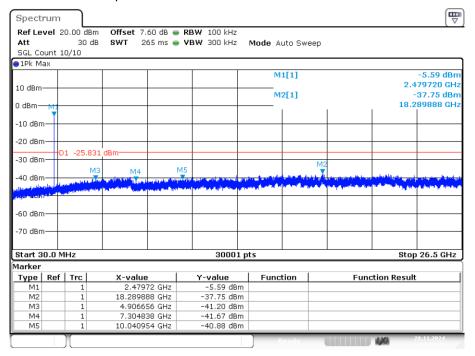


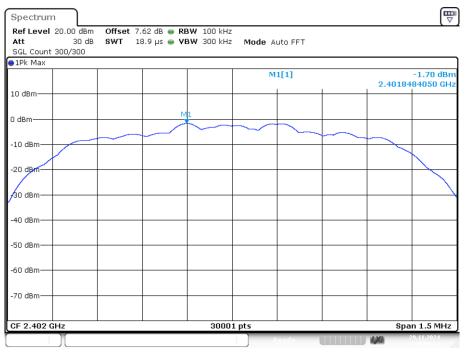
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref

Date: 28.NOV.2024 17:57:31



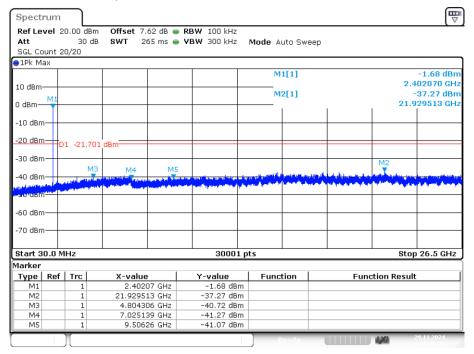
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission

Date: 28.NOV.2024 17:57:45



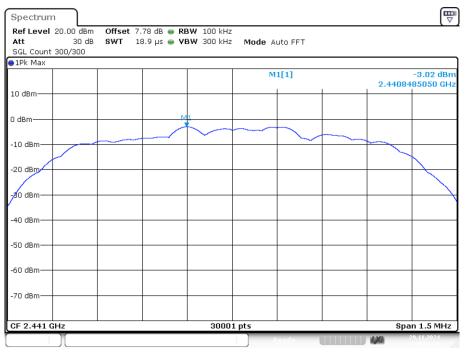
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref

Date: 29.NOV.2024 09:00:14



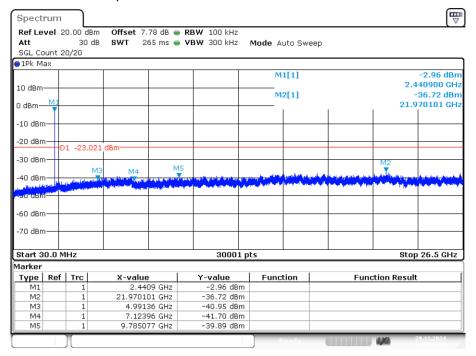
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission

Date: 29.NOV.2024 09:00:38



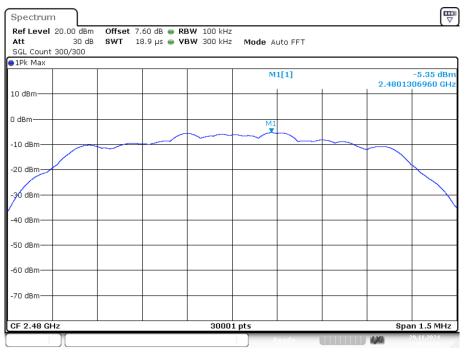
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref

Date: 29.NOV.2024 09:01:37



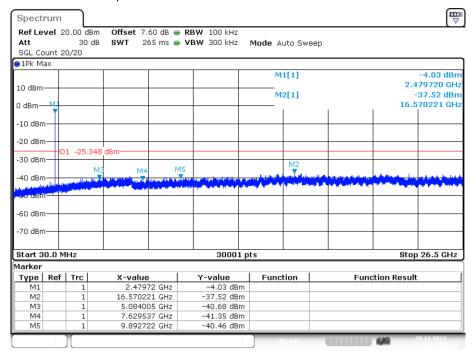
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission

Date: 29.NOV.2024 09:02:01



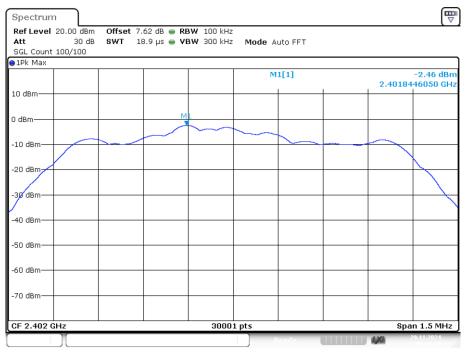
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref

Date: 29.NOV.2024 10:14:16



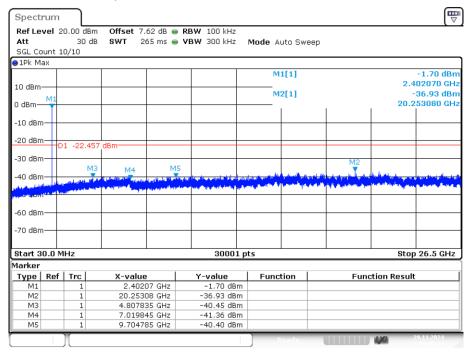
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission

Date: 29.NOV.2024 10:14:40



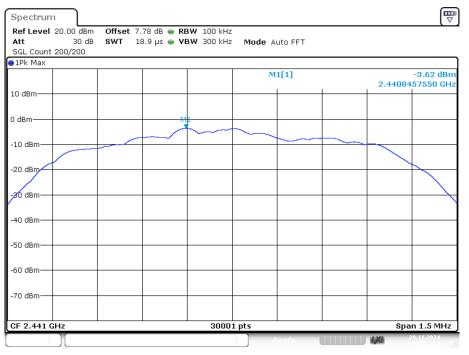
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref

Date: 29.NOV.2024 09:48:00



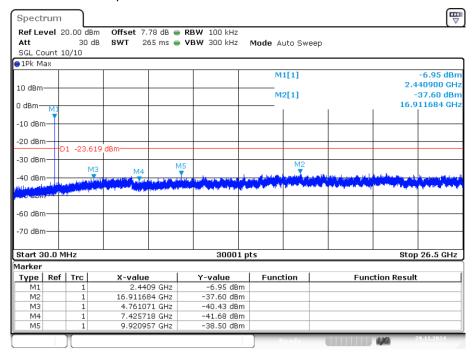
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission

Date: 29.NOV.2024 09:48:13



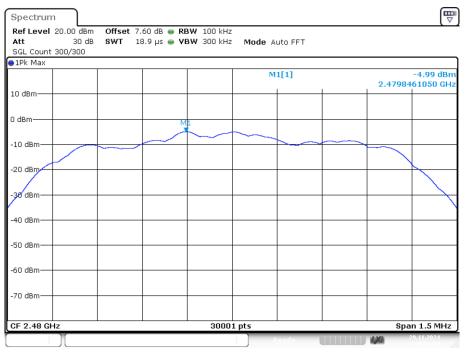
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref

Date: 29.NOV.2024 09:51:13



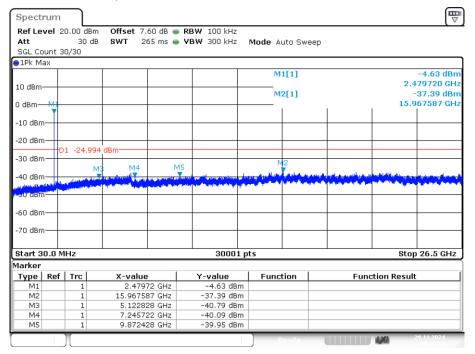
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission

Date: 29.NOV.2024 09:51:27



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref

Date: 29.NOV.2024 09:53:05

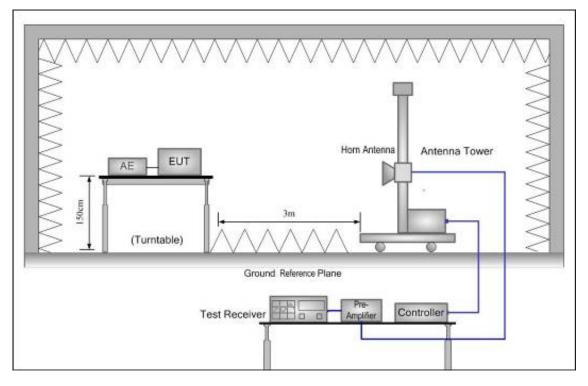


Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

Date: 29.NOV.2024 09:53:39

9. BAND EDGE COMPLIANCE

9.1. Block Diagram of Test Setup



9.2. Limit

All the lower and upper band-edges emissions appearing within restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

9.3. Test Procedure

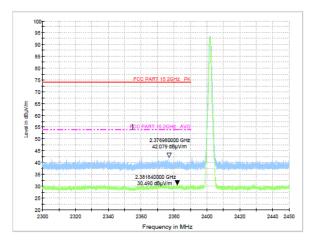
All restriction band and non- restriction band have been tested , only worse case is reported.

