

RADIO TEST REPORT

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Report No.:STS2208146W01

Issued for

SHENZHEN LINKIING TECHNOLOGY CO., LIMITED

Floor 2, Building 5, Lihe Industrial Area, 1055 SongBai Road, Xili Town, Nanshan District, Shenzhen, China

Product Name:	Bluetooth Module	
Brand Name:	Linkiing	
Model Name:	LK8353	
Series Model:	N/A	
FCC ID:	2A8JX-LK8353	
Test Standard:	FCC Part 15.247	

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APPROVA

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TEST RESULT CERTIFICATION

Applicant's Name:	SHENZHEN LINKIING TECHNOLOGY CO., LIMITED
Address:	Floor 2, Building 5, Lihe Industrial Area, 1055 SongBai Road, Xili Town, Nanshan District, Shenzhen, China
Manufacturer's Name:	SHENZHEN LINKIING TECHNOLOGY CO., LIMITED
Address:	Floor 2, Building 5, Lihe Industrial Area, 1055 SongBai Road, Xili Town, Nanshan District, Shenzhen, China
Product Description	
Product Name:	Bluetooth Module
Brand Name:	Linkiing
Model Name:	LK8353
Series Model:	N/A
Test Standards:	FCC Part15.247
Test Procedure:	ANSI C63.10-2013

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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 Date of Test
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 Date of receipt of test item
 :

 Date of receipt of test item
 :

 Date (s) of performance of tests
 :

 Date of Issue
 :

 Date of Issue
 :

 Test Result
 :

 Pass

Testing Engineer

(Chris Chen)

Technical Manager

Jean She

(Sean she)



Authorized Signatory :

hover Joney

(Bovey Yang)



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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	31 Aug. 2022	STS2208146W01	ALL	Initial Issue



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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards: KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247,Subpart C				
Standard Section	Test Item	Judgment	Remark	
15.207	Conducted Emission	PASS		
15.247 (a)(2)	6dB Bandwidth	PASS		
15.247 (b)(3)	Output Power	PASS		
15.209	Radiated Spurious Emission	PASS		
15.247 (d)	Conducted Spurious & Band Edge Emission	PASS		
15.247 (e)	Power Spectral Density	PASS		
15.205	Restricted bands of operation PASS -			
Part 15.247(d)/ Part 15.209(a)	Band Edge Emission PASS			
15.203	Antenna Requirement	PASS		

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are according to ANSI C63.10-2013.

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1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China FCC test Firm Registration Number: 625569 IC test Firm Registration Number: 12108A A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U}$, where expended uncertainty \mathbf{U} is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	±0.87dB
2	Unwanted Emissions, conducted	±2.895dB
3	All emissions, radiated 9K-30MHz	±3.80dB
4	All emissions, radiated 30M-1GHz	±4.09dB
5	All emissions, radiated 1G-6GHz	±4.92dB
6	All emissions, radiated>6G	±5.49dB
7	Conducted Emission (9KHz-30MHz)	±2.73dB



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Bluetooth Module			
Trade Name	Linkiing			
Model Name	LK8353			
Series Model	N/A			
Model Difference	N/A			
	The EUT is a Blueto	ooth Module		
	Operation Frequency:	2402~2480 MHz		
	Modulation Type:	GFSK		
	Radio Technology:	BLE		
Product Description	Bluetooth	LE(Support 1M PHY, 2M PHY)		
	Configuration:			
	Number Of Channel:	40		
	Antenna Designation:	Please refer to the Note 3.		
	Antenna Gain (dBi)	0.54dBi		
Channel List	Please refer to the Note 2.			
Rating	Input: DC 3V			
Hardware version number	V1.1			
Software version number	V1.3			
Connecting I/O Port(s)	Please refer to the I	Note 1.		

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.





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	Channel List						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequenc y (MHz)
00	2402	10	2422	20	2442	30	2462
01	2404	11	2424	21	2444	31	2464
02	2406	12	2426	22	2446	32	2466
03	2408	13	2428	23	2448	33	2468
04	2410	14	2430	24	2450	34	2470
05	2412	15	2432	25	2452	35	2472
06	2414	16	2434	26	2454	36	2474
07	2416	17	2436	27	2456	37	2476
08	2418	18	2438	28	2458	38	2478
09	2420	19	2440	29	2460	39	2480

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	Linkiing	LK8353	РСВ	N/A	0.54dBi	BLE ANT

Note: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.







2.2 DESCRIPTION OF THE TEST MODES

For conducted test items and radiated spurious emissions

Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Worst Mode	Description	Data/Modulation
Mode 1	TX CH00(2402MHz)	1 MHz/GFSK
Mode 2	TX CH19(2440MHz)	1 MHz/GFSK
Mode 3	TX CH39(2480MHz)	1 MHz/GFSK

Worst Mode	Description	Data/Modulation
Mode 4	TX CH00(2402MHz)	2M PHY /GFSK
Mode 5	TX CH19(2440MHz)	2M PHY /GFSK
Mode 6	TX CH39(2480MHz)	2M PHY /GFSK

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

(2) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/60Hz is shown in the report.

(3) The battery is fully-charged during the radited and RF conducted test.

For AC Conducted Emission

	Test Case
AC Conducted Emission	Mode 7 : Keeping BT TX

2.3 TEST SOFTWARE AND POWER LEVEL

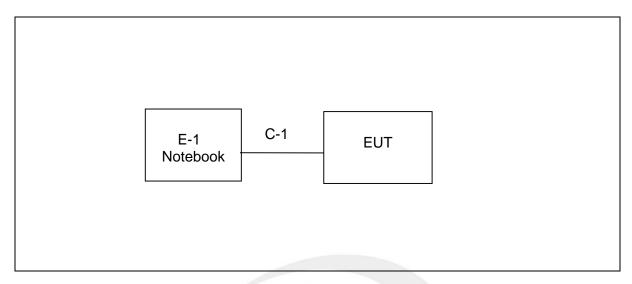
During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Туре	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
BLE(With 2M	BLE_1M PHY	GFSK	0.54	default	sscom5.13.1
PHY)	BLE_2M PHY	GFSK	0.54	default	5500110.10.1

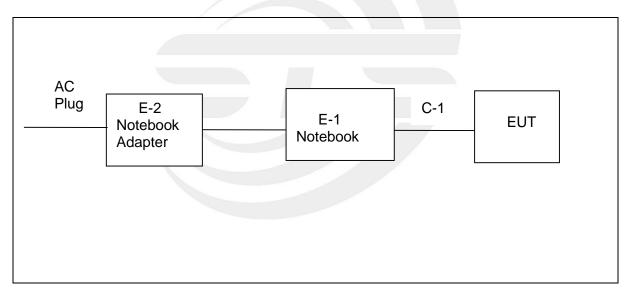


2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test



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2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

	Necessary accessories					
Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note	
N/A	N/A	N/A	N/A	N/A	N/A	

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-1	Notebook	LENOVO	Think Pad E470	N/A	N/A
E-2	Notebook Adapter	LENOVO	ADLX45DLC3A	N/A	N/A
C-1	USB Cable	N/A	N/A	150cm	NO

Note:

- (1) For detachable type I/O cable should be specified the length in cm in ^r Length ^a column.
- (2) "YES" is means "with core"; "NO" is means "without core".



2.6 EQUIPMENTS LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	
Test Receiver	R&S	ESCI	101427	2021.09.30	2022.09.29	
Signal Analyzer	R&S	FSV 40-N	101823	2021.09.30	2022.09.29	
Active loop Antenna	ZHINAN	ZN30900C	16035	2021.04.11	2023.04.10	
Bilog Antenna	TESEQ	CBL6111D	34678	2020.10.12	2022.10.11	
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2021.10.11	2023.10.10	
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2020.10.12	2022.10.11	
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2021.10.08	2022.10.07	
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2021.09.30	2022.09.29	
Pre-Amplifier (18G-40GHz)	SKET	LNPA-1840-50	SK2018101801	2021.09.28	2022.09.27	
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08	
Turn table	EM	SC100_1	60531	N/A	N/A	
Antenna mast	EM	SC100	N/A	N/A	N/A	
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)				

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2021.09.30	2022.09.29
LISN	R&S	ENV216	101242	2021.09.30	2022.09.29
LISN	EMCO	3810/2NM	23625	2021.09.30	2022.09.29
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 CE)			

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RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
			MY55520005	2021.09.30	2022.09.29
Power Sensor	Kovoight	Kevsight U2021XA -		2021.09.30	2022.09.29
Fower Sensor	Keysight	U2U21XA	MY56120038	2021.09.30	2022.09.29
			MY56280002	2021.09.30	2022.09.29
Signal Analyzer	Agilent	N9020A	MY51110105	2022.03.01	2023.02.28
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			



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3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

	Conducted Emission limit (dBuV)		
FREQUENCY (MHz)	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	
0.50 -5.0	56.00	46.00	
5.0 -30.0	60.00	50.00	

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



3.2 TEST PROCEDURE

- a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN is at least 80 cm from the nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

Vertical Reference Ground Plane EUT 40cm EUT 80cm N Horizontal Reference Ground Plane

3.3 TEST SETUP

Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



3.5 TEST RESULTS

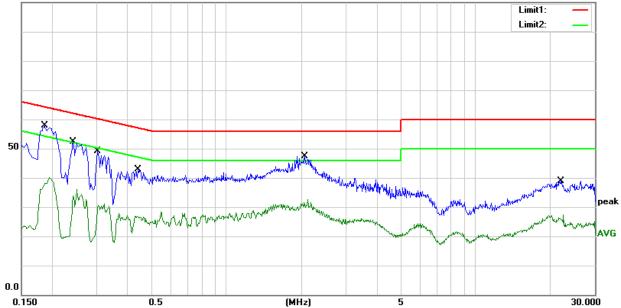
Temperature:	26.8(C)	Relative Humidity:	59%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 7		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(d B)	(dBuV)	(dBuV)	(dB)	
1	0.1860	37.50	20.31	57.81	64.21	-6.40	QP
2	0.1860	19.75	20.31	40.06	54.21	-14.15	AVG
3	0.2420	31.92	20.50	52.42	62.03	-9.61	QP
4	0.2420	15.69	20.50	36.19	52.03	-15.84	AVG
5	0.3020	28.33	20.75	49.08	60.19	-11.11	QP
6	0.3020	10.34	20.75	31.09	50.19	-19.10	AVG
7	0.4420	22.45	20.54	42.99	57.02	-14.03	QP
8	0.4420	7.86	20.54	28.40	47.02	-18.62	AVG
9	2.0580	27.08	20.30	47.38	56.00	-8.62	QP
10	2.0580	12.32	20.30	32.62	46.00	-13.38	AVG
11	22.0300	16.21	22.78	38.99	60.00	-21.01	QP
12	22.0300	4.57	22.78	27.35	50.00	-22.65	AVG

Remark:

- 1. All readings are Quasi-Peak and Average values
- 2. Margin = Result (Result = Reading + Factor)–Limit
- 3. Factor=LISN factor+Cable loss+Limiter (10dB)

100.0 dBuV



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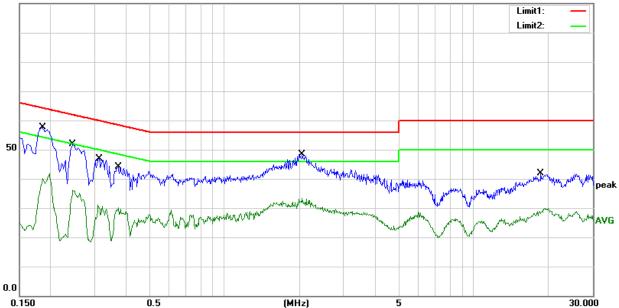
Temperature:	26.8(C)	Relative Humidity:	59%RH
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 7		

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(d B)	(dBuV)	(dBuV)	(dB)	
1	0.1860	37.24	20.37	57.61	64.21	-6.60	QP
2	0.1860	21.46	20.37	41.83	54.21	-12.38	AVG
3	0.2460	31.25	20.58	51.83	61.89	-10.06	QP
4	0.2460	15.45	20.58	36.03	51.89	-15.86	AVG
5	0.3140	26.13	20.76	46.89	59.86	-12.97	QP
6	0.3140	10.30	20.76	31.06	49.86	-18.80	AVG
7	0.3740	23.50	20.63	44.13	58.41	-14.28	QP
8	0.3740	8.92	20.63	29.55	48.41	-18.86	AVG
9	2.0540	28.02	20.39	48.41	56.00	-7.59	QP
10	2.0540	13.00	20.39	33.39	46.00	-12.61	AVG
11	18.6100	19.23	22.54	41.77	60.00	-18.23	QP
12	18.6100	7.45	22.54	29.99	50.00	-20.01	AVG

Remark:

- 1. All readings are Quasi-Peak and Average values
- 2. Margin = Result (Result = Reading + Factor)-Limit
- 3. Factor=LISN factor+Cable loss+Limiter (10dB)

100.0 dBuV



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4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	(dBuV/m) (at 3M)			
FREQUENCY (MHz)	PEAK	AVERAGE		
Above 1000	74	54		

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

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For Radiated Emission

Spectrum Parameter	Setting		
Attenuation	Auto		
Detector	Peak/QP/AV		
Start Frequency	9 KHz/150KHz(Peak/QP/AV)		
Stop Frequency	150KHz/30MHz(Peak/QP/AV)		
	200Hz (From 9kHz to 0.15MHz)/		
RB / VB (emission in restricted	9KHz (From 0.15MHz to 30MHz);		
band)	200Hz (From 9kHz to 0.15MHz)/		
	9KHz (From 0.15MHz to 30MHz)		

Spectrum Parameter	Setting	
Attenuation	Auto	
Detector	Peak/QP	
Start Frequency	30 MHz(Peak/QP)	
Stop Frequency	1000 MHz (Peak/QP)	
RB / VB (emission in restricted band)	120 KHz / 300 KHz	

Spectrum Parameter	Setting	
Attenuation	Auto	
Detector	Peak/AV	
Start Frequency	1000 MHz(Peak/AV)	
Stop Frequency	10th carrier hamonic(Peak/AV)	
RB / VB (emission in restricted	1 MHz / 3 MHz(Peak)	
band)	1 MHz/1/T MHz(AVG)	

For Restricted band

Spectrum Parameter	Setting		
Detector	Peak/AV		
Stort/Stop Fraguenov	Lower Band Edge: 2310 to 2410 MHz		
Start/Stop Frequency	Upper Band Edge: 2475 to 2500 MHz		
	1 MHz / 3 MHz(Peak)		
RB / VB	1 MHz/1/T MHz(AVG)		

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Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2 TEST PROCEDURE

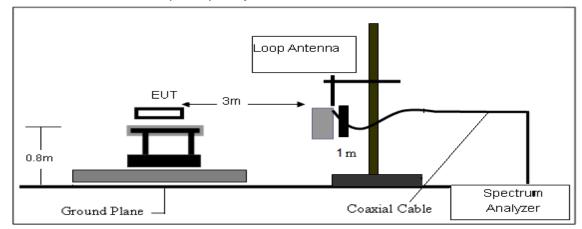
- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
- e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos. Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

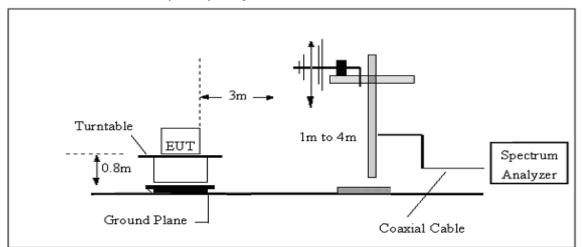


4.3 TEST SETUP

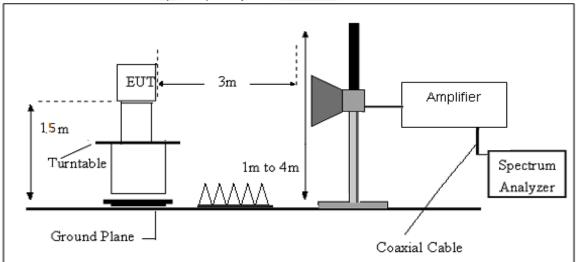
(A) Radiated Emission Test-Up Frequency Below 30MHz

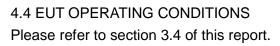


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz







4.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AGWhere FS = Field Strength CL = Cable Attenuation Factor (Cable Loss) RA = Reading Amplitude AG = Amplifier Gain AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG





4.6 TEST RESULTS

(Between 9KHz - 30 MHz)

Temperature:	23.1(C)	Relative Humidtity:	60%RH
Test Voltage:	DC 3V	Polarization:	
Test Mode:	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB); Limit line = specific limits(dBuv) + distance extrapolation factor.





