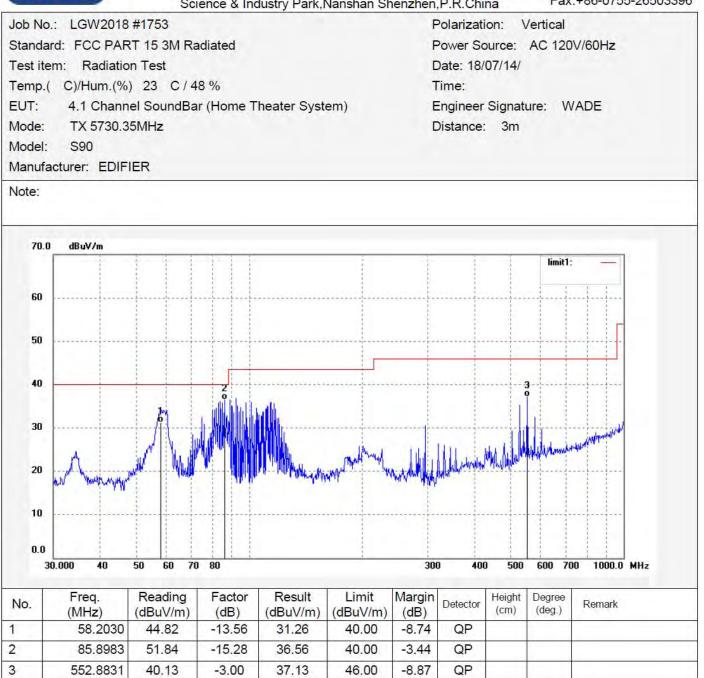




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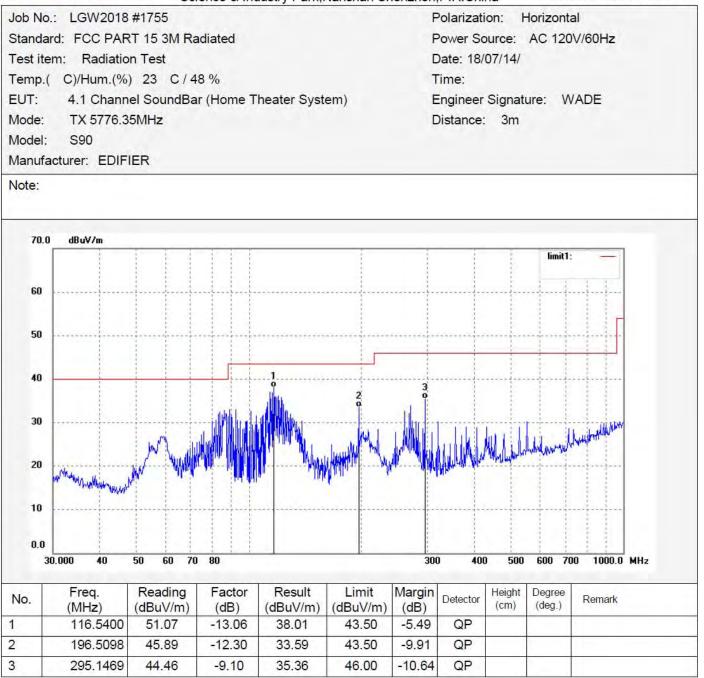
F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396







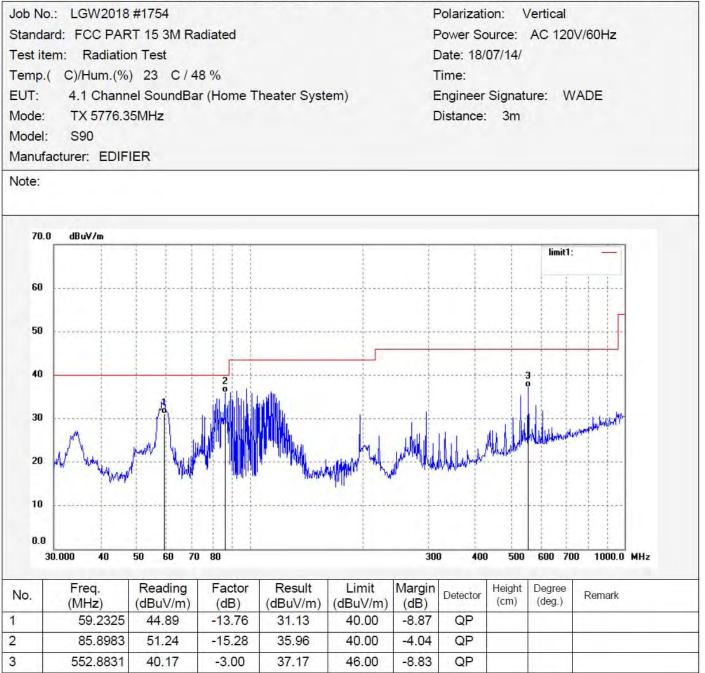
F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396







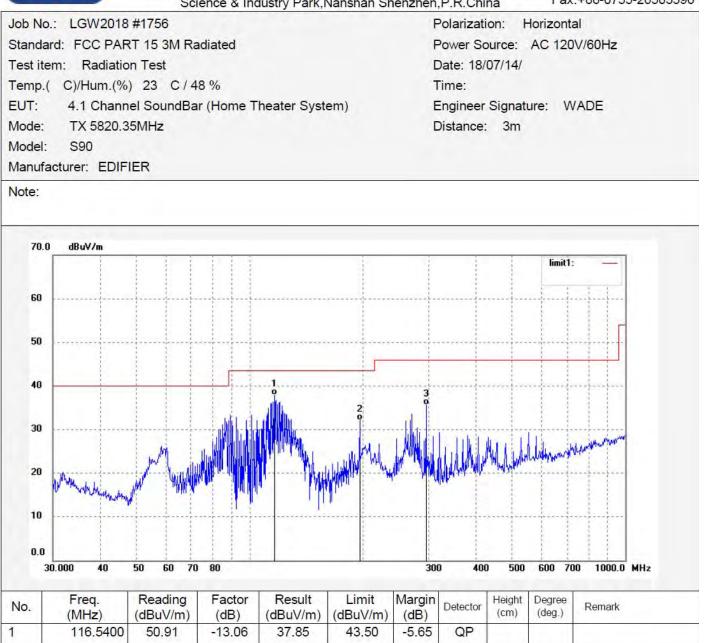
F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396





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196.5098

295,1469

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-10.33

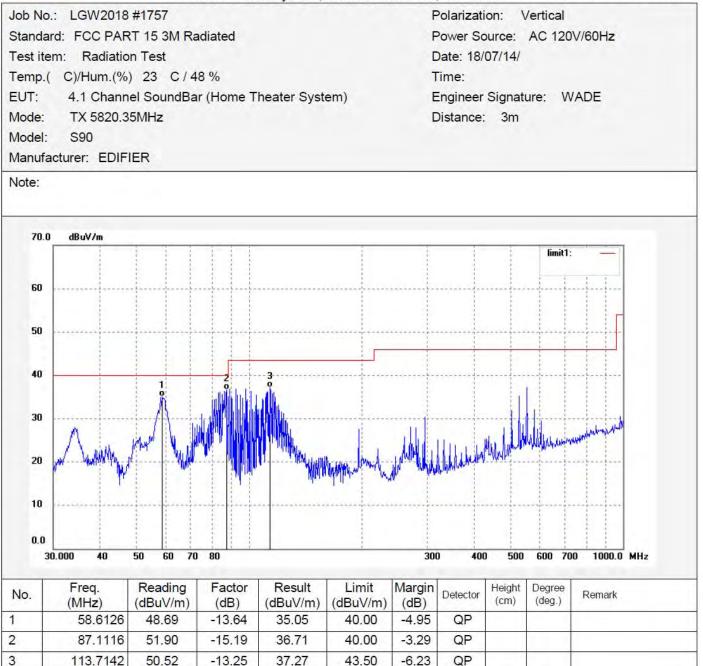
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QP





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### 1GHz-18GHz test data (5.8G)