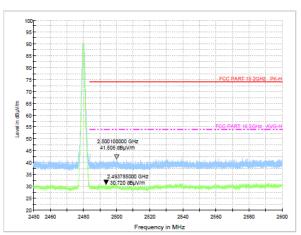
9.4. Test Result

PASS. (See below detailed test data)

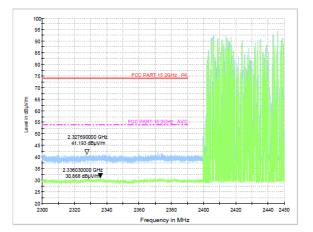
Test Mode: GFSK-Low Hopping-off

Test Mode: GFSK-High Hopping-off

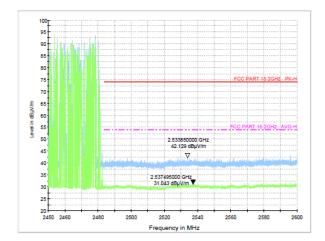




Test Mode: GFSK-Low Hopping-on



Test Mode: GFSK-High Hopping-on

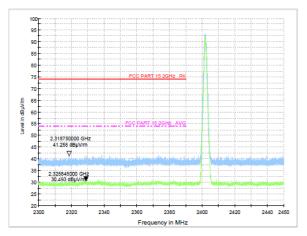


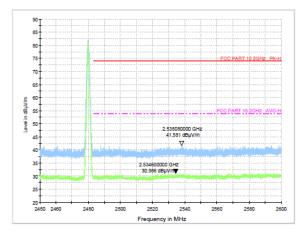
Note: 1. *: Maximum data; x: Over limit; !: over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

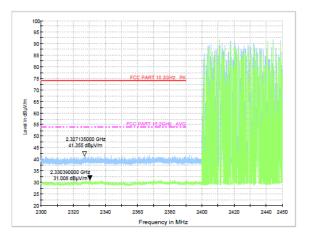


Test Mode: π/4 DQPSK-High Hopping-off

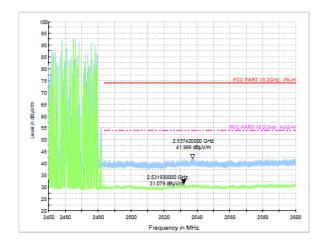




Test Mode: π/4 DQPSK-Low Hopping-on



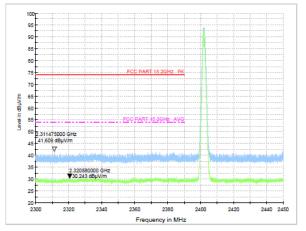
Test Mode: π/4 DQPSK-High Hopping-on



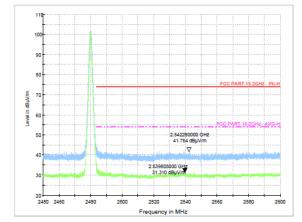
Note: 1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Test Mode: 8-DPSK -Low Hopping-off