(30MHz -1000MHz)

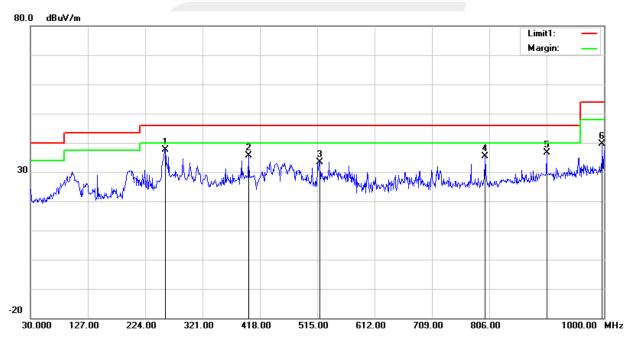
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	Mode 1/2/3/4/5/6 (Mode 3 wo	rst mode)	

1M PHY

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	257.9500	52.58	-15.02	37.56	46.00	-8.44	peak
2	398.6000	46.79	-11.20	35.59	46.00	-10.41	peak
3	518.8800	41.16	-7.84	33.32	46.00	-12.68	peak
4	799.2100	37.52	-2.04	35.48	46.00	-10.52	peak
5	903.0000	37.10	-0.37	36.73	46.00	-9.27	peak
6	997.0900	37.71	2.04	39.75	54.00	-14.25	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





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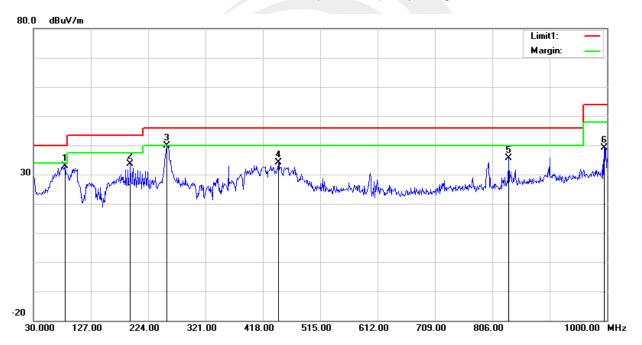
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	Mode 1/2/3/4/5/6 (Mode 3 wo	rst mode)	

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	83.3500	55.29	-22.52	32.77	40.00	-7.23	peak
2	193.9300	54.83	-21.11	33.72	43.50	-9.78	peak
3	256.0100	55.16	-15.24	39.92	46.00	-6.08	peak
4	444.1900	43.96	-9.92	34.04	46.00	-11.96	peak
5	834.1300	36.17	-0.59	35.58	46.00	-10.42	peak
6	995.1500	37.07	2.04	39.11	54.00	-14.89	peak

Remark:

1. Margin = Result (Result = Reading + Factor)-Limit

2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





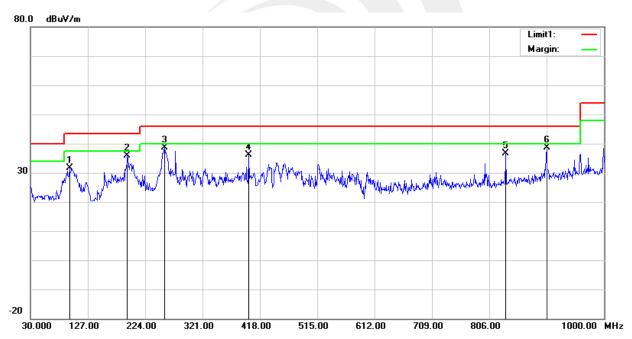
2M PHY

Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	Mode 1/2/3/4/5/6 (Mode 3 wo	rst mode)	

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	95.9600	52.21	-20.67	31.54	43.50	-11.96	peak
2	193.9300	56.91	-21.11	35.80	43.50	-7.70	peak
3	256.9800	53.67	-15.13	38.54	46.00	-7.46	peak
4	398.6000	47.30	-11.20	36.10	46.00	-9.90	peak
5	834.1300	37.22	-0.59	36.63	46.00	-9.37	peak
6	903.0000	38.91	-0.37	38.54	46.00	-7.46	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





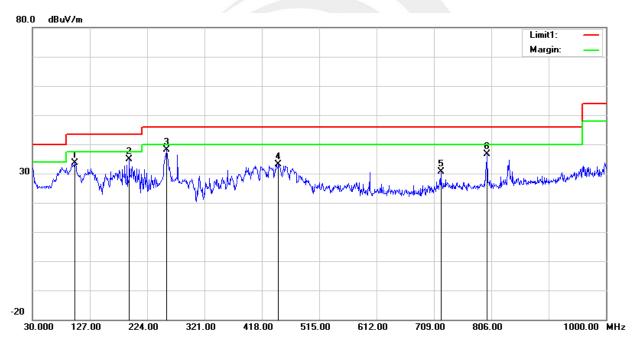
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Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	Mode 1/2/3/4/5/6 (Mode 3 wo	rst mode)	

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/ m)	(dBuV/m)	(dBuV/m)	(dB)	
1	101.7800	53.55	-19.94	33.61	43.50	-9.89	peak
2	193.9300	56.09	-21.11	34.98	43.50	-8.52	peak
3	256.9800	53.29	-15.13	38.16	46.00	-7.84	peak
4	446.1300	42.89	-9.83	33.06	46.00	-12.94	peak
5	720.6400	33.91	-3.20	30.71	46.00	-15.29	peak
6	799.2100	38.76	-2.04	36.72	46.00	-9.28	peak

Remark:

- 1. Margin = Result (Result = Reading + Factor)-Limit
- 2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





(1GHz-25GHz) Spurious emission Requirements

1M PHY GFSK

Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment
				Low Ch	nannel (GFSK/2	2402 MHz)	• • • •			•
3264.70	61.24	44.70	6.70	28.20	-9.80	51.44	74.00	-22.56	PK	Vertical
3264.70	50.78	44.70	6.70	28.20	-9.80	40.98	54.00	-13.02	AV	Vertical
3264.79	61.18	44.70	6.70	28.20	-9.80	51.38	74.00	-22.62	PK	Horizontal
3264.79	50.62	44.70	6.70	28.20	-9.80	40.82	54.00	-13.18	AV	Horizontal
4804.58	59.06	44.20	9.04	31.60	-3.56	55.50	74.00	-18.50	PK	Vertical
4804.58	50.51	44.20	9.04	31.60	-3.56	46.95	54.00	-7.05	AV	Vertical
4804.60	59.04	44.20	9.04	31.60	-3.56	55.48	74.00	-18.52	PK	Horizontal
4804.60	49.63	44.20	9.04	31.60	-3.56	46.07	54.00	-7.93	AV	Horizontal
5359.63	48.09	44.20	9.86	32.00	-2.34	45.75	74.00	-28.25	PK	Vertical
5359.63	39.51	44.20	9.86	32.00	-2.34	37.17	54.00	-16.83	AV	Vertical
5359.73	47.43	44.20	9.86	32.00	-2.34	45.09	74.00	-28.91	PK	Horizontal
5359.73	38.73	44.20	9.86	32.00	-2.34	36.38	54.00	-17.62	AV	Horizontal
7205.73	53.98	43.50	11.40	35.50	3.40	57.38	74.00	-16.62	PK	Vertical
7205.73	44.08	43.50	11.40	35.50	3.40	47.48	54.00	-6.52	AV	Vertical
7205.69	53.60	43.50	11.40	35.50	3.40	57.00	74.00	-17.00	PK	Horizontal
7205.69	43.94	43.50	11.40	35.50	3.40	47.34	54.00	-6.66	AV	Horizontal
	•			Middle C	Channel (GFSK	/2440 MHz)		•		•
3263.14	61.25	44.70	6.70	28.20	-9.80	51.45	74.00	-22.55	PK	Vertical
3263.14	51.21	44.70	6.70	28.20	-9.80	41.41	54.00	-12.59	AV	Vertical
3263.07	61.65	44.70	6.70	28.20	-9.80	51.85	74.00	-22.15	PK	Horizontal
3263.07	50.69	44.70	6.70	28.20	-9.80	40.89	54.00	-13.11	AV	Horizontal
4880.08	59.04	44.20	9.04	31.60	-3.56	55.48	74.00	-18.52	PK	Vertical
4880.08	49.60	44.20	9.04	31.60	-3.56	46.04	54.00	-7.96	AV	Vertical
4880.19	59.01	44.20	9.04	31.60	-3.56	55.45	74.00	-18.55	PK	Horizontal
4880.19	49.24	44.20	9.04	31.60	-3.56	45.68	54.00	-8.32	AV	Horizontal
5357.09	49.35	44.20	9.86	32.00	-2.34	47.01	74.00	-26.99	PK	Vertical
5357.09	39.64	44.20	9.86	32.00	-2.34	37.30	54.00	-16.70	AV	Vertical
5357.39	47.95	44.20	9.86	32.00	-2.34	45.61	74.00	-28.39	PK	Horizontal
5357.04	39.03	44.20	9.86	32.00	-2.34	36.68	54.00	-17.32	AV	Horizontal
7320.85	53.97	43.50	11.40	35.50	3.40	57.37	74.00	-16.63	PK	Vertical
7320.85	44.98	43.50	11.40	35.50	3.40	48.38	54.00	-5.62	AV	Vertical
7320.38	54.75	43.50	11.40	35.50	3.40	58.15	74.00	-15.85	PK	Horizontal
7320.38	44.71	43.50	11.40	35.50	3.40	48.11	54.00	-5.89	AV	Horizontal

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				High Char	nnel (GFSK/	2480 MHz)				
3264.64	61.67	44.70	6.70	28.20	-9.80	51.87	74.00	-22.13	PK	Vertical
3264.64	51.28	44.70	6.70	28.20	-9.80	41.48	54.00	-12.52	AV	Vertical
3264.84	61.78	44.70	6.70	28.20	-9.80	51.98	74.00	-22.02	PK	Horizontal
3264.84	50.77	44.70	6.70	28.20	-9.80	40.97	54.00	-13.03	AV	Horizontal
4960.32	58.48	44.20	9.04	31.60	-3.56	54.92	74.00	-19.08	PK	Vertical
4960.32	49.78	44.20	9.04	31.60	-3.56	46.22	54.00	-7.78	AV	Vertical
4960.32	58.67	44.20	9.04	31.60	-3.56	55.11	74.00	-18.89	PK	Horizontal
4960.32	49.85	44.20	9.04	31.60	-3.56	46.29	54.00	-7.71	AV	Horizontal
5359.88	48.77	44.20	9.86	32.00	-2.34	46.42	74.00	-27.58	PK	Vertical
5359.88	40.16	44.20	9.86	32.00	-2.34	37.81	54.00	-16.19	AV	Vertical
5359.69	48.28	44.20	9.86	32.00	-2.34	45.94	74.00	-28.06	PK	Horizontal
5359.69	38.06	44.20	9.86	32.00	-2.34	35.71	54.00	-18.29	AV	Horizontal
7439.75	54.24	43.50	11.40	35.50	3.40	57.64	74.00	-16.36	PK	Vertical
7439.75	43.76	43.50	11.40	35.50	3.40	47.16	54.00	-6.84	AV	Vertical
7439.91	53.69	43.50	11.40	35.50	3.40	57.09	74.00	-16.91	PK	Horizontal
7439.91	44.91	43.50	11.40	35.50	3.40	48.31	54.00	-5.69	AV	Horizontal

Note:

1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor.

2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.





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2M PHY GFSK

Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limits	Margin	Detector	Comment		
(MHz)	(dBµV)	(dB)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре			
				Low Ch	nannel (GFSK/2	2402 MHz)						
3264.75	61.28	44.70	6.70	28.20	-9.80	51.48	74.00	-22.52	PK	Vertical		
3264.75	50.08	44.70	6.70	28.20	-9.80	40.28	54.00	-13.72	AV	Vertical		
3264.60	61.34	44.70	6.70	28.20	-9.80	51.54	74.00	-22.46	PK	Horizontal		
3264.60	51.14	44.70	6.70	28.20	-9.80	41.34	54.00	-12.66	AV	Horizontal		
4804.51	58.54	44.20	9.04	31.60	-3.56	54.98	74.00	-19.02	PK	Vertical		
4804.51	49.60	44.20	9.04	31.60	-3.56	46.04	54.00	-7.96	AV	Vertical		
4804.38	58.59	44.20	9.04	31.60	-3.56	55.03	74.00	-18.97	PK	Horizontal		
4804.38	50.02	44.20	9.04	31.60	-3.56	46.46	54.00	-7.54	AV	Horizontal		
5359.82	48.68	44.20	9.86	32.00	-2.34	46.33	74.00	-27.67	PK	Vertical		
5359.82	39.92	44.20	9.86	32.00	-2.34	37.58	54.00	-16.42	AV	Vertical		
5359.82	47.19	44.20	9.86	32.00	-2.34	44.85	74.00	-29.15	PK	Horizontal		
5359.82	38.72	44.20	9.86	32.00	-2.34	36.37	54.00	-17.63	AV	Horizontal		
7205.76	53.62	43.50	11.40	35.50	3.40	57.02	74.00	-16.98	PK	Vertical		
7205.76	44.29	43.50	11.40	35.50	3.40	47.69	54.00	-6.31	AV	Vertical		
7205.95	53.80	43.50	11.40	35.50	3.40	57.20	74.00	-16.80	PK	Horizontal		
7205.95	44.57	43.50	11.40	35.50	3.40	47.97	54.00	-6.03	AV	Horizontal		
				Middle C	Channel (GFSK	(/2440 MHz)						
3262.99	62.13	44.70	6.70	28.20	-9.80	52.33	74.00	-21.67	PK	Vertical		
3262.99	49.94	44.70	6.70	28.20	-9.80	40.14	54.00	-13.86	AV	Vertical		
3263.00	61.43	44.70	6.70	28.20	-9.80	51.63	74.00	-22.37	PK	Horizontal		
3263.00	50.62	44.70	6.70	28.20	-9.80	40.82	54.00	-13.18	AV	Horizontal		
4880.00	59.22	44.20	9.04	31.60	-3.56	55.66	74.00	-18.34	PK	Vertical		
4880.00	49.91	44.20	9.04	31.60	-3.56	46.35	54.00	-7.65	AV	Vertical		
4880.18	58.42	44.20	9.04	31.60	-3.56	54.86	74.00	-19.14	PK	Horizontal		
4880.18	49.91	44.20	9.04	31.60	-3.56	46.35	54.00	-7.65	AV	Horizontal		
5357.17	49.20	44.20	9.86	32.00	-2.34	46.85	74.00	-27.15	PK	Vertical		
5357.17	39.18	44.20	9.86	32.00	-2.34	36.84	54.00	-17.16	AV	Vertical		
5357.39	47.85	44.20	9.86	32.00	-2.34	45.51	74.00	-28.49	PK	Horizontal		
5357.00	38.55	44.20	9.86	32.00	-2.34	36.20	54.00	-17.80	AV	Horizontal		
7320.85	54.52	43.50	11.40	35.50	3.40	57.92	74.00	-16.08	PK	Vertical		
7320.85	43.84	43.50	11.40	35.50	3.40	47.24	54.00	-6.76	AV	Vertical		
7320.33	53.84	43.50	11.40	35.50	3.40	57.24	74.00	-16.76	PK	Horizontal		
7320.33	43.71	43.50	11.40	35.50	3.40	47.11	54.00	-6.89	AV	Horizontal		



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				High Char	nnel (GFSK/	2480 MHz)				
3264.81	61.68	44.70	6.70	28.20	-9.80	51.88	74.00	-22.12	PK	Vertical
3264.81	51.59	44.70	6.70	28.20	-9.80	41.79	54.00	-12.21	AV	Vertical
3264.85	62.10	44.70	6.70	28.20	-9.80	52.30	74.00	-21.70	PK	Horizontal
3264.85	50.82	44.70	6.70	28.20	-9.80	41.02	54.00	-12.98	AV	Horizontal
4960.57	58.31	44.20	9.04	31.60	-3.56	54.75	74.00	-19.25	PK	Vertical
4960.57	49.20	44.20	9.04	31.60	-3.56	45.64	54.00	-8.36	AV	Vertical
4960.58	58.59	44.20	9.04	31.60	-3.56	55.03	74.00	-18.97	PK	Horizontal
4960.58	50.14	44.20	9.04	31.60	-3.56	46.58	54.00	-7.42	AV	Horizontal
5359.88	48.75	44.20	9.86	32.00	-2.34	46.41	74.00	-27.59	PK	Vertical
5359.88	39.14	44.20	9.86	32.00	-2.34	36.79	54.00	-17.21	AV	Vertical
5359.75	47.72	44.20	9.86	32.00	-2.34	45.38	74.00	-28.62	PK	Horizontal
5359.75	39.26	44.20	9.86	32.00	-2.34	36.92	54.00	-17.08	AV	Horizontal
7439.90	54.75	43.50	11.40	35.50	3.40	58.15	74.00	-15.85	PK	Vertical
7439.90	43.85	43.50	11.40	35.50	3.40	47.25	54.00	-6.75	AV	Vertical
7439.84	53.55	43.50	11.40	35.50	3.40	56.95	74.00	-17.05	PK	Horizontal
7439.84	44.10	43.50	11.40	35.50	3.40	47.50	54.00	-6.50	AV	Horizontal

Note:

1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor.

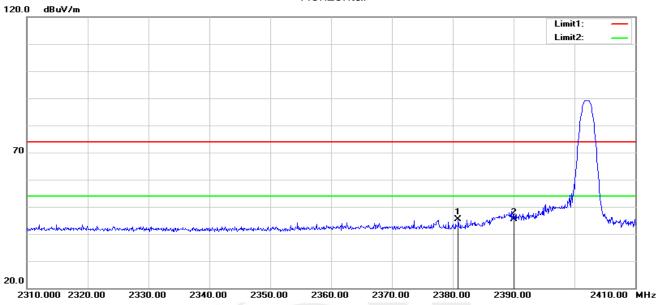
2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.