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		Sc	ience & Ind	dustry Park,I	Nanshan Sh	nenzhen	,P.R.Chi	na	Fax	:+86-0755-265033			
lob No.:	LGW2018	#1730				F	Polarizati	ion: H	lorizonta	al			
standar	d: FCC PAR	RT 15 3M Ra	adiated			Power Source: AC 120V/60Hz							
Fest iter	n: Radiatio	n Test				C	Date: 18/	07/14/					
Temp.(	C)/Hum.(%	) 23 C/4	8 %			Time:							
EUT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	em)	Engineer Signature: WADE							
Mode:	TX 5730.3	5MHz				C	Distance	3m					
Nodel:	S90												
Manufac	turer: EDIF	IER											
Note:													
110.0	dBuV/m												
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										10000.01112			
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark			
	5730.350	79.57	10.18	89.75	114.00	-24.25	peak						
	5730.350	78.07	10.18	88.25	94.00	-5.75	AVG						
3	11460.744	30.60	19.86	50.46	74.00	-23.54	peak						
	11460.744	21.39	19.86	41.25	54.00	-12.75	AVG						



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Job No	.: LGW2018			austry i aik,i			Polarizat		/ertical	
tanda	rd: FCC PAF	RT 15 3M Ra	diated			F	Power So	ource:	AC 120	V/60Hz
est ite	em: Radiatio	on Test				C	Date: 18/	07/14/		
emp.(	C)/Hum.(%	) 23 C/4	8 %			Т	Time:			
UT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	em)	E	Engineer	Signat	ure: W	/ADE
lode:	TX 5730.3	5MHz				C	Distance	: 3m		
lodel:	S90									
lanufa	acturer: EDIF	IER								
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1	000.000	20	00	3000	5000	6000 7	7000 8000	9000		18000.0 MHz
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
	5730 350	70 65	10.18	80.83	114 00	24 17	neak		· · · · · ·	

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5730.350	79.65	10.18	89.83	114.00	-24.17	peak			
2	5730.350	78.15	10.18	88.33	94.00	-5.67	AVG			
3	11460.734	30.70	19.86	50.56	74.00	-23.44	peak			
4	11460.734	21.71	19.86	41.57	54.00	-12.43	AVG		2	

#### Shenzhen Accurate Technology Co., Ltd.

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## ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber Tel:+86-0755-26503290

o.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
	000.000	20	00	3000	5000	6000	7000 8000	9000		18000.	DMHz
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ote:											
anufa	acturer: EDI	FIER									
ode: odel:	TX 5776. S90	35IVIHZ				1	Distance	: 3m			
JT:		nel SoundBa	r (Home T	heater Syst	em)		Engineer		ure: W	/ADE	
mp.(	C)/Hum.(%	6) 23 C/4	8 %			-	Time:				
	em: Radiati		lalatea				Date: 18/		110 120		
		RT 15 3M Ra	diated				Power So				
DINO	.: LGW201	8 #1/34				1	Polarizat	ion:	Horizont	al	

Shenzhen Accurate Technology Co., Ltd.

5776.350

11552.733

11552.733

77.64

30.34

22.37

10.44

20.17

20.17

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3

4

88.08

50.51

42.54

94.00

74.00

54.00

-5.92

-23.49

-11.46

AVG

peak

AVG



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ob No	.: LGW2018	#1735				F	Polarizati	ion: \	/ertical		
tanda	rd: FCC PAR	RT 15 3M Ra	diated			F	Power Sc	ource:	AC 120	V/60Hz	
est ite	em: Radiatio	n Test				0	Date: 18/	07/14/			
emp.(	C)/Hum.(%	) 23 C/4	8 %			1	Time:				
UT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	em)	E	Engineer	Signat	ure: W	/ADE	
lode:	TX 5776.3	5MHz				C	Distance:	3m			
lodel:	S90										
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	000.000	20	00	3000	5000	6000 7	7000 8000	9000		18000.	0 MHz
	Freq.	Reading	Factor	Result	Limit	Margin		Height	Degree		
Vo.	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector	(cm)	(deg.)	Remark	
		(ubuv/iii)	(uD)	(abav/iii)	(ubuv/iii)	(UD)	in the second second		1.42.2.2		

AVG

peak

AVG

-5.55

-23.39

-11.43

Shenzhen Accurate Technology Co., Ltd.

5776.350

11552.737

11552.737

78.01

30.44

22.40

10.44

20.17

20.17

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88.45

50.61

42.57

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Job No	b.: LGW2018	#1737				F	Polarizat	ion: H	Horizonta	al			
Standa	ard: FCC PAR	RT 15 3M Ra	adiated			F	Power So	ource:	AC 120	V/60Hz			
Test ite	em: Radiatio	n Test				Date: 18/07/14/							
Temp.(	( C)/Hum.(%	) 23 C/4	8 %			Time:							
EUT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	tem)	Engineer Signature: WADE							
Mode:	TX 5820.3	5MHz				ſ	Distance	3m					
Model:	S90												
Manufa	acturer: EDIF	IER											
Note:													
110	.0 dBuV/m												
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1	1000.000	20	100	3000	5000	6000	7000 8000	9000		18000.0 MHz			
No.	Freq.	Reading	Factor	Result	Limit	Margin	Detector	Height	Degree	Remark			
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	1 2	(cm)	(deg.)	Norman			
1	5820.350	78.96	10.66	89.62	114.00	-24.38							
2	5820.350	77.56	10.66	88.22	94.00	-5.78	AVG						
3	11640.732	29.57	20.71	50.28	74.00	-23.72	peak						

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11640.732

21.65

4

42.36

20.71

54.00

-11.64

AVG





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Standa Test ite Temp. EUT: Mode: Model:	TX 5820.3 S90	RT 15 3M R on Test ) 23 C / / el SoundB 5MHz	48 %	heater Syst	em)	F C T E	Polarizati Power Sc Date: 18/ Fime: Engineer Distance:	ource: 07/14/ Signati		
Manufa Note:	acturer: EDIF	IER								
Hote.										
110	.0 dBuV/m									
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<b>20.</b> (	000.000	2	:000	3000	5000	6000	7000 8000	9000	-	18000.0 MHz
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5820.350	80.11	10.66	90.77	114.00	-23.23	peak			
2	5820.350	78.71	10.66	89.37	94.00	-4.63	AVG			
3	11640.740	30.03	20.71	50.74	74.00	-23.26	peak			
4	11640.740	21.94	20.71	42.65	54.00	-11.35	AVG			



### 18GHz-26.5GHz test data (5.8G)



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		Sci	ence & In	dustry Park,	Nanshan Sh	nenzhen	P.R.Chi	na	Гах	.+80-0755-20505596
Job No	.: LGW2018	#1741				F	Polarizati	on: H	Horizonta	al
Standa	ard: FCC PAR	RT 15 3M Ra	diated			F	ower So	ource:	AC 120	V/60Hz
Test ite	em: Radiatio	n Test				, E				
Temp.	( C)/Hum.(%	) 23 C/4	8 %			J	Time:			
EUT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	E	Engineer	Signat	ure: W	ADE	
Mode:	TX 5730.3	5MHz				C	Distance:	3m		
Model:	S90									
Manufa	acturer: EDIF	IER								
Note:										
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1	8000.000		20000							26500.0 MHz
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	22807.212	10.16	39.68	49.84	74,00	-24.16	peak			1
2	22807.212	-0.04	39.68	39.64	54.00	-14.36	AVG			





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Job No	.: LGW2018	#1740				F	Polarizat	ion: \	/ertical				
Standa	rd: FCC PAR	RT 15 3M Ra	diated			Power Source: AC 120V/60Hz							
Test ite	m: Radiatio	n Test				C	Date: 18/	07/14/					
Temp.(	C)/Hum.(%	) 23 C/4	8 %			Time:							
EUT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	em)	Engineer Signature: WADE							
Mode:	TX 5730.3					C	Distance	3m					
Model:	S90												
Manufa	acturer: EDIF	IER											
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1	8000.000		20000							26500.0 MHz			
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark			
1	22544.105	10.60	39.42	50.02	74.00	-23.98	peak			1			
2	22544.105	0.81	39.42	40.23	54.00	-13.77	AVG						