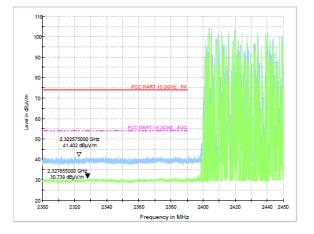


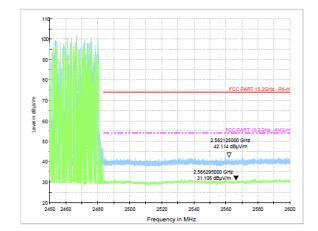
Test Mode: 8-DPSK -High Hopping-off



Test Mode: 8-DPSK-Low Hopping-on

Test Mode: 8-DPSK -High Hopping-on





Conducted Method

Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

Spectrum	י ך								[₩
	20.00 dB		RBW 100 kHz	-					
Att	30 0	dB SWT 113.8 µs	😑 VBW 300 kHz	z Mode	Auto F	FT			
SGL Count	100/100								
⊖1Pk Max									
				M	1[1]		0.40	-2.75	
10 dBm								185000 -56.49 (
				IMD:	2[1]			-56.49 (000000	
0 dBm					1	1	2.40	1	66.
									1
-10 dBm—									
-20 dBm									
20 0011	D1 -22.81	3 dBm					_	+ (+
-30 dBm									1
-40 dBm								+ +	-
						M4			
-50 dBm	1 0 1	al marker war have	while an				MB	Ma	t
-60 dBm	when address	alles and see the second of the second s	www.munhay	Prophesing Alartha	our of the second	Karan wanter fares	www.hiterary	V NAME OF	N
-ou ubm									
-70 dBm									
yo abiii									
Start 2.30	6 GHz		1001 g	ots			Stop	2.406 0	Hz
Marker									
Type Re	f Trc	X-value	Y-value	Funct	tion	Fui	nction Resu	lt	
M1	1	2.40185 GHz	-2.75 dBm						
M2	1	2.4 GHz	-56.49 dBm	1					
MЗ	1	2.39 GHz	-56.36 dBm						
M4	1	2.378 GHz	-51.67 dBm	<u>ا ا</u>					
				R	eady		120	28.11.2024	

Date: 28.NOV.2024 17:34:36



Spect	rum								
Ref L	evel	20.00 d		8 👄 RBW 100 kHz 5 👄 VBW 300 kHz	Mode Au				
	unt 1	.00/100	ub 3WI 113.0 µ:	5 - YOW 300 KH2	MODE AU	Ito FF I			
●1Pk M		,							
					M1[:	1]		2.470	-5.92 dBm 985000 GHz
10 dBm					M2[1	1]			-54.32 dBm
0 dBm-						-		2.483	350000 GHz
T T									
-10 dBn	n								
-20 dBn									
-20 461		1 05 0	74 dBm						
-30 c Bn	n	1 -20.0	74 ubili						
-40 dBn	-								
-50 dBri	12		M4 M3						
w w	Receipt	Www.WH	whether the whether the wear and	alter and the second and the second s	harmonic	Mushar	which when the	Wey/Marman	phentheneninter
-60 dBn	∩								
-70 dBn									
70 abri	·								
Start 2	.476	GHz		1001 pt	<u> </u>			Ston	2.576 GHz
Marker		une		1001 pt	2			otop	
Type	Ref	Trc	X-value	Y-value	Functio	n	Fund	tion Resul	t
M1		1	2.47985 GHz	-5.92 dBm					
M2		1	2.4835 GHz	-54.32 dBm					
M3 M4		1	2.5 GHz 2.4952 GHz	-54.51 dBm -52.08 dBm					
1014		1	2.4952 GHZ	-32.00 UDIII					

Date: 28.NOV.2024 17:57:16

Spectrum								
Ref Level	20.00 dBr 30 d		-					
SGL Count 1		В SWT 113.8 µs	VBW 300 kHz	Mode A	uto FFT			
SGL COURT 1	.00/100							
				M1[11			-1.67 dBm
				MIT	11		2 401	-1.07 uBm 185000 GHz
10 dBm				M2[11			-54.76 dBm
				m2L	-1			00000016Hz
0 dBm						1		1
-10 dBm								
-10 0.011								
-20 dBm-	1 -21.918							
L	1 -21.918	a abm						
-30 dBm								
-40 dBm								+ $+$ $+$
-50 dBm				M4				
-SU dBm	m den alle	uneraling-Allacencertand	der outer the tester of	Name and an and the	and a second	Ash & Breen son	NI3	Murit Lab
-60 dBm	area a la co	And the second of the second second	an Anadamentation of And		Annenderinge	and a de a de a de a de a	0.0.1 Ma	4]14+ (j++
00 00								
-70 dBm								
Start 2.306	GHz		1001 p	ts			Ston	2.406 GHz
Marker			1001 p				0100	Little diffe
Type Ref	Trc	X-value	Y-value	Functio	n l	Euno	tion Resul	t
M1 M1	1	2.40185 GHz	-1.67 dBm	. arrotre				-
M2	1	2.4 GHz	-54.76 dBm					
MЗ	1	2.39 GHz	-56.05 dBm					
M4	1	2.3591 GHz	-51.40 dBm					
)(t a s	dv		420	29.11.2024

Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission

Date: 29.NOV.2024 08:59:58

Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission

10 dBm 2.4798 M2[1] -5	-4.81 dBn 35000 GH: 54.68 dBn 50000 GH:
SGL Count 100/100 IPk Max 10 dBm M1[1] -50 dBm -20 cBm -30 dBm	35000 GH 54.68 dBn
1Pk Max M1[1] - 10 dBm M2[1] -5 0 d8m 2.4798 -10 dBm 2.4835 -20 cBm - -30 dBm 01 -24.944 dBm	35000 GH 54.68 dBn
10 dBm M1[1] - 10 dBm M2[1] -5 0 dBm 0 2.4798 -10/dBm 0 0 -20 cBm 0 0 -30 dBm 0 0	35000 GH 54.68 dBn
10 dBm 2.4798 M2[1] -5 2.4835 -10 dBm	35000 GH 54.68 dBn
10 dBm M2[1] -5 0 dBm 2.4835 -10/dBm - -20 cBm - -30 dBm 01 -24.944 dBm	54.68 dBn
0 d&m 2.4835 -10 d&m 20 c&m 20 c&m 20 c&m 20 c&m 20 c&m 20 c&m 21 c&m21 c&m21 c&m21 c&m21 c&m21 c&m21 c&m21 c&m	50000 GH
-10 dBm	
-20 dBm D1 -24.944 dB	
-30 dBm	
-30 dBm	
-30 dBm-	
-40 dBm	
M4 M3	
-50 dBm2	ANDONIM
-60 dBm	
-70 dBm	
Start 2.476 GHz 1001 pts Stop 2.	.576 GHz
Marker	
Type Ref Trc X-value Y-value Function Function Result	
M1 1 2.47985 GHz -4.81 dBm	
M2 1 2.4835 GHz -54.68 dBm M3 1 2.5 GHz -52.31 dBm	
M3 1 2.5 GHz -52.31 dBm M4 1 2.4947 GHz -52.31 dBm	
Ready 29.	

Date: 29.NOV.2024 09:03:55

Spect	rum											
	evel	20.00			👄 RBW 100 k							
🗎 Att				113.8 µs	🔵 VBW 300 k	Hz IV	lode	Auto F	FΤ			
		100/100)									
⊖1Pk M	ax											
							M1	l[1]				-2.53 dBm
10 dBm	-						—					195000 GHz
							M12	2[1]				-50.95 dBm)00000ីGHz
0 dBm-							— ı			I	2.40	
10.10												1 A
-10 dBn	n-+											
-20 dBn												
-20 ubii		D1 -22.	593 dBm									
-30 dBn	n —											- 11-
00 000	. 1											
-40 dBn	n—											$+ \alpha$
										M4	мз	M2
-50 dBn	n-+											
h/MaluMa	show	when who	haventhemanutat	f hy mar	when the second and the second s	Jawash	m	Marta	r have	Will Alexandria All	Lange and a grant of the	www.pr un
-60 dBn	n-+											
-70 dBn	_											
-70 UBI												
Start 2	2.306	5 GHz			100	l pts					Stop	2.406 GHz
Marker												
Туре	Ref	f Trc	X-value		Y-value		Funct	ion		Fund	ction Resul	t
M1		1		95 GHz	-2.53 dE							
M2		1		2.4 GHz	-50.95 dE							
M3 M4		1		39 GHz 73 GHz	-52.95 dE -52.19 dE							
L 1714		1 1	2.37	73 GHZ	-52.19 dE							
		T .					R	e a d y	1		1,00	29.11.2024

Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission

Date: 29.NOV.2024 09:47:50

Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission

Spectrum											[□
Ref Level			_								
SGL Count 1	30 (100/100	dB SWT 113.8	µs 🖷 V	BW 300 k	Hz Mo	de .	Auto FF	Т			
1Pk Max	100/100										
						M1	[1]				-5.03 dBn
10 dBm						_				2.4	7985000 GH:
						M2	[1]				-54.40 dBn
0 d8m										2.4	8350000 GH:
-10 dBm											
-20 cBm								_			
	01 -24.98	37 dBm						_			
-30 dBm						\rightarrow		_			
-40 dBm											
() (
-50 d8m		now million when the more thank			la.	_				L. Alta	, all has a s
no yray	rymulaw	Mader Marthaller Construction of the	-wow-	workbywhow	provend	hun	water and	www	all and a good for the second good of the second good good good good good good good g	wight me the	mm were the
-60 aBm											
-70 dBm											
Start 2.476	GHz			100	lpts					Sto	p 2.576 GHz
larker											
Type Ref	Trc	X-value		Y-value	Fi	unct	ion		Fun	ction Res	ult
M1	1	2.47985 Gł		-5.03 dE							
M2 M3	1	2.4835 GI		-54.40 dB							
M3 M4	1	2.5 Gł 2.4847 Gł		-55.03 de							
	7)			(1)		430	29.11.2024