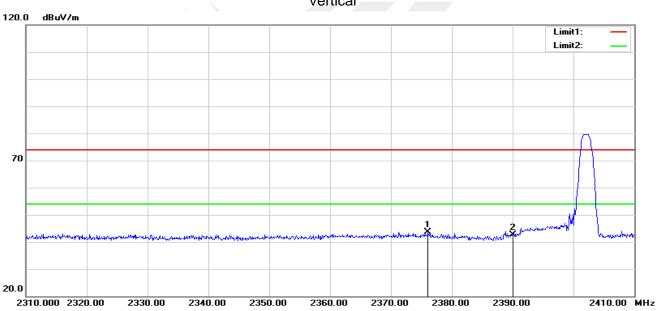


4.6 TEST RESULTS (Restricted Bands Requirements)





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2380.900	41.26	4.21	45.47	74.00	-28.53	peak
2	2390.000	40.93	4.34	45.27	74.00	-28.73	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2376.100	39.49	4.13	43.62	74.00	-30.38	peak
2	2390.000	38.27	4.34	42.61	74.00	-31.39	peak

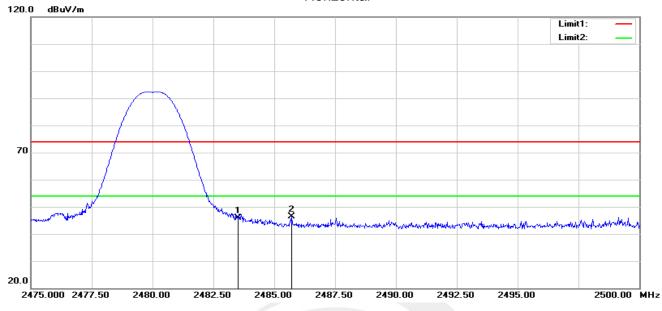
Vertical



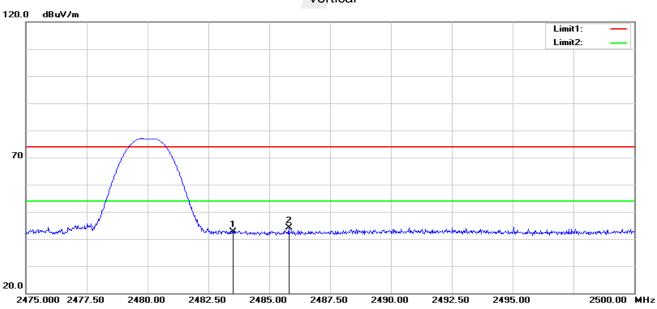
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GFSK-High Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	41.34	4.60	45.94	74.00	-28.06	peak
2	2485.725	41.65	4.61	46.26	74.00	-27.74	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	38.07	4.60	42.67	74.00	-31.33	peak
2	2485.800	39.40	4.61	44.01	74.00	-29.99	peak

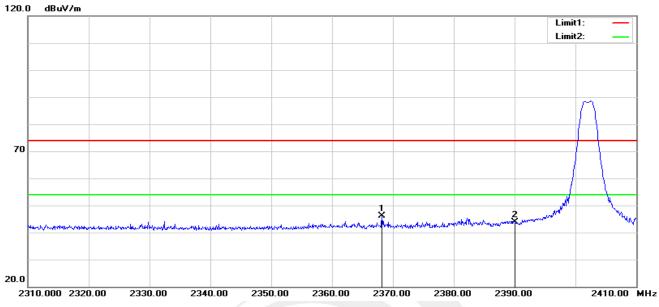
Vertical

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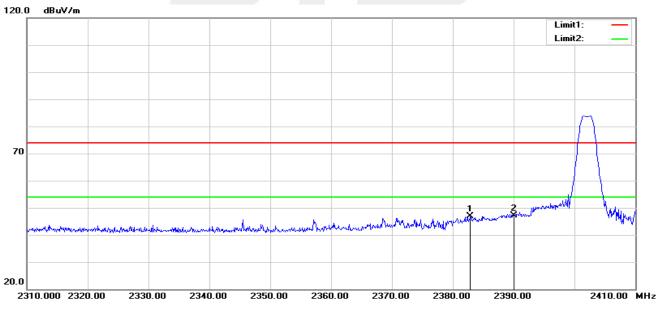


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2M PHY GFSK-Low Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2368.200	42.15	4.01	46.16	74.00	-27.84	peak
2	2390.000	39.47	4.34	43.81	74.00	-30.19	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2382.900	42.56	4.23	46.79	74.00	-27.21	peak
2	2390.000	42.79	4.34	47.13	74.00	-26.87	peak

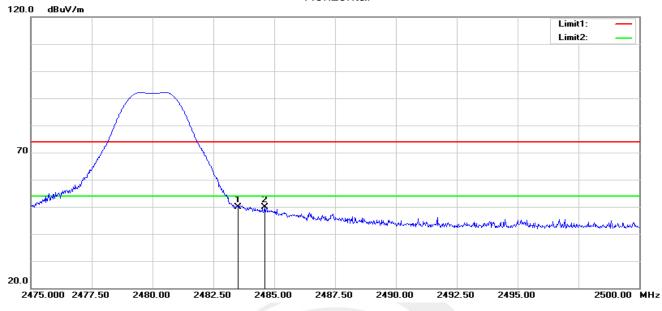
Vertical



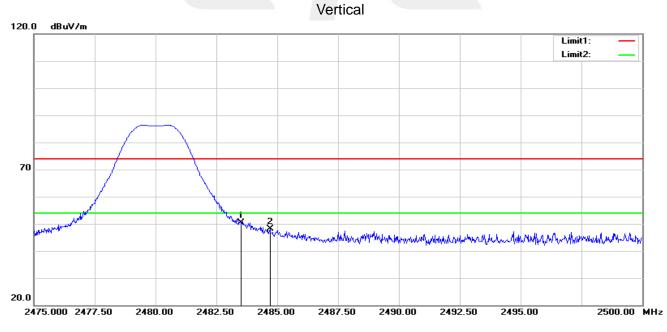
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GFSK-High Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	45.36	4.60	49.96	74.00	-24.04	peak
2	2484.600	45.32	4.61	49.93	74.00	-24.07	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	45.70	4.60	50.30	74.00	-23.70	peak
2	2484.700	43.47	4.61	48.08	74.00	-25.92	peak



5. CONDUCTED SPURIOUS & BAND EDGE EMISSION

5.1 LIMIT

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold
For Band edge	
Spectrum Parameter	Setting
Spectrum Parameter Detector	Setting Peak
Detector	
	Peak
Detector	Peak Lower Band Edge: 2300 – 2407 MHz

5.3 TEST SETUP



The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna termina is 50 Ohm; the path loss as the factor is calibrated to correct the reading. Make the measurement with the spectrum analyzer's resolution bandwidth(RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

5.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

5.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



6. POWER SPECTRAL DENSITY TEST

6.1 LIMIT

FCC Part 15.247,Subpart C							
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247(e)	Power Spectral Density	≤8 dBm (RBW≥3KHz)	2400-2483.5	PASS			

6.2 TEST PROCEDURE

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS channel bandwidth.
- 3. Set the RBW to: 100 kHz \ge RBW \ge 3 kHz.
- 4. Set the VBW \geq 3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 TEST SETUP

Specturm Analyzer	EUT
----------------------	-----

6.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

6.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



7. BANDWIDTH TEST

7.1 LIMIT

FCC Part 15.247,Subpart C						
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS		

7.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW \geq 3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be \geq 6 dB.

7.3 TEST SETUP



7.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

7.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



8. PEAK OUTPUT POWER TEST

8.1 LIMIT

FCC Part 15.247,Subpart C						
Section	Frequency Range (MHz)	Result				
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS		

8.2 TEST PROCEDURE

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

 $RBW \ge DTS$ bandwidth

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

a) Set the RBW \geq DTS bandwidth.

b) Set VBW \geq [3 × RBW].

c) Set span \geq [3 \times RBW].

d) Sweep time = auto couple.

e) Detector = peak.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

h) Use peak marker function to determine the peak amplitude level.

Integrated band power method:

The following procedure can be used when the maximum available RBW of the instrument is less than the

DTS bandwidth:

a) Set the RBW = 1 MHz.

b) Set the VBW \geq [3 \times RBW].

c) Set the span \geq [1.5 × DTS bandwidth].

d) Detector = peak.

e) Sweep time = auto couple.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

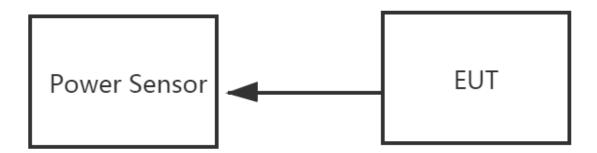
h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.







8.4 EUT OPERATION CONDITIONS Please refer to section 3.4 of this report.

8.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.





9. ANTENNA REQUIREMENT

9.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2 EUT ANTENNA

The EUT antenna is PCB Antenna. It comply with the standard requirement.



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APPENDIX 1-TEST DATA

1. DUTY CYCLE

Condition	Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	100	0	0.01
NVNT	BLE 1M	2440	100	0	0.01
NVNT	BLE 1M	2480	100	0	0.01
NVNT	BLE 2M	2402	100	0	0.01
NVNT	BLE 2M	2440	100	0	0.01
NVNT	BLE 2M	2480	100	0	0.01



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		Те	st Graphs		
	Duty (Cycle NV	<u>'NT BLE 1</u>	M 2402MHz	
Keysight Spectrum Analyzer - S RL RF 50		Lenwer-		ALIGN AUTO	05:40:31 DM Aug 26, 20
Center Freq 2.4020		SENSE:		ALIGN AUTO Avg Type: Log-Pw	05:40:31 PM Aug 26, 202 r TRACE 1 2 3 4 5
	PN		Frig: Free Run #Atten: 30 dB		DET P N N N
		Jani.Low "			Mkr1 50.00 m
Ref Offset 0 10 dB/div Ref 20.50					-1.19 dBr
.og					
10.5			1		
.500			Y		
9.50					
19.5					
29.5					
39.5					
49.5					
59.5					
69.5					
center 2.40200000	GHz	1		1	Span 0 H
Res BW 1.0 MHz		#VBW:	3.0 MHz	Sv	veep 100.0 ms (10001 pt
IKR MODE TRC SCL	X	Y	FUNCTION FU	JNCTION WIDTH	FUNCTION VALUE
1 N 1 t 2	50.00 ms	-1.19 dB	m		
3 4					
5					
6 7 8					
8					
10					
11					•
sg					
				STATUS	
	Duty				
Kaurisht Spactrum Applymer S		Cycle N∨	NT BLE 1	status M 2440MHz	
Keysight Spectrum Analyzer - S R L RF 50	wept SA			M 2440MHz	05:43:32 PM Aug 26, 202
RL RF 50	wept SA Ω AC 000000 GHz	SENSE:	PULSE	M 2440MHz	05:43:32 PM Aug 26, 202 r TRACE 1 2 3 4 5 TYPE WWWWW
RL RF 50	wept SA Ω AC 000000 GHz PN	SENSE:		M 2440MHz	05:43:32 PM Aug 26, 20 r TRACE 1 2 3 4 5 TYPE WWWWW
RL RF 50	iwept SA Ω AC 000000 GHz PN IFC	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 0 dB/div Ref 30.00	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 0 dB/div Ref 30.00	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 0 dB/div Ref 30.00 20.0 Ref 30.00	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
RL RF 50 center Freq 2.4400 Ref Offset 0 0 dB/div Ref 30.00 20.0 10.0	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
RL RF 50 center Freq 2.4400 Ref Offset 0 0 dB/div Ref 30.00 .00 .00	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 Ref 30.00 O dB/div Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00 Ref 30.00	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE [] 2 3 4 5 TYPE WWWW DET P NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 Ref Offset 0 0 dB/div Ref 30.00 0 0.00 0 0 0 0.00 0 0 0 0 0.00 0 0 0 0 0 0.00 <	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 Ref Offset 0 0 dB/div Ref 30.00 0 0.0 .0 .0 .0 0.00 .00 .00 .00 .00 0.00 .00 .00 .00 .00 .00 0.00 .	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE [] 2 3 4 5 TYPE WWWW DET P NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 Ref 30.00 0 dB/div Ref 30.00 0 0.0 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0 0.00 0 0 0	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PM Jug 26, 20: r TRACE [12:3:45 TYPE[WWWW DET PNNN Mkr1 50.00 m -1.30 dBr
RL RF 50 Center Freq 2.4400 Ref Offset 0 Ref Offset 0 0.08/div Ref 30.00 0 0.09 - - 0.00 - -	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE [] 2 3 4 5 TYPE WWWW DET P NNN Mkr1 50.00 m
RL RF 50 Center Freq 2.4400 Ref Offset 0 Ref Offset 0 0.08/div Ref 30.00 0 0.09 - - 0.00 - -	weept SA Ω AC D000000 GHz PN IFG D.5 dB	SENSE: NO: Fast ↔ 1	PULSE	M 2440MHz	05:43:32 PMAug 26, 202 r TRACE] 2:3.4 5 TYPE WWWW DET P. NNN Mkr1 50.00 m
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RL RF 50 Center Freq 2.4400 Ref Offset 0 Ref 30.00 0 dB/div Ref 30.00 <	weept SA	SENSE: NO: Fast ↔ 1	PULSE	ALIGN AUTO Avg Type: Log-Pw	05:43:32 PM Aug 26, 202 r TRAO [] 2 3 4 5 TYPE WWWW DET [P NNNN Mkr1 50.00 m -1.30 dBr -1.30 d
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		Cycle N	VNT BLE	1M 2480	MHZ		
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G		Ovela N					
Keysight Spectrum Analyz			VNT BLE	2111 2402			
	er - Swept SA						
R L RF	50 Ω AC	SEN:	SE:PULSE		pe: Log-Pwr	05:48:5 T	2 PM Aug 26, 20
R L RF	50 Ω AC D2000000 GHz	PNO: Fast IFGain:Low	SE:PULSE Trig: Free Run #Atten: 30 dB		pe: Log-Pwr	Т	
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RL RF enter Freq 2.4(Ref Offs dB/div Ref 20	50 Ω AC D2000000 GHz set 0.5 dB	PNO: Fast +++	Trig: Free Run		pe: Log-Pwr	™ Mkr1	2 PM Aug 26, 20 RACE 1 2 3 4 TYPE WWWW DET P N N N 50.00 n
RL RF enter Freq 2.4(Ref Offs Ref 20 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	50 Ω AC D2000000 GHz set 0.5 dB	PNO: Fast +++	Trig: Free Run		pe: Log-Pwr	™ Mkr1	2 PM Aug 26, 20 RACE 1 2 3 4 TYPE WWWW DET P N N N 50.00 n
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RL RF enter Freq 2.4(dB/div Ref 20 99 00 00 00 00 00 00 00 00 00 00 00 00	50 Ω AC D2000000 GHz set 0.5 dB	PNO: Fast +++	Trig: Free Run		pe: Log-Pwr	™ Mkr1	2 PM Aug 26, 20 RACE 1 2 3 4 TYPE WWWW DET P N N N 50.00 n
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RL RF enter Freq 2.40 Ref Offs 0 dB/div Ref 20 0 dB/div <	59 Ω AC D2000000 GHz set 0.5 dB .00 dBm	PNO: Fast +++ IFGain:Low ////////////////////////////////////	Trig: Free Run #Atten: 30 dB		Sweep	T Mkr1 	2 PMAU 26, 27 NACE 1 2 3 4 TIPE WHINN 50.00 m 1.52 dB
RL RF enter Freq 2.40 Ref Offs 0 dB/div Ref 20 0 dB/div <	59 Ω AC D2000000 GHz set 0.5 dB .00 dBm .00 dBm .00 dBm .00 dBm .00 dBm	PNO: Fast +++ IFGain:Low ////////////////////////////////////	Trig: Free Run #Atten: 30 dB	Avg Ty	Sweep	Mkr1	2 PMAU 26, 27 NACE 1 2 3 4 TIPE WHINN 50.00 m 1.52 dB
RL RF enter Freq 2.40 Ref Offs 0 dB/div Ref 20 0 dB/div <	59 Ω AC D2000000 GHz set 0.5 dB .00 dBm .00 dBm .00 dBm .00 dBm .00 dBm	PNO: Fast +++ IFGain:Low ////////////////////////////////////	Trig: Free Run #Atten: 30 dB	Avg Ty	Sweep	Mkr1	2 PMAU 26, 27 NACE 1 2 3 4 TIPE WHINN 50.00 m 1.52 dB
RL RF enter Freq 2.41 Ref Offs 0 dB/div Ref 20 0 dB/div <	59 Ω AC D2000000 GHz set 0.5 dB .00 dBm .00 dBm .00 dBm .00 dBm .00 dBm	PNO: Fast +++ IFGain:Low ////////////////////////////////////	Trig: Free Run #Atten: 30 dB	Avg Ty	Sweep	Mkr1	2 PMAU 26, 27 NACE 1 2 3 4 TIPE WHINN 50.00 m 1.52 dB
RL RF Enter Freq 2.40 Ref Offs dB/div Ref 20 00	59 Ω AC D2000000 GHz set 0.5 dB .00 dBm .00 dBm .00 dBm .00 dBm .00 dBm	PNO: Fast +++ IFGain:Low ////////////////////////////////////	Trig: Free Run #Atten: 30 dB	Avg Ty	Sweep	Mkr1	2 PMAU2 26,212 34 NACE 1 2 34 TPREVWWW DET P NNN 50.00 n 1.52 dB
RL RF Enter Freq 2.4(Ref Offs Ref Offs Ref 20 00 0 0 00 0 0 0 00 0 0 0 0 00 0 0 0 0 0 00 0 0 0 0 0 0 00 0	59 Ω AC D2000000 GHz set 0.5 dB .00 dBm .00 dBm .00 dBm .00 dBm .00 dBm	PNO: Fast +++ IFGain:Low ////////////////////////////////////	Trig: Free Run #Atten: 30 dB	Avg Ty	Sweep	Mkr1	2 PMAU 26, 27 NACE 1 2 3 4 TIPE WHINN 50.00 m 1.52 dB
RL RF Enter Freq 2.40 Ref Offs dB/div Ref 20 00	59 Ω AC D2000000 GHz set 0.5 dB .00 dBm .00 dBm .00 dBm .00 dBm .00 dBm	PNO: Fast +++ IFGain:Low ////////////////////////////////////	Trig: Free Run #Atten: 30 dB	Avg Ty	Sweep	Mkr1	2 PMAU 26, 27 NACE 1 2 3 4 TIPE WHINN 50.00 m 1.52 dB



Duty Cycle NVNT BLE 2M 2440MHz Keysight Spectrum Analyzer - Swept SA 05:52:25 PM Aug 26, 2022 Center Freq 2.440000000 GHz Avg Type: Log-Pwr TRACE 1 2 3 4 5 TYPE WWWWW DET P NNNN Trig: Free Run #Atten: 30 dB PNO: Fast IFGain:Low -----Mkr1 50.00 ms -2.01 dBm Ref Offset 0.5 dB Ref 20.00 dBm 10 dB/div 0.00 40.0 50.0 Center 2.440000000 GHz Span 0 Hz Sweep 100.0 ms (10001 pts) Res BW 1.0 MHz #VBW 3.0 MHz MRR MOD: 1 N 2 3 4 5 6 7 7 8 9 10 11 MKR MODE TRC SCL FUNCTION FUNCTION WIDTH FUNCTION VALUE 50.00 ms -2.01 dBm t STATUS Duty Cycle NVNT BLE 2M 2480MHz Keysight Spectrum Analyzer - Swept S κ RL RF 50 Ω Α 05:54:40 PM Aug 26, 2022 Avg Type: Log-Pwr TRACE 1 2 3 4 5 TYPE WWWWW DET P N N N N Center Freq 2.480000000 GHz PNO: Fast +++ Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 50.00 ms Ref Offset 0.5 dB Ref 20.00 dBm -1.35 dBm 0 dB/div 0.0 10.0 20.0 -30.0 40.0 Center 2.480000000 GHz Span 0 Hz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 100.0 ms (10001 pts) Y FUNCTION FUNCTION WIDTH -1.35 dBm MKR MODE TRC SCL FUNCTION VALUE 50.00 ms Ν t 2 3 4 5 6 7 8 9 10 11 STATUS sG



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2. MAXIMUM AVERAGE CONDUCTED OUTPUT POWER

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	-1.18	0	-1.18	<=30	Pass
NVNT	BLE 1M	2440	-1.36	0	-1.36	<=30	Pass
NVNT	BLE 1M	2480	-1.08	0	-1.08	<=30	Pass
NVNT	BLE 2M	2402	-1.48	0	-1.48	<=30	Pass
NVNT	BLE 2M	2440	-1.67	0	-1.67	<=30	Pass
NVNT	BLE 2M	2480	-1.39	0	-1.39	<=30	Pass