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Job No	.: LGW2018	#1742				F	Polarizati	on: H	Horizonta	al				
Standa	ard: FCC PAF	RT 15 3M Ra	diated			Power Source: AC 120V/60Hz								
Test it	em: Radiatio	n Test				Date: 18/07/14/								
Temp.	( C)/Hum.(%	) 23 C/4	8 %			Г								
EUT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	em)	E	ADE							
Mode:	TX 5776.3	5MHz				C	Distance	3m						
Model	S90													
Manuf	acturer: EDIF	IER												
Note:														
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark				
1	23073.390	10.64	39.64	50.28	74.00	-23.72	peak							
2	23073.390	0.61	39.64	40.25	54.00	-13.75	AVG							





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b No.: LGW2018 #1743	Polarization: Vertical
andard: FCC PART 15 3M Radiated	Power Source: AC 120V/60Hz
est item: Radiation Test	Date: 18/07/14/
emp.( C)/Hum.(%) 23 C / 48 %	Time:
JT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
ode: TX 5776.35MHz	Distance: 3m
odel: S90	
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	21840.330	10.78	39.24	50.02	74.00	-23.98	peak			
2	21840.330	0.87	39.24	40.11	54.00	-13.89	AVG			





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lob No	.: LGW2018	#1745				F	Polarizati	on: H	Horizonta	al
Standa	rd: FCC PAF	RT 15 3M Ra	diated			F	Power Sc	ource:	AC 120	V/60Hz
est ite	em: Radiatio	on Test				C	)ate: 18/	07/14/		
emp.	( C)/Hum.(%	) 23 C/4	8 %			Т	ime:			
UT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	em)	E	Ingineer	Signat	ure: W	ADE
lode:	TX 5820.3	5MHz				C	Distance:	3m		
lodel:	S90									
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0.0			1							
	8000.000		20000							26500.0 MHz
lo.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
	22379.043	9.96	39.73	49.69	74.00	-24.31	peak			

Shenzhen Accurate Technology Co., Ltd.

22379.043

-0.19

39.73

2

39.54

54.00

-14.46

AVG





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job N	o.: LGW2018	#1744				F	Polarizati	ion: \	/ertical	
Stand	ard: FCC PAR	RT 15 3M Ra	diated			F	Power Sc	ource:	AC 120	V/60Hz
Test if	em: Radiatio	n Test				C	Date: 18/	07/14/		
Temp	.( C)/Hum.(%	) 23 C/4	8 %			1	Time:			
EUT:	4.1 Chann	el SoundBa	r (Home T	heater Syst	em)	E	Engineer	Signat	ure: W	ADE
Mode	TX 5820.3	5MHz		and the second		0	Distance:	3m		
Model	: S90									
Manut	facturer: EDIF	IER								
Note:										
90	0 dBuV/m									
									limit1:	
80		*****		*****				********		
70										
70						******		*******		**********
60										
50		the second s	and in some in		an and an a special states	- Andrew and the set	Watan and Maria	-	#MM Any BAA	anoughinger
40				2						
30		*********		********		********			********	*********
20								*******		
10										
0.0	18000.000		20000							26500.0 MHz
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	21364.105	10.77	39.31	50.08	74.00	-23.92	peak	(1, 1994) -	1.000	
2	21364.105	1.04	39.31	40.35	54.00	-13.65	AVG			



#### 9kHz-30MHz test data (Bluetooth+5.8G)

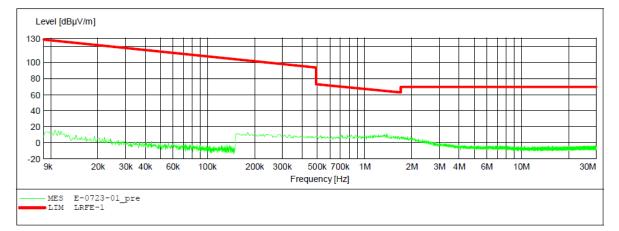
#### ACCURATE TECHNOLOGY CO., LTD

#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2402MHz+TX 5730.35MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: X Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

Short Desci	ription:	S	UB STD VTER	RM2 1.70		
Start	Stop	Step –	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



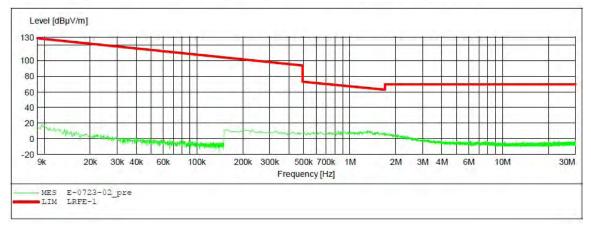


#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2402MHz+TX 5730.35MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: Y Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

Short Desc	ription:	5	SUB STD VTE	RM2 1.70			
Start	Stop	Step -	Detector	Meas.	IF	Transducer	
9.0 kHz	Frequency 150.0 kHz 30.0 MHz	100.0 Hz	QuasiPeak QuasiPeak		Bandw. 200 Hz 9 kHz		



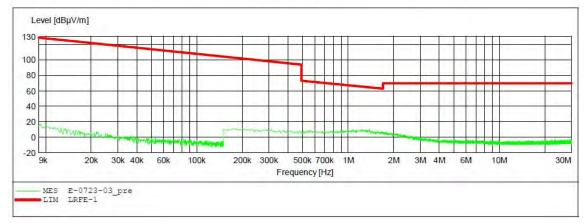


#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2402MHz+TX 5730.35MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: Z Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

~	Short Desc	ription:		SUB STD VTE	RM2 1.70		
	Start	Stop	Step -	Detector	Meas.	IF	Transducer
	Frequency	Frequency	Width		Time	Bandw.	
	9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
	150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



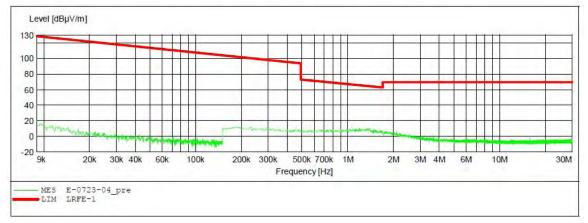


#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2441MHz+TX 5776.35MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: X Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

Short Desc	ription:		SUB STD VTE	RM2 1.70		
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
	150.0 kHz		QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



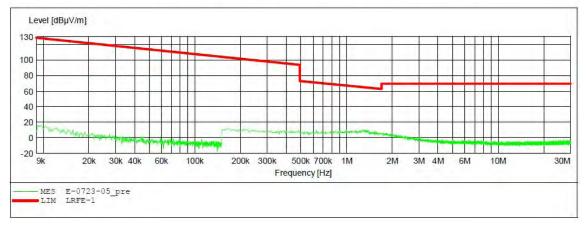


#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2441MHz+TX 5776.35MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: Y Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

Short Desc	ription:		SUB STD VTE	RM2 1.70		
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



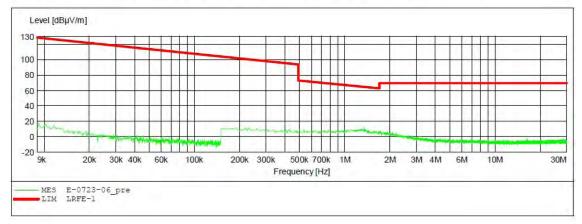


#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2441MHz+TX 5776.35MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: Z Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

Short Desc	ription:	5	UB STD VTE	RM2 1.70		
Start	Stop	Step -	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
	150.0 kHz		QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



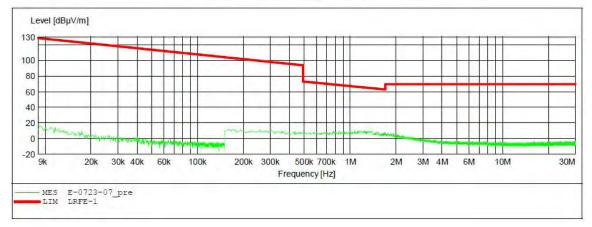


#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2480MHz+TX 5820.25MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: X Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

7	Short Desc	ription:		SUB STD VTE	RM2 1.70			
	Start	Stop	Step	Detector	Meas.	IF	Transducer	
	Frequency	Frequency	Width		Time	Bandw.		
	9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M	
	150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M	