Date: 29.NOV.2024 09:52:49

Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

10 dBm M2[1]	-3.56 dBi 0515000 GH -53.44 dBi
10 dBm M1[1] 2.40 0 dBm 2.40	0515000 GH
10 dBm 2.40 0 dBm 2.40 2.40 2.40 2.40	0515000 GH
0 dBm M2[1] 2.40	
0 dBm 2.40	-53.44 dBi
-10 dBm	0000000 GH
-10 dBm	111
-20 dBm	
-30 dBm	V.
-40 dBm	
M4	
-50 dBm	M2
	and to apply to
-60 dBm	
-70 dBm	
Start 2.306 GHz 1001 pts Stop	p 2.406 GHz
Marker	
Type Ref Trc X-value Y-value Function Function Resu	ult
M1 1 2.40515 GHz -3.56 dBm	
M2 1 2.4 GHz -53.44 dBm	
M3 1 2.39 GHz -52.94 dBm	
M4 1 2.3574 GHz -51.09 dBm	

Date: 28.NOV.2024 17:58:58

Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission

Spectrum										₩
Ref Level 20	0.00 dBr	n Offset	7.60 dB 😑	RBW 100 kHz						
Att	30 di	B SWT	113.8µs 👄	VBW 300 kHz	Mode	Auto Fi	FT			
SGL Count 40	00/4000									
∋1Pk Max										
					M	1[1]			-5.6	8 dBn
10 dBm									2.4788500	O GH
10 0800					M	2[1]			-50.9	8 dBn
									2.4835000	O GH
dd dan										
-20 dBm										
D1	-26.127	dBm								
-30 dBm	20,127									
-40 dBm										
M2 M		МЗ								
-50 dBport	haber pour	A hange when here have	mound	annon when have a far	who have been been been been been been been be	Allehauthan	monormania	monorally	Munda wala	nyulut
-60 dBm	Ŭ						ř			
-60 UBIII-										
-70 dBm										
-/0 00111										
Start 2.476 G	Hz			1001 p	ts				Stop 2.576	i GHz
Marker										
	Trc	X-value		Y-value	Func	tion		Function	Result	
M1	1		85 GHz	-5.68 dBm						
M2	1		35 GHz	-50.98 dBm						
M3	1		2.5 GHz	-52.00 dBm						
M4	1	2.48	89 GHz	-50.39 dBm						
					R	eady		100	28.11.2	024

Date: 28.NOV.2024 18:04:32

Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission

Spectrum						
Ref Level						
Att SGL Count 1	30 di		● VBW 300 kHz	Mode Auto F	FT	
1Pk Max	1000/1000					
				M1[1]		2.52 dBr
10.10				TOTAL AT		5000 GH
10 dBm				M2[1]		4.41 dBr
0 dBm					2.4000	0000 GH
						11
-10 dBm						թանի
						ا"]
-20 dBm	01 -22.476	dBm				_
-30 dBm						
-30 dBm						
-40 dBm						
					M4	J
-50 dBm	. Anthen auto	with which the way make	and the state of the state	at which is a strength of the	Jenter march of the production	- <u>144</u>
a decorrection	to the second second	and the second	Inter-rationanter-allowing have	and the second second	March and a start of the start	-00 Ju 🔶
-60 dBm						
-70 dBm						
-/o ubiii						
Start 2.306	GHz		1001 pts	s	Stop 2.	406 GHz
Marker						
Type Ref	Trc	X-value	Y-value	Function	Function Result	
M1	1	2.40585 GHz	-2.52 dBm			
M2	1	2.4 GHz	-54.41 dBm			
M3 M4	1	2.39 GHz 2.3852 GHz	-53.77 dBm -50.98 dBm			