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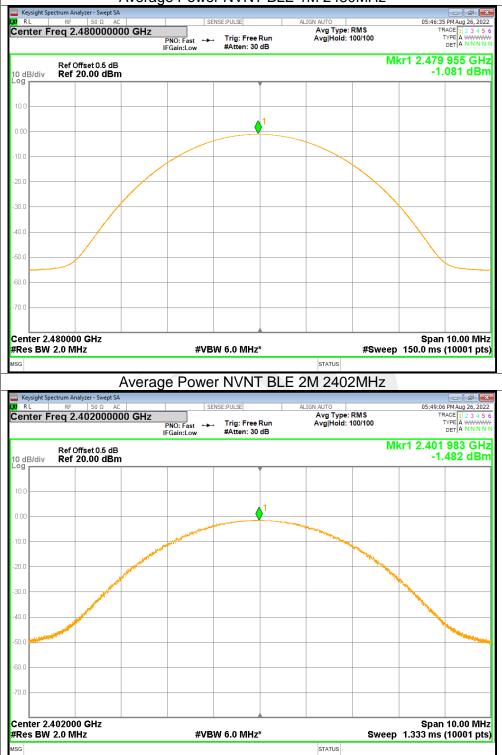


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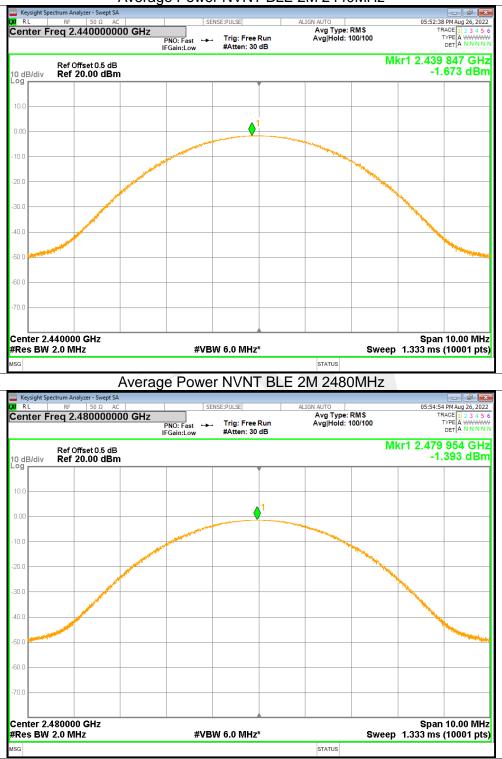


Average Power NVNT BLE 1M 2480MHz

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Average Power NVNT BLE 2M 2440MHz

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3. MAXIMUM PEAK CONDUCTED OUTPUT POWER

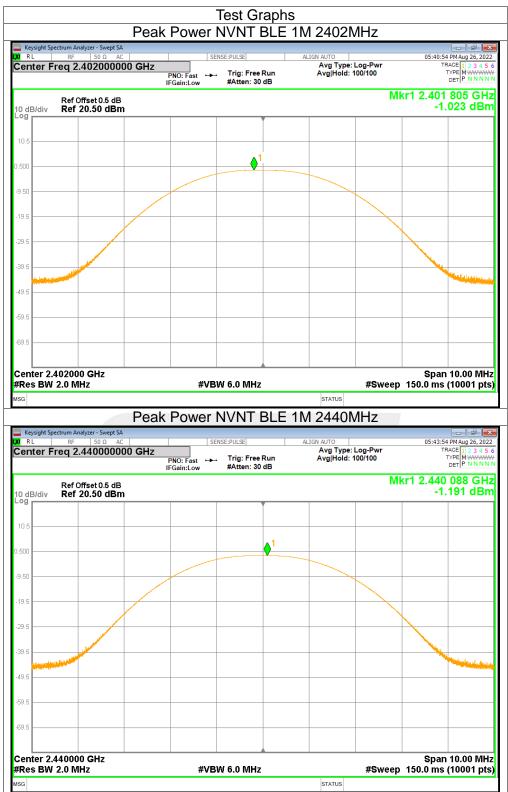
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	-1.02	<=30	Pass
NVNT	BLE 1M	2440	-1.19	<=30	Pass
NVNT	BLE 1M	2480	-0.93	<=30	Pass
NVNT	BLE 2M	2402	-1.05	<=30	Pass
NVNT	BLE 2M	2440	-1.22	<=30	Pass
NVNT	BLE 2M	2480	-0.96	<=30	Pass



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Peak Power NVNT BLE 1M 2480MHz

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Peak Power NVNT BLE 2M 2440MHz

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4. -6DB BANDWIDTH

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	0.67	>=0.5	Pass
NVNT	BLE 1M	2440	0.66	>=0.5	Pass
NVNT	BLE 1M	2480	0.66	>=0.5	Pass
NVNT	BLE 2M	2402	1.36	>=0.5	Pass
NVNT	BLE 2M	2440	1.36	>=0.5	Pass
NVNT	BLE 2M	2480	1.36	>=0.5	Pass



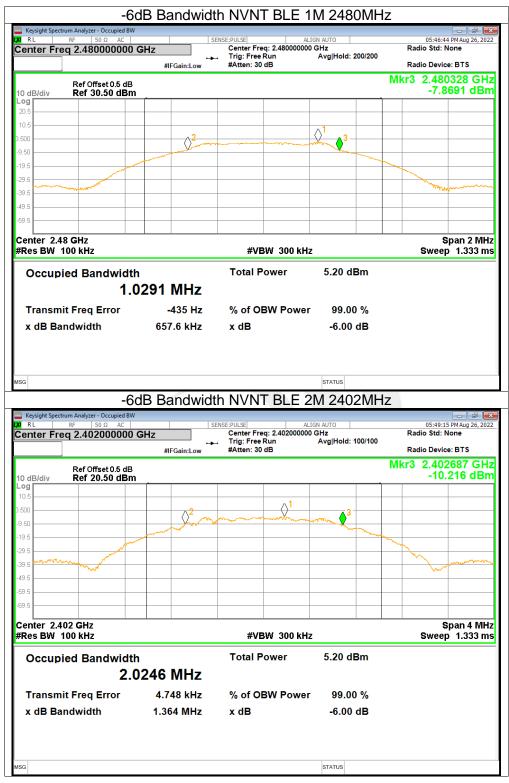
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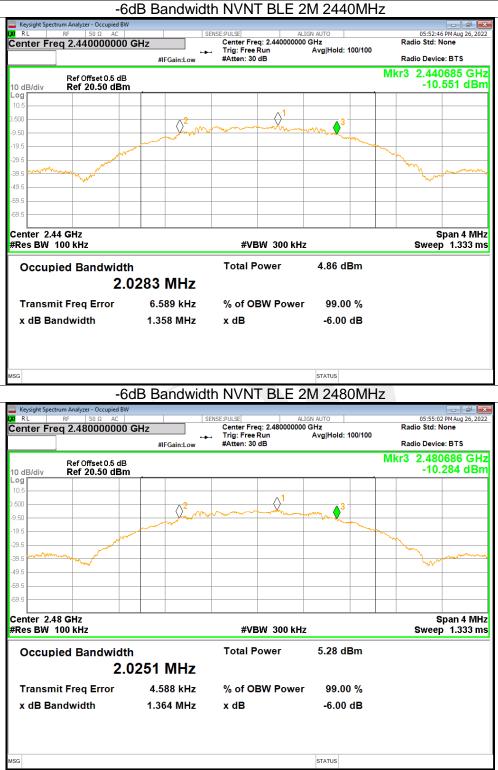






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5. MAXIMUM POWER SPECTRAL DENSITY LEVEL

Condition	Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	-16.41	<=8	Pass
NVNT	BLE 1M	2440	-16.56	<=8	Pass
NVNT	BLE 1M	2480	-16.28	<=8	Pass
NVNT	BLE 2M	2402	-23.04	<=8	Pass
NVNT	BLE 2M	2440	-23.19	<=8	Pass
NVNT	BLE 2M	2480	-22.92	<=8	Pass



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Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC	SEN	SE:PULSE	ALIGN AUTO	05:41:32 PM Aug 26, 202
enter Freq 2.402000000 GH		Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 20/20	TRACE 1 2 3 4 5 TYPE MWWW DET P N N N
Ref Offset 0.5 dB	in Galilleow		Mkr1	2.402 014 1 GH -16.412 dBr
10.0				
0.00				
0.0		1		
0.0	markamaran	www.www.	Advantation of the other of the	
0.0	ψ			WWWWWWW
10.0				
0.0				
70.0				
enter 2 402000 GHz				Span 1 005 MF
Res BW 3.0 kHz	#VBV	V 10 kHz	-	
Center 2.4020000 GHz Res BW 3.0 kHz			STATUS	Span 1.005 MH 106.0 ms (1001 pt
Res BW 3.0 kHz ^{5G} Keysight Spectrum Analyzer - Swept SA	PSD NVN	T BLE 1M 2	status 2440MHz	106.0 ms (1001 pt
Res BW 3.0 kHz IG Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC		T BLE 1M 2 se:PULSE Trig: Free Run	STATUS	106.0 ms (1001 pt 05:44:36 PM Aug 26, 20 TRACE [1 2 3 4 TRACE [1 2 3 4
Res BW 3.0 kHz IG Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC enter Freq 2.440000000 GH	PSD NVN	T BLE 1M 2	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 50/50	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20 TRACE [1 2:3 4 TYPE M WWW DET P NNNI 2.4400 013 86 GH
Res BW 3.0 kHz IG Keysight Spectrum Analyzer - Swept SA RL RF enter Freq 2.440000000 GH O dB/div Ref Offset 0.5 dB O dB/div Ref 20.00 dBm		T BLE 1M 2 se:PULSE Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 50/50	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20 TRACE [1 2:3 4 TYPE M WWW DET P NNNI 2.4400 013 86 GH
Res BW 3.0 kHz G Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC enter Freq 2.440000000 GH 0 dB/div Ref Offset 0.5 dB Ref 20.00 dBm		T BLE 1M 2 se:PULSE Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 50/50	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20 TRACE [1 2:3 4 TYPE M WWW DET P NNNI 2.4400 013 86 GH
Res BW 3.0 kHz g keysight Spectrum Analyzer - Swept SA RL RF SO Ω AC enter Freq 2.440000000 GH 0 dB/div Ref Offset 0.5 dB 0 dB/div Ref 20.00 dBm		T BLE 1M 2 se:PULSE Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 50/50	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20 TRACE [1 2:3 4 TYPE M WWW DET P NNNI 2.4400 013 86 GH
Res BW 3.0 kHz		T BLE 1M 2 se:PULSE Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 50/50	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20 TRACE [] 2 3 4 TYPE M WWW DET P N N NT 2.4400 013 86 GH
Res BW 3.0 kHz		T BLE 1M 2 SE:PULSE Trig: Free Run	STATUS 2440MHz ALIGN AUTO Avg Type: Log-Pwr Avg]Hold: 50/50 Mkr1 2	106.0 ms (1001 pt
Res BW 3.0 kHz 3G 3G RL RF RL RF SO AC enter Freq 2.440000000 GH 0 BRef 20.00 dBm 0 BRef 20.00 dBm 0 BRef 20.00 dBm 0 BRef 20.00 dBm	PSD NVN	T BLE 1M 2 SE:PULSE Trig: Free Run	STATUS 2440MHz ALIGN AUTO Avg Type: Log-Pwr Avg]Hold: 50/50 Mkr1 2	106.0 ms (1001 pt
Res BW 3.0 kHz sg keysight Spectrum Analyzer - Swept SA RL RF S0 ΔC center Freq 2.440000000 GH 0 dB/div Ref Offset 0.5 dB 0 dB/div Ref 20.00 dBm 00 0 0.0 0.0 0.0	PSD NVN	T BLE 1M 2 SE:PULSE Trig: Free Run	STATUS 2440MHz ALIGN AUTO Avg Type: Log-Pwr Avg]Hold: 50/50 Mkr1 2	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20 TRACE [] 2 3 4 TYPE M WWW DET P N N NT 2.4400 013 86 GH
Res BW 3.0 kHz sg Keysight Spectrum Analyzer - Swept SA RL RF S0 AC enter Freq 2.440000000 GH 0.0 0.0 0.0 0.0 0.0 0.0 0.0	PSD NVN	T BLE 1M 2 SE:PULSE Trig: Free Run	STATUS 2440MHz ALIGN AUTO Avg Type: Log-Pwr Avg]Hold: 50/50 Mkr1 2	106.0 ms (1001 pt
Res BW 3.0 kHz 3G 3G Keysight Spectrum Analyzer - Swept SA RL RF S0 a AC center Freq 2.440000000 GH 0 dB/div Ref Offset 0.5 dB 0 dB/div 0 dB/div	PSD NVN	T BLE 1M 2 SE:PULSE Trig: Free Run	STATUS 2440MHz ALIGN AUTO Avg Type: Log-Pwr Avg]Hold: 50/50 Mkr1 2	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20: TRACE [] 2 3 4 TYPE [] 2.440 013 86 GH -16.563 dBr
Res BW 3.0 kHz 3G 3G Keysight Spectrum Analyzer - Swept SA RL RF SO Q AC Center Freq 2.440000000 GH Od B/div Ref Offset 0.5 dB Od B/div Ref 20.00 dBm 00 AC 00 AC	PSD NVN	T BLE 1M 2 SE:PULSE Trig: Free Run	STATUS 2440MHz ALIGN AUTO Avg Type: Log-Pwr Avg]Hold: 50/50 Mkr1 2	106.0 ms (1001 pt 05:41:36 PM Aug 26, 20: TRACE [] 2 3 4 TYPE [] 2.440 013 86 GH -16.563 dBr
Res BW 3.0 kHz sg sg RL RF S0 Q enter Freq 2.440000000 GH 0.0 0.0 0.0 0.0 0.0 0.0	PSD NVN	T BLE 1M 2 SE:PULSE Trig: Free Run	STATUS 2440MHz ALIGN AUTO Avg Type: Log-Pwr Avg]Hold: 50/50 Mkr1 2	106.0 ms (1001 pt

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PSD NVNT BLE 1M 2480MHz

	ectrum Analyzer - Swept SA					1011 AL 1977			- 6 2
RL Contor F	RF 50 Ω AC			SENSE:PULSE	AL	IGN AUTO Avg Type: L	og-Pwr	05:46:	53 PM Aug 26, 202 TRACE 1 2 3 4 5
	req 2.4800000		PNO:Wide ↔			Avg Hold: 2			TYPE MWWWW DET P N N N N
		1	FGain:Low	#Atten: 30 d	βB				
	Ref Offset 0.5 dB						Mkr1		13 86 GH
) dB/div	Ref 20.00 dBm							-16	6.283 dBn
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0.0					A1				-
					X				
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0.0									
0.0									
0.0									
enter 2.	4800000 GHz					·		Spa	an 990.0 kH
Res BW	3.0 kHz		#VI	BW 10 kHz			Swee	p 104.4 m	ns (1001 pts
	pectrum Analyzer - Swept SA	P	SD NV	NT BLE	2M 24	status 02MHz			
Keysight Sp R L	eectrum Analyzer - Swept SA RF 50 Ω AC			NT BLE		02MHz	.og-Pwr	05:49:	43 PM Aug 26, 202 TRACE 1 2 3 4 5
RL		00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz	.og-Pwr 00/100	05:49:	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE M WWWW
Keysight Sp R L	RF 50 Ω AC	00 GHz		SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100		43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE M WWWW DET P N N N N
Keysight Sp RL enter F	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp RL enter F	RF 50 Ω AC Freq 2.40200000	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp R L	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp RL enter F	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp RL enter F	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
keysight Sp RL enter F	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
keysight Sp RL enter F	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp RL enter F	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Contraction of the second seco	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Content of the second s	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Content of the second s	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE M WWWW
) dB/div 9 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Contraction of the second seco	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Keysight Sg RL enter F 0 dB/div 0 d.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Contraction of the second seco	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Keysight Sp RL enter F 0 dB/div 0 d.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Keysight Sp RL enter F 0 dB/div 0 d.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Keysight Sp RL enter F 0 dB/div 0 d.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Keysight Sp RL enter F 0 dB/div 0 d.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp RL enter F 0 dB/div 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp RL enter F 0 dB/div 0 d.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:
Keysight Sp RL enter F 0 dB/div 0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 9	43 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 22 48 GH
Keysight Sp RL I enter F 0 dB/div 0 d.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RF 50 Ω AC Freq 2.40200000 Ref Offset 0.5 dB Ref Offset 0.5 dB	00 GHz	PNO: Wide ↔	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	00/100	2.401 92	43 PM Aug 26, 202 TRACE 1 23 45 TYPE IM WWWW DET P NNNN 22 48 GH: 3.042 dBn
Keysight Sp RL enter F 0 dB/div 0 0 <td>RF 50 Q AC req 2.40200000 Ref Offset 0.5 dB Ref 20.00 dBm</td> <td>00 GHz</td> <td>PNO: Wide ++</td> <td>SENSE:PULSE Trig: Free F #Atten: 30 d</td> <td>AL Run</td> <td>02MHz IGN AUTO Avg Type: L</td> <td>20/100 Mkr1</td> <td>2.401 9: -23</td> <td>43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:</td>	RF 50 Q AC req 2.40200000 Ref Offset 0.5 dB Ref 20.00 dBm	00 GHz	PNO: Wide ++	SENSE:PULSE Trig: Free F #Atten: 30 d	AL Run	02MHz IGN AUTO Avg Type: L	20/100 Mkr1	2.401 9: -23	43 PM Aug 26, 202: TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N 22 48 GH:

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Keysight Spectrum Analyzer - Swept SA 05:53:16 PM Aug 26, 2022 SENSE:PULS Center Freq 2.440000000 GHz TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N Avg Type: Log-Pwi Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB PNO: Wide ↔→ IFGain:Low Mkr1 2.439 920 44 GHz -23.186 dBm Ref Offset 0.5 dB Ref 20.00 dBm 10 dB/div 0.00 10.0 20. 30 40.0 50.0 60. Center 2.440000 GHz Span 2.040 MHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 215.1 ms (1001 pts) SG STATUS PSD NVNT BLE 2M 2480MHz 🧰 Keysight Spectrum Analyzer - Swept SA 🞾 R L RF 50 Ω AC d 💌 05:55:31 PM Aug 26, 2022 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N Avg Type: Log-Pwr Avg|Hold: 100/100 Center Freq 2.480000000 GHz PNO: Wide +++ Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.479 920 44 GHz Ref Offset 0.5 dB Ref 20.00 dBm -22.919 dBm 10 dB/div Log 10.0 20. 30.0 40.0 50.0 Center 2.480000 GHz Span 2.040 MHz Sweep 215.1 ms (1001 pts) #Res BW 3.0 kHz #VBW 10 kHz STATUS SG