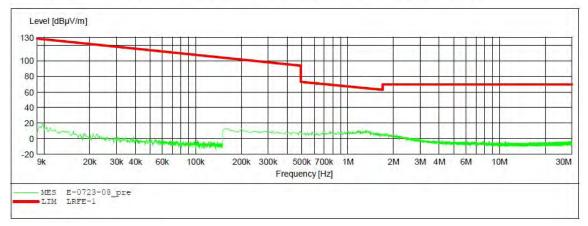


#### FCC PART 15 3m Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90
EDIFIER
TX 2480MHz+TX 5820.25MHz
2# Chamber
WADE
AC 120V/60Hz
Y
2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

1	Short Desc	ription:	5	SUB STD VTE	RM2 1.70		
	Start	Stop	Step _	Detector	Meas.	IF	Transducer
	Frequency	Frequency	Width		Time	Bandw.	
	9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
	150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



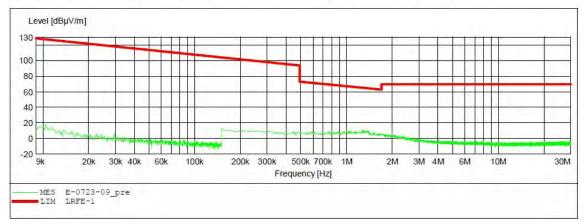


#### FCC PART 15 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90 Manufacturer: EDIFIER Operating Condition: TX 2480MHz+TX 5820.25MHz Test Site: 2# Chamber Operator: WADE Test Specification: AC 120V/60Hz Comment: Z Start of Test: 2018-7-23 /

#### SCAN TABLE: "LFRE Fin"

Short Desc			SUB STD VTE			
Start	Stop	Step -	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
	150.0 kHz			1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

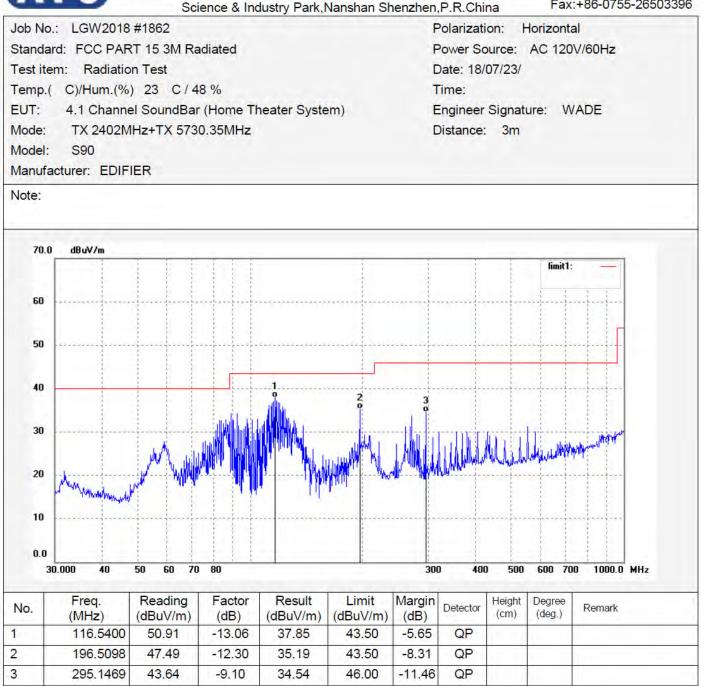




#### 30MHz-1000MHz test data (Bluetooth+5.8G)

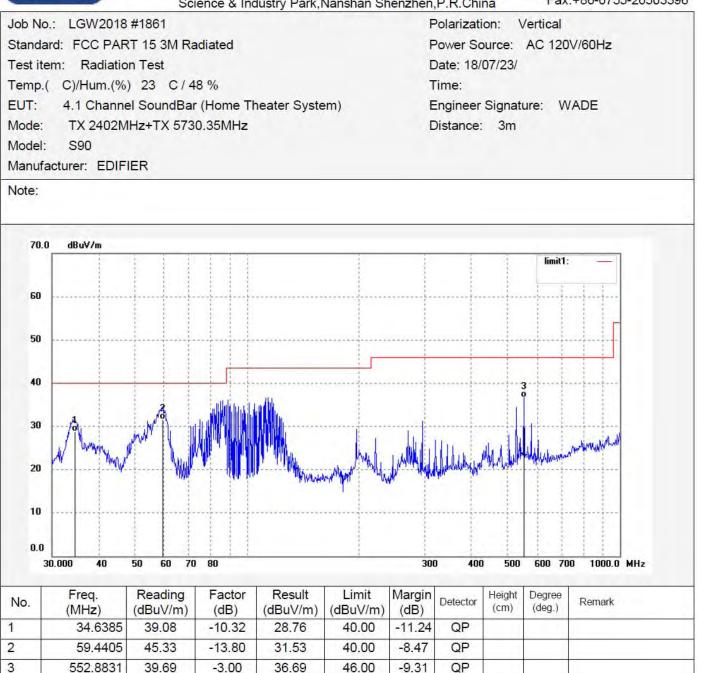


F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.Chin Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396





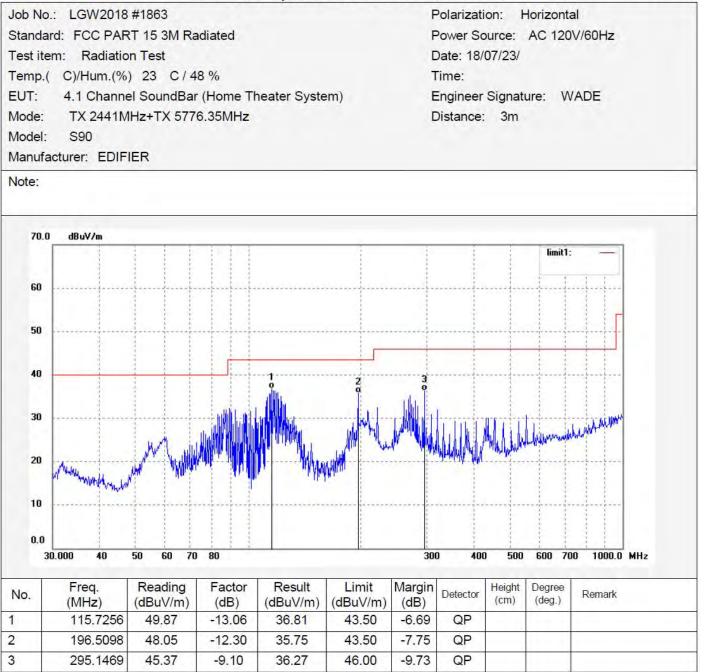
F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396





### ACCURATE TECHNOLOGY CO., LTD.

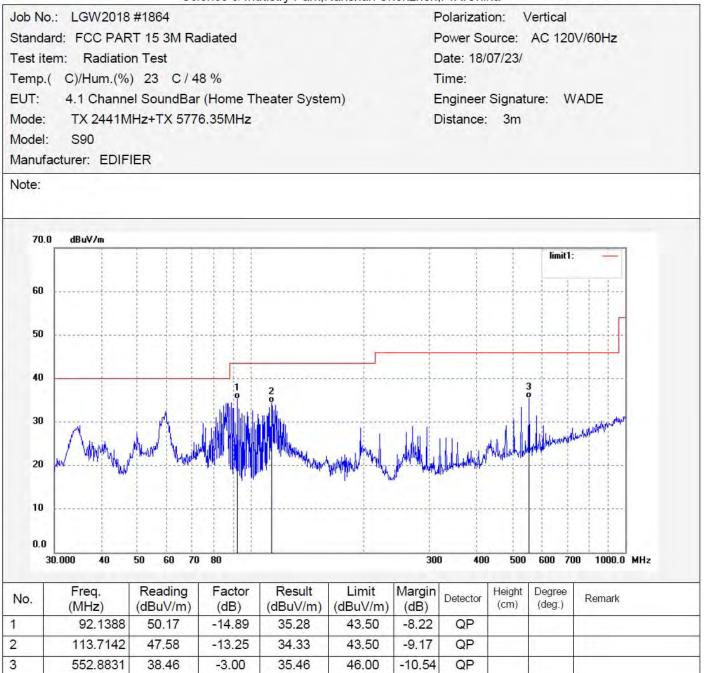
F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396