Date: 29.NOV.2024 09:39:54

Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission

Spectrum										
Ref Level				RBW 100 k						
Att	30 d		113.8 µs 🧉	VBW 300 k	Hz Mode	Auto F	FT			
SGL Count	1000/1000)								
1Pk Max										
					N	11[1]				-4.83 dBr
10 dBm —									2.470	585000 GH
10 0.0					N	12[1]				-52.55 dBr
a dBm									2.48	350000 GH
(
🙀 dBm——										
" N)										
-20 dBm		-								
	D1 -24.37	B dBm								
-30 dBm										
-40 dBm										
-50 dBm		M4 M3				-				
manger	multile	where the word we	Conten alpente anter	Annotheratura	comman	mand	warm	mundulu	and any and a second	an march
-60 dBm —										
-70 dBm —		-		-						-
Start 2.476	GHz			1001	pts				Stop	2.576 GHz
1arker										
Type Ref	Trc	X-valu		Y-value	Fund	tion		Fund	tion Resul	t
M1	1		85 GHz	-4.83 dB						
M2	1		35 GHz	-52.55 dB						
M3	1		2.5 GHz	-53.49 dB						
M4	1	2.49	85 GHz	-51.28 dB	Sm					
						Ready			100	29.11.2024

Date: 29.NOV.2024 09:43:11

Spectrum								
Ref Level				• RBW 100 kHz				
Att	30		.13.8 µs (VBW 300 kHz	Mode Auto	FFT		
SGL Count	5000/500)0						
1Pk Max								
					M1[1]			-2.36 dBn
10 dBm —							2.4	0285000 GH
					M2[1]		2.4	-51.97 dBn 0000000\©H
0 dBm —						1	2.4	
								MN
-10 dBm								
-20 dBm								
20 0011	D1 -22.6	38 dBm						
30 dBm								
-40 dBm —								+ (
			M4				мз	M2
-50 dBm	ىر بەلاسىسىد	martine	and a shown	and promound programme	www.man	ver princementer		
-60 dBm	~			1		× I		
-ou ubm								
-70 dBm								
, o abiii								
Start 2.306	011-			1001				p 2.406 GHz
	GHZ			1001 pt	5		510	p 2.406 GHZ
larker	1 Tes 1	N 1		M	E	1 -	P	-14
Type Ref M1	Trc	X-value	B5 GHz	Y-value -2.36 dBm	Function	- F	unction Resu	лс
M1 M2	1		.4 GHz	-2.36 dBm -51.97 dBm				
M3	1		39 GHz	-52.46 dBm				
M4	1		D7 GHz	-50.31 dBm				
	20)			

Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission

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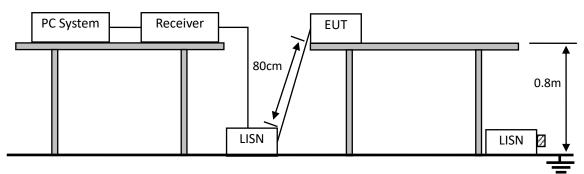
Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission

Spectrum					[□
Ref Level 20.00 d	Bm Offset 7.60 dB (BRBW 100 kHz			
Att 30		🛯 VBW 300 kHz	Mode Auto F	FT	
SGL Count 2500/250	00				
∋1Pk Max					
			M1[1]		-5.10 dBn
10 dBm					2.47605000 GH
			M2[1]		-52.66 dBn
Ø dBm				1	2.48350000 GH
udd here.					
,¢¢,∕αBm					
-20 dBm					
D1 -25.2	92 dBm				
-30 aBm					
-40 dBm					
-50 dBm ^{2 M4}	M3				
Richardenter	and while the and the and the	Marghlabertalouse My Antes	nerrow	Comparison were	whowhy the man and a second way
-60 dBm					
-70 dBm					
Start 2.476 GHz		1001 pts	5		Stop 2.576 GHz
Marker					
Type Ref Trc	X-value	Y-value	Function	Fu	nction Result
M1 1	2.47605 GHz	-5.10 dBm			
M2 1 M3 1	2.4835 GHz 2.5 GHz	-52.66 dBm -53.03 dBm			
M4 1	2.4862 GHz	-50.65 dBm			
			Doady		29.11.2024

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10. POWER LINE CONDUCTED EMISSIONS

10.1.Block Diagram of Test Setup



 \blacksquare :50 Ω Terminator

10.2.Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
	dB(µV)	dB(µV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

10.3.Test Procedure

(1) The EUT was placed on a non-metallic table, 80cm above the ground plane.