PSD NVNT BLE 2M 2440MHz

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6. BAND EDGE

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-50.64	<=-20	Pass
NVNT	BLE 1M	2480	-54.93	<=-20	Pass
NVNT	BLE 2M	2402	-33.21	<=-20	Pass
NVNT	BLE 2M	2480	-46.72	<=-20	Pass



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	Band B	Edge NVN	<u>st Graphs</u> Γ BLE 1M	2402MHz R	lef
Keysight Spectrum Ana		SENSE:P		ALIGN AUTO	05:41:48 PM Aug 26, 202
	402000000 GHz	_		Aug Type: Log-P Avg Hold: 100/100	Wr TRACE 1 2 3 4 5
		PNO: Wide ↔ I IFGain:Low #/	rig: Free Run Atten: 30 dB	Avginoia: 100/100	DET PNNN
10 dB/div Ref 2	ffset 0.5 dB 2 0.50 dBm				Mkr1 2.402 240 GH -1.927 dBn
Log					
10.5					
0.500			1		
			m		
-9.50					
-19.5		/	/\	<u> </u>	
		/			
-29.5					
-39.5		/¥			
		- And -		hey.	
-49.5		HAPPY V		Martin and A	MIL MARINA CONTRACTOR
-59.5 Martin Marin	apprending and a second and a second				mann wanter and the start and
0.5					
-69.5					
Center 2.402000					Span 8.000 MH
#Res BW 100 kH		<i>#</i> 0.0000.0			
		#VBW 3	00 kHz	#	
ISG	12	#VBW 3	00 kHz	#	#Sweep 100.0 ms (1001 pts
ISG					≴Sweep 100.0 ms (1001 pts
Keysight Spectrum Ana	Band Edg	ge NVNT B	LE 1M 24	status 102MHz Emis	#Sweep 100.0 ms (1001 pts SSION
Keysight Spectrum Ana	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26, 202 wr TRACE 12.3.4.5 0
Keysight Spectrum Ana	Band Edg		LE 1M 24	STATUS O2MHz Emis	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26, 202 wr TRACE 23.45 0 TYPE M WWW DET P NNNN
Keysight Spectrum Ana RL RF Center Freq 2. Ref O	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr TRACE [] .3 4 5 0 TYPE M WWW DET P NNN Mkr1 2.402 2 GH:
Keysight Spectrum Ana R RL RF Center Freq 2.: Ref 0 10 dB/div Ref 2	Band Edg 50 Ω AC 356000000 GHz		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr TRACE [] 23 4 5 0 TYPE M WWW DET P NNN Mkr1 2.402 2 GH:
Keysight Spectrum Ana RL RF Center Freq 2.: Ref 0 10 dB/div Ref 2 10.5	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr TRACE [] 23 4 5 0 TYPE M WWW DET P NNN Mkr1 2.402 2 GH:
Keysight Spectrum Ana R RL RF Center Freq 2.: Ref 0 10 dB/div Ref 2	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr TRACE [] 23 4 5 0 TYPE MWWW DET P NNN Mkr1 2.402 2 GH2
Keysight Spectrum Ana RL RF Center Freq 2.: Ref 0 10 dB/div Ref 2 10.5 0.500	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr TRACE [] 23 4 5 0 TYPE MWWW DET P NNN Mkr1 2.402 2 GH2
Keysight Spectrum Ana R RL RF Center Freq 2. Ref 0 10 dB/div Ref 2 0.50	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26,202 wr TRACE 12.3 4 5 0 TRACE 12.3 4 5 10 TRACE 12.3 4 5
Keysight Spectrum Ana R RL RF Center Freq 2. Ref 0 10 dB/div Ref 2 0.50	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26,202 wr TRACE 12.3 4 5 0 TRACE 12.3 4 5 10 TRACE 12.3 4 5
Keysight Spectrum Ana R RL RF Center Freq 2.: Ref 0 10 dB/div Ref 2 0.50	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr 05:42:02 PM Aug 26,202 wr 01:42:02 PM Aug 26,202 wr 01:42:02 PM Aug 26,202 vr 01:42:02 PM Au
Keysight Spectrum Ana R RL RF Center Freq 2. Ref 0 10 dB/div Ref 2 0.50	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr 05:42:02 PM Aug 26,202 wr 01:42:02 PM Aug 26,202 wr 01:42:02 PM Aug 26,202 vr 01:42:02 PM Au
Reysight Spectrum Anna RL RF Center Freq 2 Ref 0 10.5 Ref 0 10.5	Band Edg		LE 1M 24	STATUS O2MHz Emis ALIGN AUTO Avg Type: Log-P	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26,202 wr TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 10 TRACE 12:3 4
Keysight Spectrum Ana R RL RF Center Freq 2. Ref 0 10 dB/div Ref 2 0.50	Band Edc		LE 1M 24	STATUS	#Sweep 100.0 ms (1001 pts SSION 05:42:02 PM Aug 26,202 wr 05:42:02 PM Aug 26,202 wr 01:42:02 PM Aug 26,202 wr 01:42:02 PM Aug 26,202 vr 01:42:02 PM Au
Keysight Spectrum Ana R RL RF Center Freq 2.: Ref O 10 dB/div Ref Z 10.5	Band Edg	ge NVNT B	ULSE 1M 24	STATUS	25weep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26,202 wr 05:42:02 PMAug 26,202 wr 05:42:02 PMAug 26,202 05:42:02 PMAug 26,202 05:
Keysight Spectrum Ana R RL RF Center Freq 2.: Ref O 10 dB/div Ref Z 10.50	Band Edg	PNO: Fast →→ T IFGain:Low → T # # # # # # # # # # # # #	ULSE 1M 24	STATUS	45weep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26,202 wr TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 10 TRACE 12:3 4 5
Keysight Spectrum Ana RL RF Center Freq 2. Ref O O dB/div Ref O 10.5 Ref O 0.500 Ref O 9.50 Ref O -9.50 Ref O -9.50 Ref O Start 2.30600 G Ref O Start 2.30600 G Ref Start 2.30600 G Res BW 100 kl R 1 1 1 2 1 1 1 3 1 1 1	Band Edg	ge NVNT B Isense:P PNO: Fast IFGain:Low # Image: Sense: P # Image: Sense: P # Image: Sense: P Image: P <td>ULE 1M 24</td> <td>STATUS</td> <td>45weep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26,202 wr TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 10 TRACE 12:3 4 5</td>	ULE 1M 24	STATUS	45weep 100.0 ms (1001 pts SSION 05:42:02 PMAug 26,202 wr TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 0 TRACE 12:3 4 5 10 TRACE 12:3 4 5
Keysight Spectrum Ana R RL RF Center Freq 2. Ref Q In GB/div Ref Q 10 dB/div Ref Q 19 db 19 db -29 db	Band Edg	ge NVNT B Isense:P PNO: Fast IFGain:Low # Image: Sense: P # Image: Sense: P # Image: Sense: P Image: P <td>ULE 1M 24</td> <td>STATUS</td> <td>45weep 100.0 ms (1001 pts 5500 5542:02 MAug 26,202 wr TRACE 12:34 5 0 TYPE NNNN Mkr1 2.402 2 GH: -1.950 dBn 1 5top 2.40600 GH: 5weep 100.0 ms (1001 pts</td>	ULE 1M 24	STATUS	45weep 100.0 ms (1001 pts 5500 5542:02 MAug 26,202 wr TRACE 12:34 5 0 TYPE NNNN Mkr1 2.402 2 GH: -1.950 dBn 1 5top 2.40600 GH: 5weep 100.0 ms (1001 pts
Keysight Spectrum Ana R RL RF Center Freq 2.: Ref 0 10 dB/div Ref 2 10.5	Band Edg	ge NVNT B Isense:P PNO: Fast IFGain:Low # Image: Sense: P # Image: Sense: P # Image: Sense: P Image: P <td>ULE 1M 24</td> <td>STATUS</td> <td>45weep 100.0 ms (1001 pts 5500 5542:02 PM Aug 26,202 Wr TRACE 1234 5 0 TYPE M WWW DET P NNNN Mkr1 2.402 2 GH -1.950 dBn 1 5top 2.40600 GH 5weep 100.0 ms (1001 pts</td>	ULE 1M 24	STATUS	45weep 100.0 ms (1001 pts 5500 5542:02 PM Aug 26,202 Wr TRACE 1234 5 0 TYPE M WWW DET P NNNN Mkr1 2.402 2 GH -1.950 dBn 1 5top 2.40600 GH 5weep 100.0 ms (1001 pts
Keysight Spectrum Ana R RL RF Center Freq 2.: Ref 0 10 dB/div Ref 2 10.5	Band Edg	ge NVNT B Isense:P PNO: Fast IFGain:Low # Image: Sense: P # Image: Sense: P # Image: Sense: P Image: P <td>ULE 1M 24</td> <td>STATUS</td> <td>45weep 100.0 ms (1001 pts 5500 5542:02 PM Aug 26,202 Wr TRACE 1234 5 0 TYPE M WWW DET P NNNN Mkr1 2.402 2 GH -1.950 dBn 1 5top 2.40600 GH 5weep 100.0 ms (1001 pts</td>	ULE 1M 24	STATUS	45weep 100.0 ms (1001 pts 5500 5542:02 PM Aug 26,202 Wr TRACE 1234 5 0 TYPE M WWW DET P NNNN Mkr1 2.402 2 GH -1.950 dBn 1 5top 2.40600 GH 5weep 100.0 ms (1001 pts



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Keysight Sp R L	ectrum Analyzer RF 5	- Swept SA 50 Ω AC	SEN:	SE:PULSE	ALIGN AUTO		05:47	:09 PM Aug 26, 202
		0000000 GHz			Avg Typ	e: Log-Pwr	00.17	TRACE 1 2 3 4 5 TYPE MWWW
			PNO: Wide +++ IFGain:Low	Trig: Free Run #Atten: 30 dB	AvgiHold	l: 100/100		DET P NNNI
	Ref Offset					Ν		0 232 GH 1.833 dBi
) dB/div	Ref 20.5			Y				
10.5								
500					1			
				m				
9.50					<u> </u>			
19.5				1				
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39.5			+					
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9.5 - Mark	with the start	M.N.C.					- Insulation (milester	enrichtente
69.5								
	480000 GI	Hz						n 8.000 MH
	100 kHz		#VBV	V 300 kHz		#Swe	ep 100.0 r	ns (1001 pt
G								
					STATUS			
		Band Edg	e NVNT	BLE 1M	status 2480MHz	Emissio	on	
Keysight Sp	ectrum Analyzer	- Swept SA			2480MHz	Emissio		
Keysight Sp R L	RF 5	2.0	SEN:	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr		:22 PM Aug 26, 202 TRACE 1 2 3 4 5
Keysight Sp R L	RF 5	- Swept SA 50 Ω AC 5000000 GHz			2480MHz Align auto Avg Typ			
Keysight Sp R L	⊮ 5 Freq 2.526	- Swept SA 50 Ω AC 5 50000000 GHz	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	22 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
Keysight Sp RL Center F	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	22 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWWM DET P N N N N
Keysight Sp RL Center F	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	22 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
Keysight Sp RL Center F	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	22 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
C dB/div	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	22 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
C dB/div 0 dB/div 0 dB/div 0 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	22 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
C dB/div 0 dB/div 0 dB/div 0 9.50 19.50	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	222 PMAug 26, 202 TRACE 11 23 4 5 DET P NNNN 480 2 GH 1.837 dBr
C dB/div C dB/d	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	222 PMAug 26, 202 TRACE 11 23 4 5 DET P NNNN 480 2 GH 1.837 dBr
Content of the second s	RF 5	- Swept SA 50 Ω AC 50000000 GHz t 0.5 dB	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	222 PMAug 26, 202 TRACE 11 23 4 5 DET P NNNN 480 2 GH 1.837 dBr
Content of the second s	RF 5	- Swept SA 50 2 AC 50000000 GHz t 0.5 dB 50 dBm	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	222 PMAug 26, 202 TRACE 11 23 4 5 DET P NNNN 480 2 GH 1.837 dBr
Keysight Sp R L	RF 5	- Swept SA 50 2 AC 50000000 GHz t 0.5 dB 50 dBm	PNO: Fast	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr	05:47 Mkr1 2.	222 PMAug 26, 202 TRACE 11 23 4 5 DET P NNNN 480 2 GH 1.837 dBr
Code (1997) Control (Ref Offse Ref 20.5	- Swept SA 50 2 AC 50000000 GHz t 0.5 dB 50 dBm	SEN: PNO: Fast →→ IFGain:Low	SE:PULSE	2480MHz Align auto Avg Typ	e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 20, 20, 21 TRACE 1 2 3 4 5 TYPE M WWW DET P NNNN 480 2 GH 1.837 dBr 21 83 dE 21 83 dE 21 83 dE 21 83 dE 21 83 dE 21 83 dE
CodB/div CodB/d	Ref Offse Ref Offse Ref 20.5 1 1 2 7600 GHz 100 kHz	- Swept SA 50 2 AC 50000000 GHz t 0.5 dB 50 dBm	SEN: PNO: Fast →→ IFGain:Low	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8
Construction of the second sec	Ref Offse Ref 20.5	- Swept SA 50 2 AC 50000000 GHz t 0.5 dB 50 dBm 	SEN: PNO: Fast →→ IFGain:Low #VBM	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8
Collector of the second	Ref 0ffse Ref 20.5 1 1 2 2 7600 GHz 100 kHz 100 kHz 1	- Swept SA 50 02 AC 50000000 GHz t 0.5 dB 50 dBm 	SEN: PNO: Fast →→ IFGain:Low #VBW #VBW	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8
CodB/div CodB/d	Ref Offse Ref 2.526	- Swept SA 50 Q AC 50000000 GHz t 0.5 dB 10 dBm 10 dBm 1	SEN: PNO: Fast → IFGain:Low #VBW #VBW z -1.837 d z -56.766 d z -56.761 d	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8
CodB/div CodB/d	Ref Offse Ref Offse Ref 20.5	- Swept SA 50 Q AC 5000000 GHz t 0.5 dB 10 dBm 40.5	SEN: PNO: Fast → IFGain:Low #VBW #VBW z -1.837 d z -56.766 d z -57.71 d	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8
CodB/div CodB/d	Ref Offse Ref Offse Ref 20.5	- Swept SA 50 Q AC 5000000 GHz t 0.5 dB 10 dBm 40.5	SEN: PNO: Fast → IFGain:Low #VBW #VBW z -1.837 d z -56.766 d z -57.71 d	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8
0 dB/div 9 0 dB/div 9 10.6 500 9.50 9 505 505 505 505 505 505 505	Ref Offse Ref Offse Ref 20.5	- Swept SA 50 Q AC 5000000 GHz t 0.5 dB 10 dBm 40.5	SEN: PNO: Fast → IFGain:Low #VBW #VBW z -1.837 d z -56.766 d z -57.71 d	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8
Center F CodB/div CodB/d	Ref Offse Ref Offse Ref 20.5	- Swept SA 50 Q AC 5000000 GHz t 0.5 dB 10 dBm 40.5	SEN: PNO: Fast → IFGain:Low #VBW #VBW z -1.837 d z -56.766 d z -57.71 d	SE:PULSE Trig: Free Run #Atten: 30 dB		e: Log-Pwr :: 100/100	05:47	22 PM Aug 26, 202 TRACE 12 3 4 5 TYPE MANNA DET P NNNN 480 2 GH 1.837 dBr 21.83 d 21.83 d 21.8