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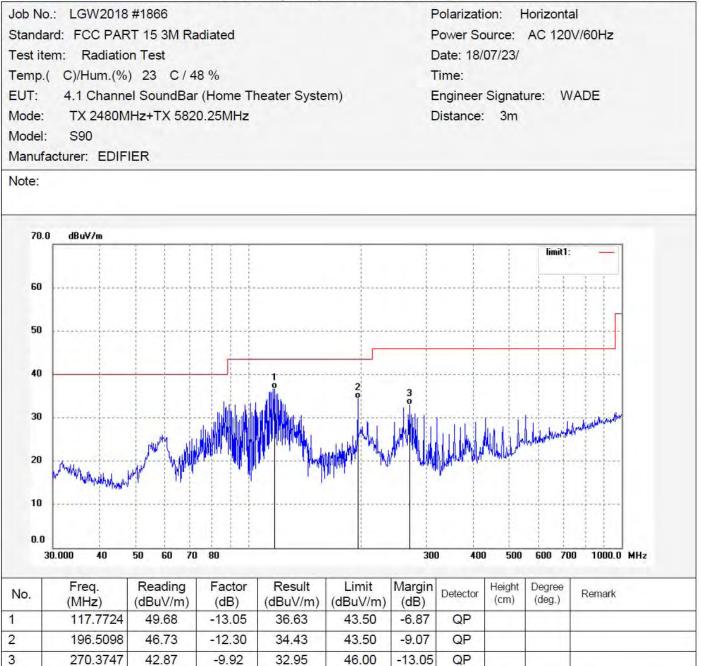
#### Shenzhen Accurate Technology Co., Ltd.

Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. ChinaTel: +86-755-26503290Fax: +86-755-26503396E-mail: webmaster@atc-lab.comHttp://www.atc-lab.com





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

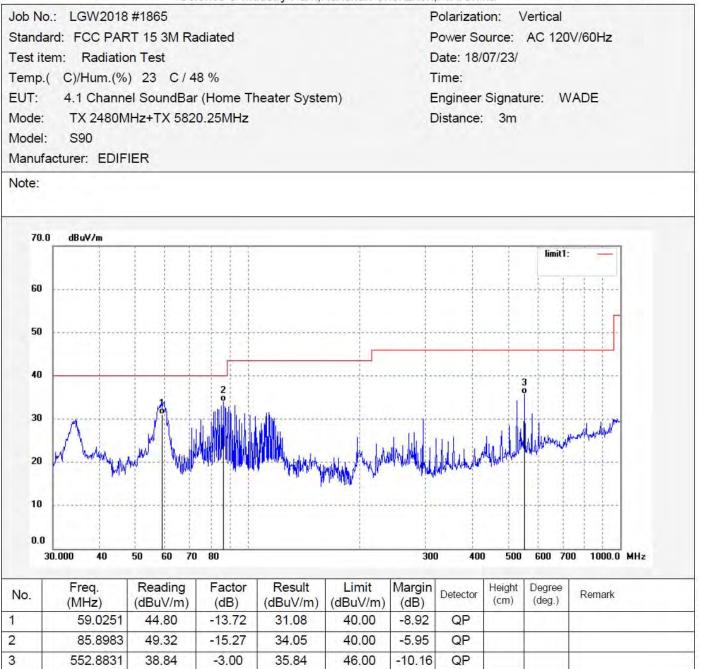




## ATC

## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396





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### 1GHz-18GHz test data (Bluetooth+5.8G)

## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

1.1. 1.1				dustry Park,I	tanonan O	-				.+00-0700-	
	o.: LGW2018				Polarizati						
	ard: FCC PAR		diated		Power Sc		AC 120	V/60Hz			
	em: Radiatio				Date: 18/	07/23/					
	( C)/Hum.(%						Time:				
EUT:	4.1 Channe			neater Syste	em)		Engineer		ure: W	ADE	
Mode:		Hz+TX 573	0.35MHz			C	Distance	3m			
Model											
Manuf	acturer: EDIF	IER									
Note:											
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									limit1:		
100						a fan		\			
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	1000.000	20	uu	3000	5000	6000	7000 8000	9000		18000.01	MHZ
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	2402.000	90.24	0.89	91.13	1	1	peak		11 11		
2	4804.024	43.16	7.40	50.56	74.00	-23.44	peak		11		
3	4804.024	35.05	7.40	42.45	54.00	-11.55	AVG		11		
4	5730.350	81.00	10.18	91.18	114.00	-22.82	peak		11		
5	5730.350	79.90	10.18	90.08	94.00	-3.92	AVG		11		
6	11460.745	30.79	19.86	50.65	74.00	-23.35	peak		11		
	11460.745	22.37	19.86	42.23	54.00		AVG				





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		Sci	ence & In	dustry Park,	Nanshan Sh	enzhen	,P.R.Chi	na	Fax	:+86-0/55-26503396
Job No	.: LGW2018	#1868		F	Polarization: Vertical					
Standa	rd: FCC PAR	RT 15 3M Ra	diated	F	Power Source: AC 120V/60Hz					
Fest ite	m: Radiatio	n Test		C	Date: 18/	07/23/				
Femp.(	C)/Hum.(%	) 23 C/4	8 %	5	lime:					
EUT:	4.1 Channe	el SoundBar	(Home T	E	Engineer Signature: WADE Distance: 3m					
Mode:	TX 2402M	Hz+TX 573	0.35MHz	Ľ						
Model:	S90									
Manufa	cturer: EDIF	IER								
Note:										
110.	0 dBu∀/m			i.		1			limit1:	-
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1	000.000	20	00	3000	5000	6000	7000 8000	9000		18000.0 MHz
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
l in li	2402.000	89.17	0.89	90.06	1	1	peak			
	4804.025	42.38	7.40	49.78	74.00	-24.22	peak		1	

and the second sec								
4804.025	42.38	7.40	49.78	74.00	-24.22	peak		
4804.025	33.17	7.40	40.57	54.00	-13.43	AVG		
5730.350	79.83	10.18	90.01	114.00	-23.99	peak		
5730.350	78.73	10.18	88.91	94.00	-5.09	AVG		
11460.731	30.19	19.86	50.05	74.00	-23.95	peak		
11460.731	22.71	19.86	42.57	54.00	-11.43	AVG		
	4804.025 5730.350 5730.350 11460.731	4804.02533.175730.35079.835730.35078.7311460.73130.19	4804.02533.177.405730.35079.8310.185730.35078.7310.1811460.73130.1919.86	4804.02533.177.4040.575730.35079.8310.1890.015730.35078.7310.1888.9111460.73130.1919.8650.05	4804.02533.177.4040.5754.005730.35079.8310.1890.01114.005730.35078.7310.1888.9194.0011460.73130.1919.8650.0574.00	4804.02533.177.4040.5754.00-13.435730.35079.8310.1890.01114.00-23.995730.35078.7310.1888.9194.00-5.0911460.73130.1919.8650.0574.00-23.95	4804.025         33.17         7.40         40.57         54.00         -13.43         AVG           5730.350         79.83         10.18         90.01         114.00         -23.99         peak           5730.350         78.73         10.18         88.91         94.00         -5.09         AVG           11460.731         30.19         19.86         50.05         74.00         -23.95         peak	4804.025       33.17       7.40       40.57       54.00       -13.43       AVG         5730.350       79.83       10.18       90.01       114.00       -23.99       peak         5730.350       78.73       10.18       88.91       94.00       -5.09       AVG         11460.731       30.19       19.86       50.05       74.00       -23.95       peak





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		Sci	ence & In	dustry Park,	Nanshan Sh	nenzhen	,P.R.Chi	na	Fax	:+86-0755-2	6503396	
lob No	.: LGW2018	#1869			F	Polarization: Horizontal						
standa	rd: FCC PAF	RT 15 3M Ra	diated		F	Power Source: AC 120V/60Hz						
est ite	m: Radiatio	on Test		[	Date: 18/	07/23/						
emp.(	C)/Hum.(%	) 23 C/4	8 %	į,	Time:							
UT:	4.1 Channe	el SoundBar	(Home T	E	Engineer Signature: WADE							
Node:	TX 2441M	Hz+TX 577	6.35MHz	[	Distance	3m						
Nodel:	S90											
<b>Aanufa</b>	cturer: EDIF	IER										
Note:											_	
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark		
	2441.000	88.64	1.06	89.70	1	1	peak					
	4882.027	41.89	8.11	50.00	74.00	-24.00	peak					

34.01

80.35

79.05

30.38

22.40

8.11

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20.17

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4882.027

5776.350

5776.350

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11552.735

Shenzhen Accurate Technology Co., Ltd.