(2) Setup the EUT and simulator as shown in 10.1

(3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 :2013on conducted Emission test.

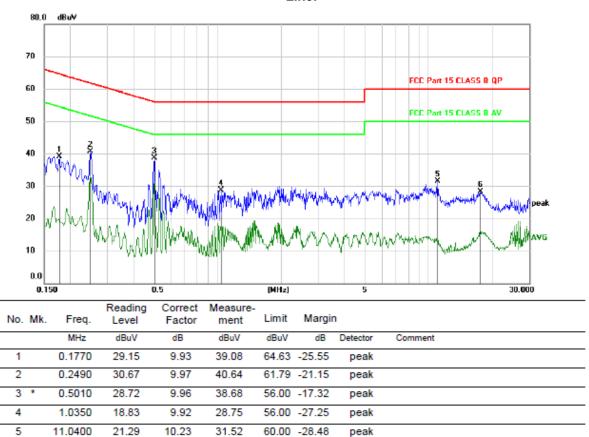
(4) The bandwidth of test receiver is set at 10KHz.

(5) The frequency range from 150 KHz to 30MHz is checked.

10.4.Test Result

PASS. (See below detailed test data)

Note: If peak Result comply with AV limit, QP and AV Result is deemed to comply with AV limit



*:Maximum data x:Over limit !:over margin

17.91

10.40

28.31

17.6490

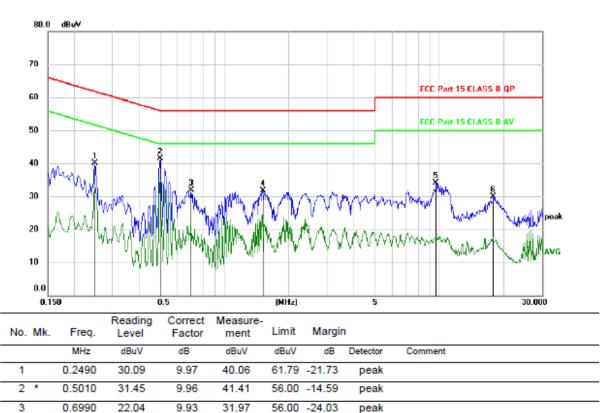
6

(Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

60.00 -31.69

peak



56.00 -24.20

60.00 -25.80

60.00 -30.17

peak

peak

peak

Neutral:

*:Maximum data x:Over limit !:over margin

21.90

24.00

19.42

9.90

10.20

10.41

31.80

34.20

29.83

4

5

6

1.5060

9.6270

17.8470

(Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Note: All modes and channels have been tested and only the GFSK 2402MHz mode with the worst data is listed.

11. ANTENNA REQUIREMENTS

11.1.Limit

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

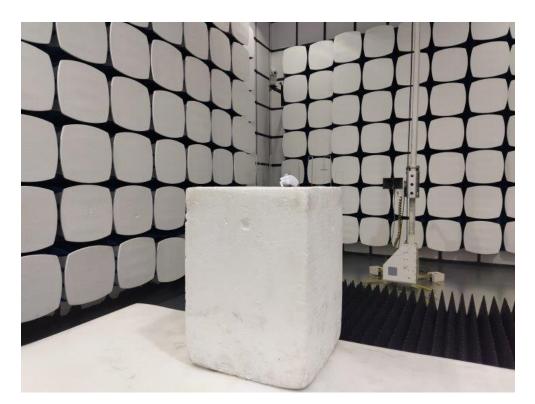
11.2.Result

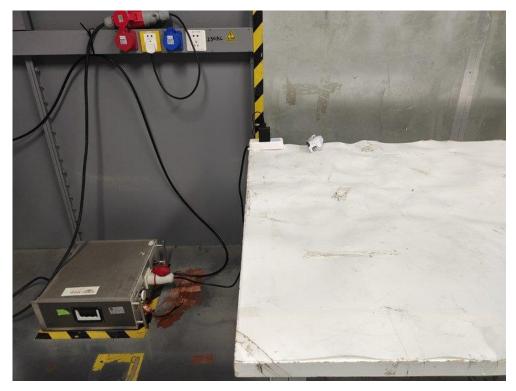
The EUT antenna is Internal Antenna. It complies with the standard requirement.

12. TEST SETUP PHOTO

12.1.Photo of Radiated Emission test







12.2.Photo of Conducted Emission test

-----END OF REPORT------