Band Edge NVNT BLE 1M 2480MHz Ref



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nter Fred	RF 50 Ω AC		SENS	SE:PULSE	ALIGN AUTO	og Dur		PM Aug 26, 2
	2.4020000	Р	NO: Wide	Trig: Free Run	Avg Type: L Avg Hold: 10	og-Pwr 0/100	1	ACE 1 2 3 4
		IF	Gain:Low	#Atten: 30 dB		ML	r1 2.402	
	ef Offset 0.5 dB ef 20.00 dBm	ı						732 dE
o								
0				≬ 1				
				man	m			
			N		N.			
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o		mm				my		
		w.	Ŷ		V	w.		
0 mm	man	1					all	MUMU
0								
0								
nter 2.402	2000 GHz						Span	8.000 N
es BW 10	0 kHz		#VBW	V 300 kHz		Sweep	1.000 ms	; (1001 p
					STATUS			
	Ba	nd Eda	NVNT	BLE 2M	2402MHz E	missior)	
Koursight Sportru	m Analyzer - Swept SA						-	
RL	RF 50 Ω AC		SENS	SE:PULSE	ALIGN AUTO Avg Type: L	og-Pwr	05:49:53 TR	PM Aug 26, 2
RL		00 GHz	NO: Fast	SE:PULSE Trig: Free Run #Atten: 30 dB		og-Pwr 10/100	TR	
nter Fred	rf 50 Ω AC q 2.3560000	00 GHz IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	TR	PM Aug 26, 2 ACE 1 2 3 4 TYPE M WWW DET P N N 1
nter Frec	RF 50 Ω AC	00 GHz F IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	Mkr1 2.4	PMAug 26,2 ACE 1 2 3 TYPE MWWW DET P N N T
nter Frec	RF 50 Ω AC 2.35600000 Ref Offset 0.5 dB	00 GHz F IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	Mkr1 2.4	PM Aug 26, 2 ACE 1 2 3 4 TYPE M WWW DET P N N 1
nter Frec	RF 50 Ω AC 2.35600000 Ref Offset 0.5 dB	00 GHz F IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	Mkr1 2.4	PM Aug 26, 2 ACE 1 2 3 4 TYPE M WWW DET P N N 1 DET P N N 1
RL nter Frec dB/div R g	RF 50 Ω AC 2.35600000 Ref Offset 0.5 dB	00 GHz F IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	Mkr1 2.4	PM Aug 26, 2 ACE 1 2 3 4 TYPE M WWW DET P N N 1 DET P N N 1
RL nter Frec dB/div R 9 0 0 0	RF 50 Ω AC 2.35600000 Ref Offset 0.5 dB	00 GHz F IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	Mkr1 2.4	PM Aug 26, 2 ACE 1 2 3 4 TYPE M WWW DET P N N 1 DET P N N 1
RL nter Frec dB/div R 9 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC 2.35600000 Ref Offset 0.5 dB	00 GHz F IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	Mkr1 2.4	PMAug 26, 2 ACE 1 2 3 4 TYPE MWWW DET P N N 1 02 2 G 446 dE
RL mter Frec dB/div R 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC 2.35600000 Ref Offset 0.5 dB	00 GHz F IF	NO: Fast	Trig: Free Run	Avg Type: L	0/100	Mkr1 2.4	PMAug 26, 2 ACE 1 2 3 4 TYPE MWWW DET P N N 1 02 2 G 446 dE
RL nter Frec dB/div R 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC Q 2.35600000 AC Ref Offset 0.5 dB Ref 20.00 dBn	n	Gain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: L Avg Hold: 10	0/100	Mkr1 2.4	PMAug 26, 2 ACE 1 2 3 4 TYPE MWWW DET P N N 1 02 2 G 446 dE
RL nter Frec dB/div R 9 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC Q 2.35600000 AC Ref Offset 0.5 dB Ref 20.00 dBn	n	Gain:Low	Trig: Free Run	Avg Type: L Avg Hold: 10	0/100	Mkr1 2.4	PMAug 26, 2 ACE 1 2 3 4 TYPE MWWW DET P N N 1 02 2 G 446 dE
RL nter Frec R dB/div R 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC Q.35600000 Ref Offset 0.5 dB Ref 20.00 dBn Ref 20.00 dBn Ref 20.00 dBn Ref 20.00 dBn	n	Gain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: L Avg Hold: 10	0/100	тк Mkr1 2.4(-3.	PMAug 26, 2 Ade 11 2 3 4 Yre M Were Det P NNH D2 2 G 446 dE
RL nter Frec B/div R 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC Q 2.3560000 Ref Offset 0.5 dB Ref 20.00 dBn	n	PNO: Fast ↔ Gain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: L Avg Hold: 10		۲۳ Mkr1 2.40 -3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE
RL nter Frec B B C C C C C C C C C C C C C	RF 50 Ω AC Q 2.35600000 AC Ref Offset 0.5 dB Bef 20.00 dBn AC Ref Offset 0.5 dB AC AC Ref 0.00 dBn AC AC AC AC AC Ref 0.00 dBn AC AC AC AC AC	00 GHz	PNO: Fast ↔ Gain:Low #VBM	Trig: Free Run #Atten: 30 dB	Avg Type: L Avg Hold: 10	0/100	۳۳ Mkr1 2.4(-3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE
RL nter Frec R A A A A A A A A A A A A A	RF 50 Ω AC 2.35600000 2.35600000 2.35600000 Ref Offset 0.5 dB 2.85600000 2.85600000 Ref 20.00 dBn 2.95600000 2.95600000 0 GHz 2.900 kHz 2.900 kHz	2.402 2 GHz	PNO: Fast ↔ Gain:Low #VBW	Trig: Free Run #Atten: 30 dB	Avg Type: L Avg Hold: 10	0/100	۲۳ Mkr1 2.40 -3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE
RL nter Frec R A A A A A A A A A A A A A	RF 50 Ω AC 2.35600000 2.35600000 2.35600000 Ref Offset 0.5 dB 2.35600000 2.356000000 Ref Offset 0.5 dB 2.356000000 2.356000000 Ref Offset 0.5 dB 2.356000000000000 2.356000000000000000000000000000000000000	X 2.402 2 GHz 2.400 0 GHz	PNO: Fast ↔ Gain:Low #VBW #VBW	V 300 kHz	Avg Type: L Avg Hold: 10	0/100	۳۳ Mkr1 2.4(-3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE
RL nter Frec R AB/div R 0 0 0 0 0 0 0 0 0 0 0 0 0	RF 50 Ω AC Q.35600000 2.35600000 2.35600000 Ref Offset 0.5 dB 2.35600000 2.35600000 Ref 20.000 dBn 2.35600000 2.35600000 Ref 20.000 dBn 2.35600000 2.35600000 Ref 0.5 dB 2.35600000 2.35600000 Ref 0.5 dB 2.35600000 2.356000000 Ref 0.5 dB 2.35600000 2.356000000000000000000000000000000000000	X 2.400 0 GHz	PNO: Fast ↔ Gain:Low #VBW	V 300 kHz	Avg Type: L Avg Hold: 10	0/100	۳۳ Mkr1 2.4(-3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE
RL nter Frec B/div R C C C C C C C C C C C C C	RF 50 Ω AC 2.35600000 2.35600000 2.35600000 Ref Offset 0.5 dB 2.35600000 2.356000000 Ref Offset 0.5 dB 2.356000000 2.356000000 Ref Offset 0.5 dB 2.356000000000000 2.356000000000000000000000000000000000000	X 2.402 2 GHz 2.400 0 GHz	PNO: Fast ↔ Gain:Low #VBW #VBW	V 300 kHz	Avg Type: L Avg Hold: 10	0/100	۳۳ Mkr1 2.4(-3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE
RL nter Frec R AB/div R AB/div R AB/di	RF 50 Ω AC 2.35600000 2.35600000 2.35600000 Ref Offset 0.5 dB 2.35600000 2.356000000 Ref Offset 0.5 dB 2.356000000 2.356000000 Ref Offset 0.5 dB 2.356000000000000 2.356000000000000000000000000000000000000	X 2.402 2 GHz 2.400 0 GHz	PNO: Fast ↔ Gain:Low #VBW #VBW	V 300 kHz	Avg Type: L Avg Hold: 10	0/100	۳۳ Mkr1 2.4(-3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE
RL nter Frec B/div R C C C C C C C C C C C C C	RF 50 Ω AC 2.35600000 2.35600000 2.35600000 Ref Offset 0.5 dB 2.35600000 2.356000000 Ref Offset 0.5 dB 2.356000000 2.356000000 Ref Offset 0.5 dB 2.356000000000000 2.356000000000000000000000000000000000000	X 2.402 2 GHz 2.400 0 GHz	PNO: Fast ↔ Gain:Low #VBW #VBW	V 300 kHz	Avg Type: L Avg Hold: 10	0/100	۳۳ Mkr1 2.4(-3 -3 	PPMaug 26, 2 Ade 1 2 3 4 Yree Mwww Det P NNH D2 2 G 446 dE

Band Edge NVNT BLE 2M 2402MHz Ref



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Keysight Spectrum Analyzer -	Swept SA						
RL RF 50	Ω AC	SENSE	:PULSE	ALIGN AUTO	og Pwr	05:55:3	7 PM Aug 26, 202
enter Freq 2.480	PI		Trig: Free Run	Avg Type: L Avg Hold: 10	00/100		TYPE NNNN
		Gain:Low	#Atten: 30 dB			4 6 46 7	-
Ref Offset					M	kr1 2.480	0 192 GH .501 dBr
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enter 2.480000 GH	Iz	-41 /m14/	200 60-		6		8.000 MH
Res BW 100 kHz		#VBW	300 kHz		Swee	p 1.000 m	s (זיטטר pts
G							
				STATUS			
-	Band Edge	e NVNT I	BLE 2M 2	status 2480MHz E	missio	n	
Keysight Spectrum Analyzer -	Swept SA			2480MHz E	missio		- • • •
Keysight Spectrum Analyzer - R L RF 50	Swept SA Ω Ω AC	SENSE	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr	05:55:4	1 PM Aug 26, 202
Keysight Spectrum Analyzer - R L RF 50	Swept SA D Q AC 000000 GHz P	NO: Fast		2480MHz E	.og-Pwr	05:55:4	1 PM Aug 26, 202 1 RACE 1 2 3 4 5 TYPE MWWWW DET P N N N N
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526	Swept SA 0 Ω AC 0 0000000 GHz IF	SENSE	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI	1 PM Aug 26, 202 RACE 1 2 3 4 5 TYPE M WWW DET P N N N N
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526 Ref Offset	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PM Aug 26, 202 RACE 1 2 3 4 5 TYPE MWWW DET P N N N N 80 2 GH
Reysight Spectrum Analyzer - RL RF 50 enter Freq 2.5260 Ref Offset 0 dB/div Ref 20.00	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PM Aug 26, 202 RACE 1 2 3 4 5 TYPE MWWW DET P N N N N 80 2 GH
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset 0 dB/div Ref 20.01 og	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PM Aug 26, 202 RACE 1 2 3 4 5 TYPE M WWW DET P N N N N
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PM Aug 26, 202 RACE 1 2 3 4 5 TYPE MWWW DET P N N N N 80 2 GH
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset Ref 20.01 og 1.00 1.00	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PM Aug 26, 202 RACE 1 2 3 4 5 TYPE MWWW DET P N N N N 80 2 GH
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset O dB/div Ref 20.01 Og 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PM Aug 26, 202 RACE 1 2 3 4 5 TYPE MWWW DET P N N N N 80 2 GH
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset od B/div Ref Offset od B/div Ref 20.01 od 1 od 1 od 1 od 1 0.00 od 1 od 1 od 1 0 od 1 0 od 1 od 1 od 1	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PMAug 26, 202 RACE [1 2 3 4 5 TYPE [M WWWW DET P N N N N 80 2 GH; 360 dBn
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset OdB/div Ref Offset od 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 0	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PMAug 26, 202 RACE [1 2 3 4 5 TYPE [M WWWW DET P N N N N 80 2 GH; 360 dBn
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset od B/div Ref Offset 0 0 1 - - -	Swept SA 0 Ω AC 000000 GHz P IF 0.5 dB	NO: Fast	:PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PMAug 26, 202 RACE [1 2 3 4 5 TYPE [M WWWW DET P N N N N 80 2 GH; 360 dBn
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset 0 dB/div Ref 20.01 0 d 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 1 1 1 1<	Swept SA 20 AC 0000000 GHz P IF 0.5 dB 0 dBm	NO: Fast	PULSE	2480MHz E Align Auto Avg Type: L	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PMAug 26, 202 RACE [1 2 3 4 5 TYPE [M WWWW DET P N N N N 80 2 GH; 360 dBn
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset od B/div Ref Offset 0 0 1 - - -	Swept SA 20 AC 0000000 GHz P IF 0.5 dB 0 dBm	NO: Fast	PULSE	2480MHz E	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4	1 PMAug 26, 202 RACE [1 2 3 4 5 TYPE [M WWWW DET P N N N N 80 2 GH; 360 dBn
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.5260 Ref Offset 0 dB/div Ref 20.00 03 - - 0.00 - - 0.00 - - - 0.00 - - - - 0.00 - <td>Swept SA 20 AC 0000000 GHz P IF 0.5 dB 0 dBm</td> <td>NO: Fast</td> <td>PULSE</td> <td>2480MHz E</td> <td>.og-Pwr 00/100</td> <td>05:55:4 TI Mkr1 2.4 -3.</td> <td>1 PMAug 26, 202 RACE [] 2 3 4 5 TYPE M WWWW DET P NNNN 80 2 GH; 360 dBn -23 50 dB</td>	Swept SA 20 AC 0000000 GHz P IF 0.5 dB 0 dBm	NO: Fast	PULSE	2480MHz E	.og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMAug 26, 202 RACE [] 2 3 4 5 TYPE M WWWW DET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i Ref Offset 0 dB/div Ref 20.01 0 d 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 0.00 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 0.00 1 1 1 1 1 1 1 1<	Swept SA 20 AC 0000000 GHz P IF 0.5 dB 0 dBm	SENSE NO: Fast →→ Gain:Low	PULSE	2480MHz E	og-Pwr 30/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RL RF SC enter Freq 2.5261 Ref Offset 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td< td=""><td>Swept SA 20 AC 0000000 GHz P IF 0.5 dB 0 dBm</td><td>SENSE NO: Fast →→ Gain:Low</td><td>PULSE</td><td>2480MHz E</td><td>og-Pwr 00/100</td><td>05:55:4 TI Mkr1 2.4 -3.</td><td>1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB</td></td<>	Swept SA 20 AC 0000000 GHz P IF 0.5 dB 0 dBm	SENSE NO: Fast →→ Gain:Low	PULSE	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i OdB/div Ref Offset 0 dB/div Ref 20.00 0 dB/div Ref 20.01 0	Swept SA 20 AC 000000 GHz P F 0.5 dB 0 dBm	NO: Fast ↔ Gain:Low #VBW	PULSE Trig: Free Run #Atten: 30 dB	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RL RF 50 enter Freq 2.526i OdB/div Ref Offset Ref 20.01 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 1 0 0 0 0	Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz	SENSE NO: Fast →→ Gain:Low #VBW	Trig: Free Run #Atten: 30 dB	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RL RF SC Ref Offset 0 <td>Swept SA 2 Q AC 000000 GHz P F 0.5 dB 0 dBm </td> <td>NO: Fast → Gain:Low → #VBW * 3.360 dB</td> <td>Trig: Free Run #Atten: 30 dB</td> <td>2480MHz E</td> <td>og-Pwr 00/100</td> <td>05:55:4 TI Mkr1 2.4 -3.</td> <td>1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB</td>	Swept SA 2 Q AC 000000 GHz P F 0.5 dB 0 dBm 	NO: Fast → Gain:Low → #VBW * 3.360 dB	Trig: Free Run #Atten: 30 dB	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RL RF SC Ref Offset odb/div Ref Offset Odb/div Ref 20.01 Od Od <tho< td=""><td>Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz</td><td>SENSE NO: Fast →→ Gain:Low #VBW</td><td>Trig: Free Run #Atten: 30 dB</td><td>2480MHz E</td><td>og-Pwr 00/100</td><td>05:55:4 TI Mkr1 2.4 -3.</td><td>1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB</td></tho<>	Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz	SENSE NO: Fast →→ Gain:Low #VBW	Trig: Free Run #Atten: 30 dB	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer RL Sc Ref Offset odb/div Ref Offset Odb/div Ref Offset Odb/div Ref Offset Odb/div Ref Offset 0 <	Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz	SENSE NO: Fast →→ Gain:Low #VBW	Trig: Free Run #Atten: 30 dB	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RL RF SC Ref Offset odb/div Ref Offset Odb/div Ref 20.01 Od Od <tho< td=""><td>Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz</td><td>SENSE NO: Fast →→ Gain:Low #VBW</td><td>Trig: Free Run #Atten: 30 dB</td><td>2480MHz E</td><td>og-Pwr 00/100</td><td>05:55:4 TI Mkr1 2.4 -3.</td><td>1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB</td></tho<>	Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz	SENSE NO: Fast →→ Gain:Low #VBW	Trig: Free Run #Atten: 30 dB	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB
Keysight Spectrum Analyzer - RE SE Ref Offset 0 <td< td=""><td>Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz</td><td>SENSE NO: Fast →→ Gain:Low #VBW</td><td>Trig: Free Run #Atten: 30 dB</td><td>2480MHz E</td><td>og-Pwr 00/100</td><td>05:55:4 TI Mkr1 2.4 -3.</td><td>1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB</td></td<>	Swept SA 3 Q AC 000000 GHz P IF 0.5 dB 0 dBm 3 4 2.480 2 GHz 2.483 5 GHz 2.483 5 GHz 2.483 6 GHz	SENSE NO: Fast →→ Gain:Low #VBW	Trig: Free Run #Atten: 30 dB	2480MHz E	og-Pwr 00/100	05:55:4 TI Mkr1 2.4 -3.	1 PMANg 26, 202 RACE 1 2 3 4 5 PET P NNNN 80 2 GH; 360 dBn -23 50 dB

Band Edge NVNT BLE 2M 2480MHz Ref



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7. CONDUCTED RF SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-33.51	<=-20	Pass
NVNT	BLE 1M	2440	-42.51	<=-20	Pass
NVNT	BLE 1M	2480	-32.5	<=-20	Pass
NVNT	BLE 2M	2402	-49.82	<=-20	Pass
NVNT	BLE 2M	2440	-51.22	<=-20	Pass
NVNT	BLE 2M	2480	-51.52	<=-20	Pass



Shenzhen STS Test Services Co., Ltd.