42.12

90.79

89.49

50.55

42.57

54.00

114.00

94.00

74.00

54.00

-11.88

-23.21

-4.51

-23.45

-11.43

AVG

peak

AVG

peak

AVG





# ACCURATE TECHNOLOGY CO., LTD.

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ob No	.: LGW2018	#1870				F	Polarizat	ion: \	/ertical			
tanda	rd: FCC PAR	RT 15 3M Ra	diated			F	Power So	ource:	AC 120	V/60Hz		
est ite	em: Radiatio	on Test				E	Date: 18/07/23/					
emp.(	C)/Hum.(%	) 23 C/4	8 %			1	Time:					
UT:	4.1 Channe	el SoundBar	(Home T	E	Engineer	Signat	ure: M	/ADE				
lode:	TX 2441M	Hz+TX 577	6.35MHz	1	Distance	: 3m						
odel:												
anufa	acturer: EDIF	IER										
ote:												
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1	000.000	20	00	3000	5000	6000	7000 8000	9000		18000.0 MHz		
lo.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark		
	2441 000	89.25	1.06	90.31	1	1	peak		1			

No.	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector	(cm)	(deg.)	Remark
1	2441.000	89.25	1.06	90.31	1	1	peak			
2	4882.025	41.81	8.11	49.92	74.00	-24.08	peak			
3	4882.025	33.13	8.11	41.24	54.00	-12.76	AVG			
4	5776.350	78.15	10.44	88.59	114.00	-25.41	peak			
5	5776.350	76.85	10.44	87.29	94.00	-6.71	AVG			
6	11552.737	30.34	20.17	50.51	74.00	-23.49	peak			
7	11552.737	22.29	20.17	42.46	54.00	-11.54	AVG			





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F1 Bldg A Changyuan New Material Port Keyuan Rd.

Site: 2# Chamber Tel:+86-0755-26503290

			ence & Ir	dustry Park,	Nanshan Sh		-			:+86-0755-265033			
	: LGW2018						Polarizat		Horizont				
	rd: FCC PAF		diated				Power Source: AC 120V/60Hz						
	m: Radiatio						Date: 18/07/23/						
	C)/Hum.(%						Time: Engineer Signature: WADE						
UT:				heater Syste	em)				ure: W	ADE			
/lode:		IHz+TX 582	0.25MHz			L	Distance	3m					
Nodel:	S90												
and the second	cturer: EDIF	IER											
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20.0	000.000	20	00	3000	5000	6000 7	7000 8000	9000		18000.0 MHz			
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark			
	2480.000	89.00	1.10	90.10	1	1	peak						
e e e e e e e	4960 029	41 44	8 60	50.04	74.00	-23 96	neak		1				

2400.000	00.00	1.10	00.10			peak		
4960.029	41.44	8.60	50.04	74.00	-23.96	peak		
4960.029	33.75	8.60	42.35	54.00	-11.65	AVG		
5820.350	80.95	10.66	91.61	114.00	-22.39	peak		
5820.350	79.55	10.66	90.21	94.00	-3.79	AVG		
11640.748	29.83	20.71	50.54	74.00	-23.46	peak		
11640.748	21.62	20.71	42.33	54.00	-11.67	AVG		
	4960.029 4960.029 5820.350 5820.350 11640.748	4960.02941.444960.02933.755820.35080.955820.35079.5511640.74829.83	4960.02941.448.604960.02933.758.605820.35080.9510.665820.35079.5510.6611640.74829.8320.71	4960.02941.448.6050.044960.02933.758.6042.355820.35080.9510.6691.615820.35079.5510.6690.2111640.74829.8320.7150.54	4960.02941.448.6050.0474.004960.02933.758.6042.3554.005820.35080.9510.6691.61114.005820.35079.5510.6690.2194.0011640.74829.8320.7150.5474.00	4960.02941.448.6050.0474.00-23.964960.02933.758.6042.3554.00-11.655820.35080.9510.6691.61114.00-22.395820.35079.5510.6690.2194.00-3.7911640.74829.8320.7150.5474.00-23.46	4960.029       41.44       8.60       50.04       74.00       -23.96       peak         4960.029       33.75       8.60       42.35       54.00       -11.65       AVG         5820.350       80.95       10.66       91.61       114.00       -22.39       peak         5820.350       79.55       10.66       90.21       94.00       -3.79       AVG         11640.748       29.83       20.71       50.54       74.00       -23.46       peak	4960.029       41.44       8.60       50.04       74.00       -23.96       peak         4960.029       33.75       8.60       42.35       54.00       -11.65       AVG         5820.350       80.95       10.66       91.61       114.00       -22.39       peak         5820.350       79.55       10.66       90.21       94.00       -3.79       AVG         11640.748       29.83       20.71       50.54       74.00       -23.46       peak



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# ACCURATE TECHNOLOGY CO., LTD.

F1.Bldg.A.Changyuan New Material Port Keyuan Rd.

Site: 2# Chamber Tel:+86-0755-26503290

oh No	: LGW2018				Nanshan Sh		Polarizati		/ertical				
	rd: FCC PAF		diated				Power Source: AC 120V/60Hz						
	m: Radiatic		0.0/				Date: 18/07/23/						
	C)/Hum.(%						Time:						
EUT:				heater Syste	em)		Engineer Signature: WADE Distance: 3m						
/lode:		Hz+TX 582	J.25MHZ			L	Jistance:	: 3m					
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No.	Freq.	Reading	Factor	Result	Limit	Margin	Detector	Height (cm)	Degree (deg.)	Remark			
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	1000	(cm)	(uey.)				
	2480.000	89.71	1.10	90.81	1	1	peak		·				

Shenzhen Accurate Technology Co., Ltd.

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-23.79

-11.44

AVG

peak

AVG

peak

AVG



ATC

# 18GHz-26.5GHz test data (Bluetooth+5.8G)

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Job No.: LGW2018 #1874	Polarization: Horizontal
Standard: FCC PART 15 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/23/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
Mode: TX 2402MHz+TX 5730.35MHz	Distance: 3m
Model: S90	
Manufacturer: EDIFIER	
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Note:

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10 0.0	8000.000		20000							26500.0 MHz
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20 10 0.0 1	Freq.		Factor			Margin (dB) -23.80	1111111		Degree (deg.)	a miner de feri



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Job No.: LGW2018 #1873	Polarization: Vertical
Standard: FCC PART 15 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/23/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
Mode: TX 2402MHz+TX 5730.35MHz	Distance: 3m
Model: S90	
Manufacturer: EDIFIER	

Note:

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18	000.000		20000							26500.0 MH
•	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1.0	25366.753	9.27	41.09	50.36	74.00	-23.64	peak			





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Job No.: LGW2018 #1875	Polarization: Horizontal
Standard: FCC PART 15 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/23/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
Mode: TX 2441MHz+TX 5776.35MHz	Distance: 3m
Model: S90	
Manufacturer: EDIFIER	
Note:	
90.0 dBuV/m	limit1: —

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).	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
	25035.357	10.33	39.76	50.09	74.00	-23.91	peak	1		
	25035.357	1.02	39.76	40.78	54.00	-13.22	AVG	1		



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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1876	Polarization: Vertical
Standard: FCC PART 15 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/23/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
Mode: TX 2441MHz+TX 5776.35MHz	Distance: 3m
Model: S90	
Manufacturer: EDIFIER	

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	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
	25732.376	9.27	41.02	50.29	74.00	-23.71	peak			
	25732.376	-0.52	41.02	40.50	54.00	-13.50	AVG			



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Job No.: LGW2018 #1878	Polarization: Horizontal
Standard: FCC PART 15 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/23/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
Mode: TX 2480MHz+TX 5820.25MHz	Distance: 3m
Model: S90	
Manufacturer: EDIFIER	

Note:

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<b>.</b>	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
	26174.038	9.67	40.33	50.00	74.00	-24.00	peak			

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Shenzhen Accurate Technology Co., Ltd.

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# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,

Site: 2# Chamber Tel:+86-0755-26503290

		Sci	ence & In	dustry Park,I	Nanshan Sh	nenzhen	P.R.Chi	na	Fax	:+86-0755-26503396			
Job No	.: LGW2018	#1877				F	Polarizati	on: \	/ertical				
Standa	rd: FCC PAF	RT 15 3M Ra	diated			F	Power Sc	ource:	AC 120	V/60Hz			
Test ite	st item: Radiation Test						Date: 18/07/23/						
Temp.	mp.( C)/Hum.(%) 23 C / 48 %						Time:						
EUT:	4.1 Channel SoundBar (Home Theater System)						Engineer Signature: WADE						
Mode:							Distance	3m					
Model:	S90												
Manufa	acturer: EDIF	IER											
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	8000.000		20000							26500.0 MHz			
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark			
1	25852.085	9.36	41.00	50.36	74.00	-23.64	peak						

-13.42

AVG

54.00

Shenzhen Accurate Technology Co., Ltd.

25852.085

-0.42

41.00

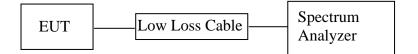
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# **12.BAND EDGE COMPLIANCE TEST**

# 12.1.Block Diagram of Test Setup



# 12.2.The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

# 12.3.The Requirement For RSS-247 Section 5.5

Section 5.5: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

# 12.4.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.



# 12.5.Operating Condition of EUT

- 12.5.1.Setup the EUT and simulator as shown as Section 12.1.
- 12.5.2.Turn on the power of all equipment.
- 12.5.3.Let the EUT work in TX (Hopping off, Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

# 12.6.Test Procedure

- 12.6.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.
- 12.6.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz with convenient frequency span including 100 kHz bandwidth from band edge.

12.6.3. The band edges was measured and recorded.

# 12.7.Test Result

# Non-hopping mode

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)	Result
	GFSK mo	de	
2400.00	49.30	> 20dBc	PASS
2483.50	61.40	> 20dBc	PASS
	8DPSK mo	ode	
2400.00	47.78	> 20dBc	PASS
2490.30	56.80	> 20dBc	PASS



## Hopping mode

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)	Result
	(ubc)	(ubc)	
	GFSK mod	de	
2400.00	50.85	> 20dBc	PASS
2486.00	53.98	> 20dBc	PASS
	8DPSK mo	de	
2372.35	51.63	> 20dBc	PASS
2484.97	53.68	> 20dBc	PASS

Note: This testing was carried out on all operation modes, but only the worst case was presented in this report.

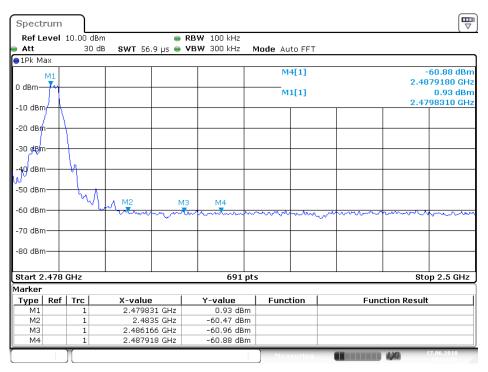
The spectrum analyzer plots are attached as below.



)					( <b></b>
10.00 dB	m 🖷 🖲	<b>BW</b> 100 kHz			
30 c	iB SWT 1 ms 👄 V	<b>'BW</b> 300 kHz <b>Mo</b>	de Auto Sweep		
			M4[1]		-61.28 dB
					2.350040 GF
			M1[1]		-6.03 dB)
					2.401990 GH
		M4		мз	
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Hz		691 pt	<u> </u>		Stop 2.403 GHz
Trc	X-value	Y-value	Function	Functio	on Result
1	2.40199 GHz	-6.03 dBm			
1	2.4 GHz	-55.33 dBm			
	2.37844 GHz 2.35004 GHz	-60.86 dBm -61.28 dBm			
1					
	30 c	30 dB SWT 1 ms • V	30 dB SWT 1 ms VBW 300 kHz Mo	30 dB     SWT 1 ms     VBW     300 kHz     Mode Auto Sweep       M4[1]     M1[1]       M1[1]     M1[1]       M4     M1[1]       M4     M4       M4	30 dB       SWT 1 ms       VBW 300 kHz       Mode Auto Sweep         M4[1]       M1[1]         M1[1]       M1[1]         M4       M3         M4       M4         M4

Non-hopping mode (GFSK)

Date: 17.JUN.2018 09:32:45



Date: 17.JUN.2018 09:34:05

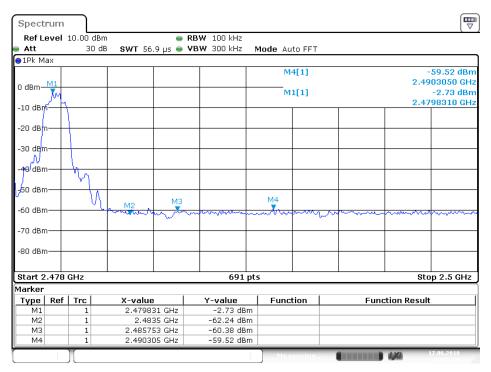
#### Shenzhen Accurate Technology Co., Ltd.

Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. ChinaTel: +86-755-26503290Fax: +86-755-26503396E-mail: webmaster@atc-lab.comHttp://www.atc-lab.com



#### ₩ Spectrum Ref Level 10.00 dBm RBW 100 kHz SWT 1 ms e VBW 300 kHz Att 30 dB Mode Auto Sweep 1Pk Max M4[1] -61.82 dBm 2.363500 GHz 0 dBm M1[1] -9.68 dBŋ 2.<u>401990 G</u>H -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm М4 МЗ -60 dBm e la -70 dBm -80 dBm-Start 2.31 GHz 691 pts Stop 2.403 GHz Marker **Function Result** Туре Ref | Trc X-value Y-value Function -9.68 dBm -57.46 dBm 2.40199 GHz 2.4 GHz Μ1 1 1 M2 2.37803 GHz MЗ 1 -61.60 dBm M4 2.3635 GHz 1 -61.82 dBm

Date: 17.JUN.2018 09:37:01



Date: 17.JUN.2018 09:35:31

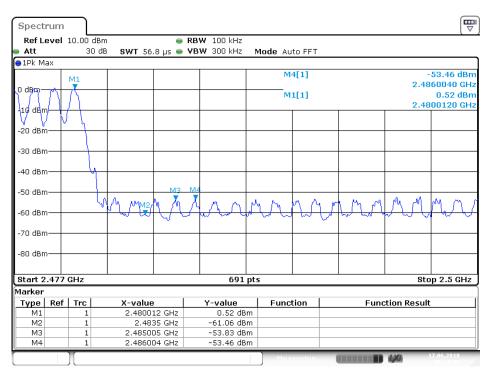
#### Shenzhen Accurate Technology Co., Ltd.

#### Non-hopping mode (8DPSK)



#### ₩ Spectrum RBW 100 kHz Ref Level 10.00 dBm SWT 1.1 ms VBW 300 kHz Att 30 dB Mode Auto Sweep 1Pk Max M4[1] -61.44 dBm 2.363000 GHz 0 dBm M1[1] -7.30 **dB**m 2.401910 🖣 👭 -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm M2 мэ м4 60 dBm mm white Martin . -70 dBm -80 dBm-Stop 2.405 GHz Start 2.31 GHz 691 pts Marker **Function Result** Туре Ref | Trc X-value Y-value Function -7.30 dBm -58.15 dBm 2.40191 GHz Μ1 1 M2 2.4 GHz 1 2.37496 GHz MЗ 1 -60.20 dBm M4 1 2.363 GHz -61.44 dBm

Date: 17.JUN.2018 09:42:17



Date: 17.JUN.2018 09:41:08

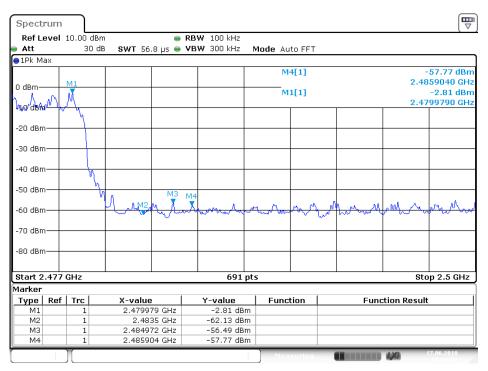
#### Shenzhen Accurate Technology Co., Ltd.