Keysight Spectrum Anal		ourious in	VINT BLE 1	M 2402MHz Ref	
RL RF	50 Ω AC	SE	NSE:PULSE	ALIGN AUTO	05:42:18 PM Aug 26, 202
Center Freq 2.4	02000000 GHz	PNO: Wide +++	Trig: Free Run	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 TYPE M WWW
		IFGain:Low	Atten: 40 dB		
0 dB/div Ref 3	fset 0.5 dB 0.00 dBm			IVIK	r1 2.402 238 5 GH -1.955 dBr
.og					
20.0					
10.0					
0.00				∲ ¹	
10.0					
20.0					
30.0					
40.0					
50.0					
50.0					
				STATUS	
	yzer - Swept SA 50 Ω AC	SE	TBLE 1M 2	2402MHz Emissi	05:42:28 PM Aug 26, 202
RL RF	yzer - Swept SA	SE		2402MHz Emissi	05:42:28 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE M MAAAAAA
RL RF Center Freq 13	yzer - Swept SA 50 Ω AC 265000000 GH2	SE Z PNO: Fast ↔→	NSE:PULSE	2402MHz Emissi	05:42:28 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
Center Freq 13. Ref Of 0 dB/div Ref 3	yzer - Swept SA 50 Ω AC .265000000 GHz	SE Z PNO: Fast ↔→	NSE:PULSE	2402MHz Emissi	05:42:28 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
RL RF Center Freq 13. Ref 0f 0 dB/div Ref 3 20.0	yzer - Swept SA 50 Ω AC 265000000 GH2	SE Z PNO: Fast ↔→	NSE:PULSE	2402MHz Emissi	05:42:28 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN Mkr1 2.401 7 GH
RL Rf center Freq 13. Ref Of 0 dB/div Ref Of 20.0 10.0	yzer - Swept SA 50 Ω AC 265000000 GH2	SE Z PNO: Fast ↔→	NSE:PULSE	2402MHz Emissi	05:42:28 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN Mkr1 2.401 7 GH
RL Rf Center Freq 13. Ref 0f 0 dB/div Ref 0f 20.0 0 0.00 0	yzer - Swept SA 50 Ω AC 265000000 GH2	SE Z PNO: Fast ↔→	NSE:PULSE	2402MHz Emissi	05:42:28 PM Aug 26, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P NNNN
RL RF Center Freq 13. Ref 0f 0 dB/div Ref 0f 20.0 0 0.00 0.00 10.0 11.0	yzer - Swept SA 50 Ω AC 265000000 GH2	SE Z PNO: Fast ↔→	NSE:PULSE	2402MHz Emissi	05:42:28 PM aug 26, 202 TRACE [2345] TYPE [M WWWW DET P NNNN Mkr1 2.401 7 GH; -7.296 dBn
RL RF Center Freq 13. Ref Of Ref 3 0 dB/div Ref 01 20.0 0 10.0 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0	yzer - Swept SA 50 Ω AC 265000000 GH2 fset 0.5 dB 0.00 dBm	SE Z PNO: Fast ↔→	NSE:PULSE	2402MHz Emissi	05:42:28 PMag 26,202 TRACE [] 2 3 4 5 TIPE M WWW DETP NNNN Mkr1 2.401 7 GH; -7.296 dBn
RL RF center Freq 13. Ref 01 0 dB/div Ref 01 20.0 Ref 3 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1	yzer - Swept SA S0 Ω AC .265000000 GHz fset 0.5 dB 0.00 dBm	PNO: Fast IFGain:Low	NSE:PULSE	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	054228 PMug 26,230 TRACE [] 2,30 TYPE MUMMAN DET P NNN Mkr1 2.401 7 GH -7.296 dBn -2196 dB
RL RF Center Freq 13. 0 Bef Of 0.0 Ref Of 0.0 Ref 3 0.0 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1 0.00 1	yzer - Swept SA 50 Ω AC 265000000 GH2 fset 0.5 dB 0.00 dBm	PNO: Fast IFGain:Low	NSE:PULSE	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	054228 PMAug 26,023 TRACE [] 2345 TYPE MWWWW DETP NNNN Mkr1 2.4017 GH; -7.296 dBn
RL RF Center Freq 13. Ref Of O dB/div Ref 3 20 1 10.0 1 20.0 1 30.0 1 40.0 1 50.0 1 50.0 1 50.0 1 50.0 1	yzer - Swept SA S0 Ω AC .265000000 GHz fset 0.5 dB 0.00 dBm	PNO: Fast IFGain:Low	NSE:PULSE	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	05:42:28 PM ug 26, 23 42 TRACE [1 2 3 42 TYPE M WWWW DET P NNNN Mkr1 2.401 7 GH -7.296 dBn -21:96 dB
RL RF Center Freq 13. Ref Of Ref 3 Og Ref 01 10.0 Ref 3 0.00 1 0.00	yzer - Swept SA 50 Ω AC .265000000 GHz fset 0.5 dB 0.00 dBm	PNO: Fast IFGain:Low	NSE:PULSE	ALIGN AUTO AVIG TYPE: Log-Pwr Avg Hold: 10/10	054228 PMay 26,237 TRACE [] 2,37 TYPE MAY 26,237 DET P NNN Mkr1 2.4017 GH -7.296 dBn -2195 d 2 Stop 26.50 GH
RL RF Center Freq 13. Ref Of Ref 3 O dB/div Ref of Ref 3 O dB/div Ref of Ref 3 O dB/div Ref 0 O dB/div Ref 0 O dB/div Ref 3 O d0 Image: Ref 3 Image: Ref 3 Image	yzer - Swept SA 50 Ω AC 2065000000 GHz Fiset 0.5 dB 0.00 dBm	PNO: Fast IFGain:Low	NSE:PULSE	2402MHz Emissi ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	054228 PMay 26,237 TRACE [] 2,37 TYPE MAY 26,237 DET P NNN Mkr1 2.4017 GH -7.296 dBn -2195 d 2 Stop 26.50 GH
RL RF Center Freq 13. Ref Of Conter Freq 13. Ref Of	yzer - Swept SA 50 Ω AC .265000000 GHz Fset 0.5 dB 0.00 dBm 	2 PNO: Fast IFGain:Low 4 4 4 4 5 10 4 4 4 5 10 4 4 5 10 4 4 5 10 10 10 10 10 10 10 10 10 10	NSE:PULSE	2402MHz Emissi ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	05:42:28 PM Aug 26:02 TRACE [1:3:45 TYPE M WWWW DET P NNNN Mkr1 2.401 7 GH: -7.296 dBn -21:96 dB -21:96 dB 2 -21:96 dB 2 -21:96 dB -21:96 dB -
RL RF Center Freq 13. Ref Of Conter Freq 13. Ref Of	yzer - Swept SA 50 Ω AC .265000000 GHz fset 0.5 dB 0.00 dBm 	Z PNO: Fast IFGain:Low 4 4 4 4 4 4 4 5 1 4 4 5 1 4 4 4 4 4 4 4 4 4 4 4 4 4	MSE:PULSE	2402MHz Emissi ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	05:42:28 PM Aug 26:02 TRACE [1:3:45 TYPE M WWWW DET P NNNN Mkr1 2.401 7 GH: -7.296 dBn -21:96 dB -21:96 dB 2 -21:96 dB 2 -21:96 dB -21:96 dB -
RL RF Center Freq 13. Ref Of O dB/div Ref 3 20	yzer - Swept SA S0 Ω AC .265000000 GHz Fset 0.5 dB 0.00 dBm 	Z PNO: Fast IFGain:Low 4 4 4 4 4 4 4 5 1 4 4 5 1 4 4 4 4 4 4 4 4 4 4 4 4 4	MSE:PULSE	2402MHz Emissi ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	05:42:28 PM ug 26:23 A TRACE [1:2:40 DET P NNNN Mkr1 2.401 7 GH -7.296 dBn -21:96:46 -21:96:46 Stop 26:50 GH p 100.0 ms (30001 pts
RL RF Center Freq 13. Ref Of Conter Freq 14. Ref Of Conter Freq14. Ref Of	yzer - Swept SA 50 Ω AC .265000000 GHz fset 0.5 dB 0.00 dBm 	Z PNO: Fast IFGain:Low 4 4 4 4 4 4 4 5 1 4 4 5 1 4 4 4 4 4 4 4 4 4 4 4 4 4	MSE:PULSE	2402MHz Emissi ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	05:42:28 PM Aug 26:02 TRACE [1:3:45 TYPE M WWWW DET P NNNN Mkr1 2.401 7 GH: -7.296 dBn -21:96 dB -21:96 dB 2 -21:96 dB 2 -21:96 dB -21:96 dB -
RL RF Center Freq 13. Ref Of Ref 3 Og Ref Of Ref 3 Og Ref Of Ref 3 Og Ref 0 Og Ref 0 Og Ref 3 Start 0.03 GHz Ref 3 Res BW 100 kH Ref 3 N 1 1 S 1 1 N 1 1 N 1 1 S 1 1 N 1 1 N 1 1 N 1 1 N 1 1	yzer - Swept SA 50 Ω AC .265000000 GHz fset 0.5 dB 0.00 dBm 	Z PNO: Fast IFGain:Low 4 4 4 4 4 4 4 5 1 4 4 5 1 4 4 4 4 4 4 4 4 4 4 4 4 4	MSE:PULSE	2402MHz Emissi ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	05:42:28 PM ug 26:23 A TRACE [1:2:40 DET P NNNN Mkr1 2.401 7 GH -7.296 dBn -21:96:46 -21:96:46 Stop 26:50 GH p 100.0 ms (30001 pts
RL RF Center Freq 13. Ref Of Conter Freq 14. Ref Of Conter Freq14. Ref Of	yzer - Swept SA 50 Ω AC .265000000 GHz fset 0.5 dB 0.00 dBm 	Z PNO: Fast IFGain:Low 4 4 4 4 4 4 4 5 1 4 4 5 1 4 4 4 4 4 4 4 4 4 4 4 4 4	MSE:PULSE	2402MHz Emissi ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	оз:42:28 РМ Анду 26, 202 TRACE [, 23 45 ТУРЕ М ЖИКИ ОСТ Р ИНИИ МКГ1 2.401 7 GH: -7.296 dBn -21:96 dB -21:96 dB 2 -21:96 dB -21:96 dB



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Keysight Spe R L	ectrum Analyzer - RF 5		L CEN	SE:PULSE	ALIGN AUTO		05-44-5	2 PM Aug 26, 20
		000000 GHz	SEN	SEIPULSE	ALIGN AUTO Avg Type: L	og-Pwr	U5:44:5 T	RACE 1 2 3 4 5
	109 2.440	00000000112	PNO: Wide +++	Trig: Free Run	Avg Hold: 10	0/100		DET P N N N
			IFGain:Low	#Atten: 30 dB				-
	Ref Offset					Mkr	1 2.440 2	
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Res BW		112	#VBV	V 300 kHz		#Swee	סטיים 100.0 m ט	
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G					STATUS			
		Tx. Spuric	ous NVN	FBLE 1M	2440MHz E	missic	n	
Keysight Spe	ectrum Analyzer -	Swept SA						
RL	RF 5	0 Ω AC	SEN	SE:PULSE	ALIGN AUTO		05:45:0	2 PM Aug 26, 20
	40.00					D	-	PACE OF A STATE
enter Fi	req 13.26	5000000 GHz	PNO: Fast	Trig: Free Run	Avg Type: L Avg Hold: 10		т	RACE 1 2 3 4 5
enter Fi	req 13.26		PNO: Fast +++ IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: L	/10		RACE 1 2 3 4 5 TYPE MWWW DET P NNNN
enter Fi	•	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	
0 dB/div	Ref Offset Ref 20.5	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	
0 dB/div	Ref Offset	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	
0 dB/div og	Ref Offset	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	
0 dB/div 9g 10.5	Ref Offset	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	
0 dB/div 9g 10.5	Ref Offset	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	
0 dB/div 9g 500 3.50	Ref Offset	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	
0 dB/div 9g 10.5 500 9.50 9.5	Ref Offset	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	ACE 1 2 3 4 5 TYPE MWWW DET P NNNN
0 dB/div og 10.5 500 9.50 19.5 29.5	Ref Offset	5000000 GHz			Avg Type: L	/10	Mkr1 2.4	RACE 1 2 3 4 5 TYPE MWWW DET P NNNN
0 dB/div 9 9 500 9.50 19.5 29.5 39.5	Ref Offset	5000000 GHz			Avg Type: L Avg Hold: 10	/10	Mkr1 2.4	ACE 1 2 3 4 5 TYPE MWWW DET P NNNN
0 dB/div og 500 9.50 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	Ref Offset	5000000 GHz		#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10	Mkr1 2.4	RACE 2.3.4.5 TYPE WWWW DET NNNI 40.5 GH 456 dBr -22.00 dE
0 dB/div 99 9.50 9.50 9.50 9.50 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	Ref Offset Ref 20.5	5000000 GHz		#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10	Mkr1 2.4	RACE 2.3.4.5 TYPE WWWW DET NNNN 40.5 GH 456 dBr -22.09 dE
0 dB/div 9 9 9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.5	Ref Offset	5000000 GHz		#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10	Mkr1 2.4	RACE 2.3.4.5 TYPE WWWW DET NNNN 40.5 GH 456 dBr -22.09 dE
0 dB/div 9 9 9.50 9.50 9.50 9.50 9.55 9.55 9.55 9.5	Ref Offset Ref 20.5	5000000 GHz		#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10	Mkr1 2.4 -6	RACE [] 2 3 4 TYPE MYWWW DET P NNNT 40 5 GH 456 dBr
0 dB/div 9 9 9 9 9 0 0 5 500 0 9 5 9 5 9 5 9 5 9 5 9 5 9 5 9 5 9 5 9 5	Ref Offset Ref 20.5	5000000 GHz		#Atten: 30 dB	Avg Type: L Avg Hold: 10		Mkr1 2.4 -6.	RACE [] 2 3 4 TYPE MYWWW DET P NNNT 40 5 GH 456 dBr -22.00 db
0 dB/div 9 dB 10.5	Ref Offset Ref 20.5	5000000 GHz		#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE 2345 TYPE WWWW DET P NNNP 405 GH 456 dBr
0 dB/div 9 9 9 9 9 9 9 9 9 10.5 500 9.50 9.50 9.50 9.55 9.5 9.5 9.5 9.5 9.5 9.5 9.	Ref Offset Ref 20.5	5000000 GHz	IFGain:Low	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6.	RACE 2345 TYPE WWWW DET P NNNP 405 GH 456 dBr
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0 dB/div 9 9 9 50 9 5	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm	4 5 4 5 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE 2345 TYPE WWWW DET P NNNP 405 GH 456 dBr
0 dB/div 9 9 9 10.6 500 9.50 9.50 9.50 9.50 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm	4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 5 4 4 5 5 4 4 5 5 4 5 4 5	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE 2345 TYPE WWWW DET P NNNP 405 GH 456 dBr
0 dB/div 9 9 9 10.6 500 9.50 9.50 9.50 9.50 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm 0 dBm	4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 5 4 4 5 5 4 4 5 5 4 5 4 5	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE 2345 TYPE WWWW DET P NNNP 405 GH 456 dBr
0 dB/div 9 9 9 9 9 50 9 70 9 70	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm 0 dBm	4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 5 4 4 5 5 4 4 5 5 4 5 4 5	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE 2345 TYPE WWWW DET P NNNP 405 GH 456 dBr
0 dB/div 9 9 9 50 19 5 9 50 9 50 9 50 9 50 9 50 9 50 19 5 9 5 19 5 9 5 19 5	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm 0 dBm	4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 5 4 4 5 5 4 4 5 5 4 5 4 5	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE [] 2 3 4 TYPE MYWWW DET P NNNT 40 5 GH 456 dBr -22.00 db
0 dB/div 9 9 9 5 500 9 5 9 5 9 5 9 5 1 0.0 1 N 1 2 N 1 2 N 1 4 N 1 6 7 8 9 9 0	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm 0 dBm	4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 5 4 4 5 5 4 4 5 5 4 5 4 5	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10 Warnundel /	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE [] 2 3 4 TYPE MYWWW DET P NNNT 40 5 GH 456 dBr -22.00 db
0 dB/div 9 9 9 9 9 50 9 70 9 70	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm 0 dBm	4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 5 4 4 5 5 4 4 5 5 4 5 4 5	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE 2345 TYPE WWWW DET P NNNP 405 GH 456 dBr
0 dB/div 9 9 9.50 9.5	Ref Offset Ref 20.5	5000000 GHz 0.5 dB 0 dBm 0 dBm	4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 4 4 5 5 4 4 5 5 4 4 5 5 4 5 4 5	#Atten: 30 dB	Avg Type: L Avg Hold: 10	/10	Mkr1 2.4 -6. -6. Stop 100.0 ms	RACE [] 2 3 4 4 TVPE M WWW DET P NNN DET P NNN 40 5 GH 456 dB1

Tx. Spurious NVNT BLE 1M 2440MHz Ref



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Tx. Spurious NVNT BLE 1M 2480MHz Ref



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Keysight S										
RL enter F	RF		AC 000 GHz	S	ENSE:PULSE	ALIGN AU	ro g Type: Log-Pv	vr	05:49:59 TR	PM Aug 26, 20
	Teq 2	402000	000 GHZ	PNO: Wide 🔸	_ Trig: Free Run #Atten: 20 dB		g Hold: 100/100		1	ACE 1 2 3 4 5 YPE MWWW DET P N N N
				IFGain:Low	#Atten: 20 db			Mkr1		168 GH
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				#VE	300 kHz			Sweep ′	1.000 ms	(1001 pt
SG			Spuric				ATUS		1.000 ms	(1001 pt
Keysight S R L	RF	Tx malyzer - Swept 50 Ω	SA AC	ous NVN	IT BLE 2N	ALIGN AU	TATUS IHz Emi	ssion	05:50:34	PM Aug 26, 202
Keysight S R L	RF	Tx malyzer - Swept 50 Ω	SA	ous NVN	IT BLE 2N	A 2402M	TATUS IHz Emi	ssion	05:50:34 TR 1	PM Aug 26, 202 ACE 1 2 3 4 5 YPE M WWWW
Keysight S RL Center F	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PM Aug 26, 202 ACE 1 2 3 4 5 YPE M WWW DET P N N N DET P N N N DET G GH
Keysight S RL Center F	RF Freq 1 Ref	Tx analyzer - Swept 50 Ω 13.26500	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PM Aug 26, 202 ACE 1 2 3 4 5 YPE M WWW DET P N N N DET P N N N DET G GH
Keysight S RL Center F	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PM Aug 26, 202 ACE 1 2 3 4 5 YPE M WWWW DET P N N N DET P N N N DET G GH
Keysight Sr RL Center F	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PM Aug 26, 202 ACE 1 2 3 4 5 YPE M WWWW DET P N N N DET P N N N DET G GH
Keysight S RL enter F	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PMAug 26, 202 Acte 1 2 3 4 5 YPE MWWW DET P NNNN DET P NNNN DE G GH 389 dBn
C dB/div 0 dB/div 0 dB/div 0 dB/div 0 dB/div 0 dB/div 0 dB/div 0 dB/div 0 dB/div 0 dB/div	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PMAug 26, 202 Acte 1 2 3 4 5 YPE MWWW DET P NNNN DET P NNNN DE G GH 389 dBn
Keysight Sj RL eenter F 500 9,50 9,50 9,50 29,5	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PMAug 26, 202 Acte 1 2 3 4 5 YPE MWWW DET P NNNN DET P NNNN DE G GH 389 dBn
Keysight Si RL eenter F 0 dB/div 500 3.50 9.50 9.5 9.5 9.5 9.5 9.5 9.5	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	A 2402M	TATUS 1Hz Emi 19 Type: Log-Pv	ssion	05:50:34 TR 1 (r1 2.4 (PMAug 26, 202 Acte 1 2 3 4 5 YPE MWWW DET P NNNN DET P NNNN DE G GH 389 dBn
Keysight Si RL eenter F 0 dB/div 500 3.50 9.50 9.5 9.5 9.5 9.5 9.5 9.5	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	ALIGN AU ALIGN AU Avg	ATUS IHz Emi TTO g Type: Log-Pu g Hold: 10/10	ssion	05:50:34 TR 1 (r1 2.4 (PMAug 26, 202 Acte 1 2 3 4 5 YPE MWWW DET P NNNN DET P NNNN DE G GH 389 dBn
Code/div Code/di Code/div Code/div Code/div Code/div Code/div Code/di	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	ALIGN AU ALIGN AU Avg	ATUS IHZ EMI TO g Type: Log-Pu g Hold: 10/10	MI	05:50:34 TR 1 (r1 2.4 (PPAug 26, 202 ACE [1 2 3 4 5 YPE M WWWW D2 6 GH; 389 dBn -24.05 dB
Code/div Code/di Code/div Code/div Code/div Code/div Code/div Code/di	RF Freq 1 Ref	Tx nalyzer - Swept 50 Ω 13.26500 Offset 0.5 d	sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	ALIGN AU ALIGN AU Avg	ATUS IHZ EMI TO g Type: Log-Pu g Hold: 10/10	MI	05:50:34 TR 1 (r1 2.4 (PMAug 26, 2010 Adci 1 2 3 4 5 YPE MWWW DET PNNNN DET PNNNN DET SAGA 389 dBr
Keysight S RL eenter F 600 600 600 95 95 925 939.5 939.5 939.5 939.5 939.5 939.5 939.5 939.5 939.5 939.5	Ref Ref	Tx 50 Ω 3.26500 0ffset 0.5 c 10.50 dE 1 (sa ac 00000 GHz	DUS NVN s PNO: Fast ↔	IT BLE 2N	ALIGN AU ALIGN AU Avg	ATUS IHZ EMI TO g Type: Log-Pu g Hold: 10/10	MI	05:50:34 TR T (r1 2.4(-3.)	PMAug 26, 202 ACE [] 2 3 4 5 YPE M WWWW DET P NNNN D2 6 GH 389 dBn -24 05 dB
RL	Ref Ref 3 GHz	Tx snalyzer - Swept 150 20 13.26500 00ffset 0.5 c 10.50 dE 1 1 1 1 1 1 1 1 1 1 1 1 1	sa ac 00000 GHz	PNO: Fast IFGain:Low	IT BLE 2N	ALIGN AU ALIGN AU Avg	ATUS IHz Emi TO g Type: Log-Pu g Hold: 10/10	wr Mi	05:50:34 TR 1 -3.1	PMAg 26, 202 AOE [1 2 3 4 5 YPE M WWWM DET [P N N N 22 6 GH 389 dBn -24 05 dB
Keysight S RL Center F 0 dB/div 9 g 0 s 9.500 9.5	Ref Ref Ref 3 GHz	Tx snalyzer - Swept [50 dz] 13.26500 0ffset 0.5 c 10.50 dE 1	SA AC 0000 GHz B Jm 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	PNO: Fast → IFGain:Low	IT BLE 2N	ALIGN AU ALIGN AU Avg	ATUS	wr Mi	05:50:34 TR 1 -3.1	PMAug 26, 202 Acte 1 2 3 4 5 YPE MWWW DET P NNNN DET P NNNN DE G GH 389 dBn
Reysight S RL center F 0	RF req 1 Ref Ref 3 GH2 4 100	Tx snalyzer - Swept [50 dz] 13.26500 0ffset 0.5 c 10.50 dE 1	SA AC 00000 GHz B B B B B C C C C C C C C C C C C C C	PNC: Fast → IFGain:Low #VE	IT BLE 2N ENSE:PULSE Trig: Free Run #Atten: 20 dB		ATUS	wr Mi	05:50:34 TR (r1 2.4(-3.1	PMAg 26, 202 AOE [1 2 3 4 5 YPE M WWWM DET [P N N N 22 6 GH 389 dBn -24 05 dB
Code Joint State Comparison of	Ref Ref Ref 3 GHz 4 100	Tx snalyzer - Swept [50 dz] 13.26500 0ffset 0.5 c 10.50 dE 1	SA AC 00000 GHz B B B M 2.402 6 GH 2.402 6 GH 2.402 6 GH 2.402 4 7 4 GH	PNC: Fast → IFGain:Low #VE z -3.385 z -63.877 z -63.877 x -73.87 x -73.87 x -73.87 x -73.87 x - 73.87 x	IT BLE 2N ENSE:PULSE Trig: Free Run #Atten: 20 dB		ATUS	wr Mi	05:50:34 TR (r1 2.4(-3.1	PMAg 26, 202 AOE [1 2 3 4 5 YPE M WWWM DET [P N N N 22 6 GH 389 dBn -24 05 dB
Code/div Code/d	Ref Ref Ref 3 GHz 1 f	Tx snalyzer - Swept [50 dz] 13.26500 0ffset 0.5 c 10.50 dE 1	SA AC 0000 GHz BB Jm 3 3 4 2.402 6 GH 22.402 6 GH	PNO: Fast PNO: Fast IFGain:Low	IT BLE 2N ENSE:PULSE Trig: Free Run #Atten: 20 dB UIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		ATUS	wr Mi	05:50:34 TR (r1 2.4(-3.1	PMAg 26, 202 AOE [1 2 3 4 5 YPE M WWWM DET [P N N N 22 6 GH 389 dBn -24 05 dB
Keysight S RL center F 0	Ref Ref 3 GHz 1 1 1 1	Tx snalyzer - Swept [50 dz] 13.26500 0ffset 0.5 c 10.50 dE 1	SA AC 0000 GHz IB IM 2.402 6 GH 2.402 6 GH	PNO: Fast PNO: Fast IFGain:Low	IT BLE 2N ENSE:PULSE Trig: Free Run #Atten: 20 dB UIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		ATUS	wr Mi	05:50:34 TR (r1 2.4(-3.1	PMAg 26, 202 AOE [1 2 3 4 5 YPE M WWWM DET [P N N N 22 6 GH 389 dBn -24 05 dB
Code/div Code/di Code/di Code/div Code/div Code/div Code/div Code/di	Ref Ref 3 GHz 1 1 1 1	Tx snalyzer - Swept [50 dz] 13.26500 0ffset 0.5 c 10.50 dE 1	SA AC 0000 GHz IB IM 2.402 6 GH 2.402 6 GH	PNO: Fast PNO: Fast IFGain:Low	IT BLE 2N ENSE:PULSE Trig: Free Run #Atten: 20 dB UIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		ATUS	wr Mi	05:50:34 TR (r1 2.4(-3.1	PMag 26, 202 AOE [] 2 3 4 5 YPE YWWM DET P NNNN DET P NNNN 22 6 GH 389 dBr
Keysight S RL center F 0 dB/div 9 g 500 9.51	Ref Ref 3 GHz 1 1 1 1	Tx snalyzer - Swept 15.0 dE 10.50	SA AC 0000 GHz IB IM 2.402 6 GH 2.402 6 GH	PNO: Fast PNO: Fast IFGain:Low	IT BLE 2N ENSE:PULSE Trig: Free Run #Atten: 20 dB UIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		ATUS	wr Mi	05:50:34 TR (r1 2.4(-3.1	PMag 26, 202 AOE [] 2 3 4 5 YPE YWWM DET P NNNN DET P NNNN 22 6 GH 389 dBr
Keysight S; RL enter F 0 dB/div 9 9 500 93 94 1 0 dB/div 1 1 1 1 1 1 2 3 4 5 7 8 9	Ref Ref 3 GHz 1 1 1 1	Tx snalyzer - Swept 15.0 dE 10.50	SA AC 0000 GHz IB IM 2.402 6 GH 2.402 6 GH	PNO: Fast PNO: Fast IFGain:Low	IT BLE 2N ENSE:PULSE Trig: Free Run #Atten: 20 dB UIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		ATUS	wr Mi	05:50:34 TR (r1 2.4(-3.1	PMag 26, 202 AOE [] 2 3 4 5 YPE YWWM DET P NNNN DET P NNNN 22 6 GH 389 dBr

Tx. Spurious NVNT BLE 2M 2402MHz Ref



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	nalyzer - Swept SA						- ¢
RL RF	50 Ω AC .440000000 GHz	SENSE:	PULSE	ALIGN AUTO Avg Type: L	og-Pwr	05:53:21 TR	PM Aug 26, 20 ACE 1 2 3 4 YPE M WWW
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		IFGain:Low #	Atten. 20 ab		Mkr	1 2.440	
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Res BW 100 k		#VBW 3	300 kHz		Sweep	1.000 ms	
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	Tx. Spuri	ous NVNT	BLE 2M 2	440MHz E	mission		
Keysight Spectrum An		ous NVNT	BLE 2M 2	440MHz E	mission		
R L RF	nalyzer - Swept SA 50 Ω AC	SENSE:		ALIGN AUTO		05:53:55	PM Aug 26, 20
R L RF	nalyzer - Swept SA	SENSE:	PULSE		og-Pwr	05:53:55 TR. T	PM Aug 26, 20 ACE 1 2 3 4 5 YPE M WWW
R L RF	nalyzer - Swept SA 50 Ω AC	SENSE: Z PNO: Fast ↔	PULSE	ALIGN AUTO Avg Type: L	og-Pwr)/10	05:53:55 TR T	PM Aug 26, 20 ACE 1 2 3 4 5 YPE MWWW DET P N N N
RL RF enter Freq 1 Ref 0	alyzer - Swept SA 50 Ω AC 3.265000000 GH2	SENSE:	PULSE	ALIGN AUTO Avg Type: L	og-Pwr)/10	05:53:55 TR T kr1 2.4 4	PM Aug 26, 20 ACE 1 2 3 4 5 YPE M WWW DET P N N N 0 5 GH
RL RF enter Freq 1 Ref C dB/div Ref	nalyzer - Swept SA 50 Ω AC 3.265000000 GH2	SENSE:	PULSE	ALIGN AUTO Avg Type: L	og-Pwr)/10	05:53:55 TR T kr1 2.4 4	PM Aug 26, 20 ACE 1 2 3 4 5 YPE M WWW DET P N N N 0 5 GH
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RL RF enter Freq 1: 0 dB/div Ref 29	alyzer - Swept SA 50 Ω AC 3.265000000 GH2	SENSE:	PULSE	ALIGN AUTO Avg Type: L	og-Pwr)/10	05:53:55 TR T kr1 2.4 4	PMAug 26, 20: ACE 1 2 3 4 5 YPE M WWWW DET P N N N 10 5 GH
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RL RF enter Freq 1: odB/div Ref 0 od Ref 0 <tr< td=""><td>alyzer - Swept SA 50 Ω AC 3.265000000 GH2</td><td>SENSE:</td><td>PULSE</td><td>ALIGN AUTO Avg Type: L Avg Hold: 10</td><td>og-Pwr I/10 M</td><td>05:53:55 TR T kr1 2.44</td><td>PMAug 26, 20: ACE 1 2 3 4 5 YPE M WWWW DET P N N N 10 5 GH</td></tr<>	alyzer - Swept SA 50 Ω AC 3.265000000 GH2	SENSE:	PULSE	ALIGN AUTO Avg Type: L Avg Hold: 10	og-Pwr I/10 M	05:53:55 TR T kr1 2.4 4	PMAug 26, 20: ACE 1 2 3 4 5 YPE M WWWW DET P N N N 10 5 GH
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RL RF enter Freq 1: odB/div Ref 0	alyzer - Swept SA 50 Ω AC 3.265000000 GH2	SENSE:	PULSE	ALIGN AUTO Avg Type: L Avg Hold: 10	og-Pwr I/10 M	05:53:55 TR T kr1 2.4 4	PMAug 26, 20: ACE 1 2 3 4 5 YPE M WWWW DET P N N N 10 5 GH
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RL RF enter Freq 1: Ref 0 0 dB/div Ref 0 500	nalyzer - Swept SA 50 Ω AC 3.265000000 GHz Dffset 0.5 dB 10.50 dBm 1	Z PNO: Fast IFGain:Low 4 ↓ 5	PULSE	ALIGN AUTO Avg Type: L Avg Hold: 10	og-Pwr //10 M	05:53:55 TR kr1 2.44 -3.0	PMAug 26, 20 ACE 1 2 3 4 PE M WWW DET IP NN NN DET IP NN NN NN NN DET IP NN NN NN NN DET IP NN NN NN NN NN NN DET IP NN
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RL RF enter Freq 1: 0 dB/div Ref 0	nalyzer - Swept SA 50 Ω AC 3.265000000 GHz Diffset 0.5 dB 10.50 dBm 1 A 4 4 4 2.440 5 G 26.462 1 G 4.881 1 G	Z PNO: Fast IFGain:Low 4 ↓ 4 ↓ 4 ↓ 5 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	PULSE Trig: Free Run FAtten: 20 dB	ALIGN AUTO Avg Type: L Avg Hold: 10	og-Pwr I/10 M	05:53:55 TR -3.(PMAug 26, 20 ACE 1 2 3 4 PE M WWW DET IP NN NN DET IP NN NN NN NN DET IP NN NN NN NN DET IP NN NN NN NN NN NN DET IP NN
enter Freq 1 Ref C O dB/div Ref C O dB/div Ref C S0 Image: Comparison of the compa	halyzer - Swept SA 50 Ω AC 3.265000000 GH2 Diffset 0.5 dB 10.50 dBm 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4	Z PNO: Fast IFGain:Low 4 ↓ 4 ↓ 4 ↓ 5 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	PULSE Trig: Free Run FAtten: 20 dB	ALIGN AUTO Avg Type: L Avg Hold: 10	og-Pwr I/10 M	05:53:55 TR -3.(PMAug 26, 20 ACE 1 2 3 4 PE M WWW DET IP NN NN DET IP NN NN NN NN DET IP NN NN NN NN DET IP NN NN NN NN NN NN DET IP NN
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Tx. Spurious NVNT BLE 2M 2440MHz Ref



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Keysight Sp R L	RF	TX nalyzer - Swep 50 Ω	t SA AC	Hz	IS NVN	NT BL SENSE:PULSE → Trig: I		ALIG		Emiss	sion	05:56:2 Ti	1 PM Aug 26, 20 RACE 1 2 3 4 1 TYPE M WWW DET P N N N
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Keysight Sg RL enter F 0 dB/div 90 </td <td>Ref Ref 3 GHz</td> <td>Tx nalyzer - Swep 59 2 3.26500 00ffset 0.5 0 10.50 dl 1</td> <td>t SA AC 00000 GH</td> <td>Hz</td> <td>IS NVN NO: Fast → Gain:Low</td> <td>NT BL SENSE:PULSE → Trig: I</td> <td>E 2M /</td> <td>ALIG</td> <td></td> <td>Emiss Log-Pwr 10/10</td> <td>M</td> <td>05:56:2 T (r1 2.4 -3.</td> <td>1 PM Aug 26, 20 1 PM Aug 26, 20 RACCE 12.3.4 PTVPE M VMWM DET P NNN1 80 2 GH 309 dB1 -24.06 d</td>	Ref Ref 3 GHz	Tx nalyzer - Swep 59 2 3.26500 00ffset 0.5 0 10.50 dl 1	t SA AC 00000 GH	Hz	IS NVN NO: Fast → Gain:Low	NT BL SENSE:PULSE → Trig: I	E 2M /	ALIG		Emiss Log-Pwr 10/10	M	05:56:2 T (r1 2.4 -3.	1 PM Aug 26, 20 1 PM Aug 26, 20 RACCE 12.3.4 PTVPE M VMWM DET P NNN1 80 2 GH 309 dB1 -24.06 d
Keysight Sp RL enter F 0 dB/div 90 </td <td>Ref Ref Ref 3 GHz / 100 I</td> <td>Tx nalyzer - Swep 59 2 3.26500 00ffset 0.5 0 10.50 dl 1</td> <td>t SA AC 00000 GH</td> <td>Hz</td> <td>IS NVN NO: Fast → Gain:Low</td> <td>JT BL SENSE:PULSE → Trig: I #Atter</td> <td>E 2M /</td> <td>ALIG</td> <td>N AUTO</td> <td>Emiss Log-Pwr 10/10</td> <td>Mi</td> <td>05:56:2 T (r1 2.4 -3. Stop 2.530 s</td> <td>1 PM Aug 26,20 1 PM Aug 26,20 RACE 1 23 4 1 TVPE M WWW pet P NNN 80 2 GH 309 dB1 -24.06 d</td>	Ref Ref Ref 3 GHz / 100 I	Tx nalyzer - Swep 59 2 3.26500 00ffset 0.5 0 10.50 dl 1	t SA AC 00000 GH	Hz	IS NVN NO: Fast → Gain:Low	JT BL SENSE:PULSE → Trig: I #Atter	E 2M /	ALIG	N AUTO	Emiss Log-Pwr 10/10	Mi	05:56:2 T (r1 2.4 -3. Stop 2.530 s	1 PM Aug 26,20 1 PM Aug 26,20 RACE 1 23 4 1 TVPE M WWW pet P NNN 80 2 GH 309 dB1 -24.06 d
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Keysight Sp RL enter F 0 dB/div 0 g 500 9.5	Ref Ref Ref 3 GHz 1 f 1 f	Tx nalyzer - Swep 59 2 3.26500 00ffset 0.5 0 10.50 dl 1	tsA AC 000000 Gł dB 3m 3m 2,480 2 25,266 5 4,958 7 7,546 6	Hz P IF(IS NVN NO: Fast → Gain:Low #VI 3.300 -55.68 -62.90 -67.42	JT BL SENSE:PULSE → Trig: I #Atter #Atter BW 300 I 9 dBm 3 dBm 2 dBm	E 2M :	ALIG	N AUTO	Emiss Log-Pwr 10/10	Mi	05:56:2 T (r1 2.4 -3. Stop 2.530 s	1 PM Aug 26,20 1 PM Aug 26,20 RACE 1 23 4 1 TVPE M WWW pet P NNN 80 2 GH 309 dB1 -24.06 d
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Keysight Sp RL enter F 0 dB/div 0 dB/div 90 000 95 96 97 89 90	Ref Ref Ref 3 GHz 1 f 1 f	Tx nalyzer - Swep 59 2 3.26500 00ffset 0.5 0 10.50 dl 1	tsA AC 000000 Gł dB 3m 3m 2,480 2 25,266 5 4,958 7 7,546 6	Hz P IF(IS NVN NO: Fast → Gain:Low #VI 3.300 -55.68 -62.90 -67.42	UT BL SENSE:PULSE → Trig: I #Atter #Atter BW 300 I 9 dBm 3 dBm 2 dBm	E 2M :	ALIG	N AUTO	Emiss Log-Pwr 10/10	Mi	05:56:2 T (r1 2.4 -3. Stop 2.530 s	1 PM Aug 26,20 1 PM Aug 26,20 RACE 1 23 4 1 TVPE M WWW pet P NNN 80 2 GH 309 dB1 -24.06 d
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Tx. Spurious NVNT BLE 2M 2480MHz Ref



APPENDIX 2- EUT TEST PHOTO

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

* * * * * END OF THE REPORT * * * *



Shenzhen STS Test Services Co., Ltd.