## Hopping mode (GFSK)



#### ₩ Spectrum RBW 100 kHz Ref Level 10.00 dBm SWT 1.1 ms VBW 300 kHz Att 30 dB Mode Auto Sweep 1Pk Max M4[1] -61.30 dBm 2.372350 GHz 0 dBm -9.67 dBm 2.402040 CHz M1[1] -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm M4 м -60 dBm Junta -70 dBm -80 dBm-Stop 2.405 GHz Start 2.31 GHz 691 pts Marker **Y-value** -9.67 dBm -62.77 dBm **Function Result** Туре Ref | Trc X-value Function 2.40204 GHz 2.4 GHz 2.38527 GHz Μ1 1 1 M2 MЗ 1 -61.80 dBm M4 2.37235 GHz 1 -61.30 dBm

Date: 17.JUN.2018 09:38:39



Date: 17.JUN.2018 09:40:01

#### Shenzhen Accurate Technology Co., Ltd.

#### Hopping mode (8DPSK)



# **Radiated Band Edge Result**

Note:

 Emissions attenuated more than 20 dB below the permissible value are not reported.
 The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

3. Display the measurement of peak values.

Test Procedure:

The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

Let the EUT work in TX (Hopping off, Hopping on) modes measure it. We select 2402MHz, 2480MHz TX frequency to transmit(Hopping off mode). We select 2402-2480MHz TX frequency to transmit(Hopping on mode).

During the radiated emission test, the spectrum analyzer was set with the following configurations:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.

3.All modes of operation were investigated and the worst-case(GFSK) emissions are reported.



Λ 7	8			TE TECH		Y CO				Site: 2# Chamber		
A	C)			hangyuan Ne dustry Park,I						+86-0755-26503290 :+86-0755-26503396		
Job No.:	LGW2018	#1717				F	Polarizat	ion: I	Horizonta	al		
Standard	d: FCC (Bar	nd Edge)				F	Power So	ource:	AC 120	V/60Hz		
Test item: Radiation Test						Date: 18/07/14/						
Temp.( C)/Hum.(%) 23 C / 48 %						Time:						
EUT: 4.1 Channel SoundBar (Home Theater System)						Engineer Signature: WADE						
Node:	TX 2402M	Hz				C	Distance	3m				
Nodel:	S90											
Manufac	turer: EDIF	IER										
90.0	dBu∀/m											
Γ									limit1:	_		
80		*************							limit2:			
							10001100011		100010011			
70	************											
60												
OU -												
50												
40		*****										
30	energy with the second s	and the second state of th	ready wanted as more	uning here the second	held and the second second	eduted in months	inventation the server	Kang and shallow	ward and and	antel - web ( a train 1		
20												
10		******	****	*****	*****			*******				
0.0												
231	10.000									2390.0 MHz		
.	Freq.	Reading	Factor	Result	Limit	Margin		Height	Degree			
No.	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector	(cm)	(deg.)	Remark		
	2389.840	38.42	0.79	39.21	74.00	-34.79	peak	1.				
2	2389.840	28.82	0.79	29.61	54.00	-24.39	AVG					

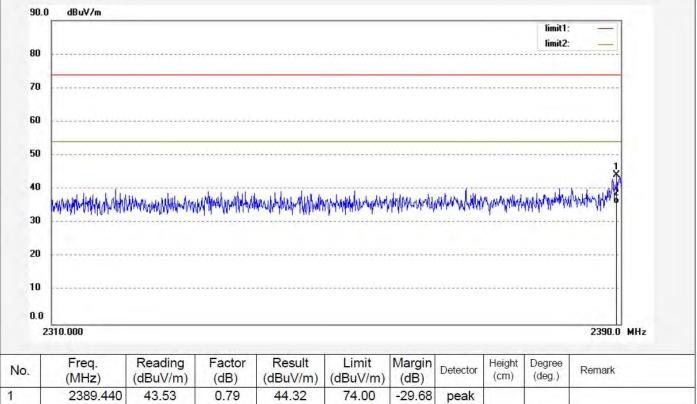




# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1716	Polarization: Vertical
Standard: FCC (Band Edge)	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/14/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
Mode: TX 2402MHz	Distance: 3m
Model: S90	
Manufacturer: EDIFIER	
Note:	



54.00

-18.36

AVG

Shenzhen Accurate Technology Co., Ltd.

2389.440

34.85

2

35.64

0.79





40

30

20

10

0.0

2483.500

# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

2500.0 MHz

b No.: LGW2018 #1722	Polarization: Horizontal
andard: FCC (Band Edge)	Power Source: AC 120V/60Hz
st item: Radiation Test	Date: 18/07/14/
mp.( C)/Hum.(%) 23 C / 48 %	Time:
IT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE
ode: TX 2480MHz	Distance: 3m
odel: S90	
anufacturer: EDIFIER	
te:	
te:	limit1:
te:	limit1: limit2:
90.0 dBuV/m 80	
90.0 dBuV/m	
90.0 dBuV/m 80	
90.0 dBuV/m 80 70	

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2487.113	34.68	1.10	35.78	74.00	-38.22	peak			
2	2487.113	24.26	1.10	25.36	54.00	-28.64	AVG			

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# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

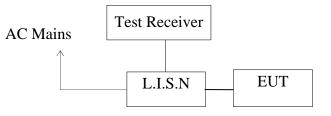
Job No.: LGW2018 #1723	Polarization: Vertical					
Standard: FCC (Band Edge)	Power Source: AC 120V/60Hz					
Test item: Radiation Test	Date: 18/07/14/					
Temp.( C)/Hum.(%) 23 C / 48 %	Time:					
EUT: 4.1 Channel SoundBar (Home Theater System)	Engineer Signature: WADE					
Mode: TX 2480MHz	Distance: 3m					
Model: S90						
Manufacturer: EDIFIER						
Note:						

90.0 dBuV/m limit1: limit2: 80 70 60 50 40 inder her and have been allowed and the second and the second s 30 20 10 0.0 2483.500 2500.0 MHz Freq. Reading Factor Result Limit Margin Height Degree Detector Remark No. (MHz) (dBuV/m) (dB) (dBuV/m) (dBuV/m) (dB) (cm) (deg.) 38.19 1 2485.200 1.10 39.29 74.00 -34.71 peak AVG 2 2485.200 28.44 1.10 29.54 54.00 -24.46



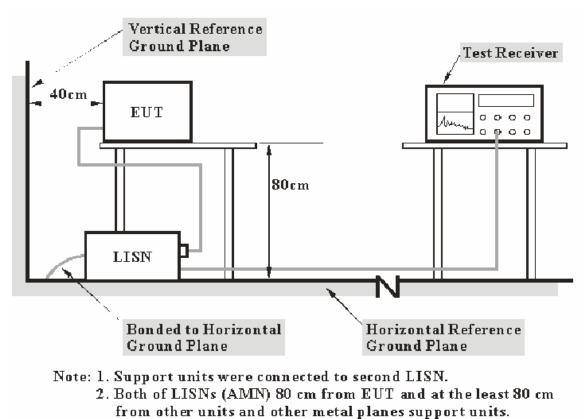
# **13.AC POWER LINE CONDUCTED EMISSION**

# 13.1.Block Diagram of Test Setup



(EUT: 4.1 Channel SoundBar (Home Theater System))

# 13.2.Test System Setup





Frequency	Limit dB(µV)					
(MHz)	Quasi-peak Level	Average Level				
0.15 - 0.50	66.0 - 56.0 *	56.0 - 46.0 *				
0.50 - 5.00	56.0	46.0				
5.00 - 30.00	60.0	50.0				
NOTE1: The lower limit sha	ll apply at the transition freque	ncies.				
NOTE2: The limit decreases linearly with the logarithm of the frequency in the range						
0.15MHz to 0.50M	Hz.					

# 13.3.Power Line Conducted Emission Measurement Limits

# 13.4.Configuration of EUT on Measurement

The equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

# 13.5.Operating Condition of EUT

13.5.1.Setup the EUT and simulator as shown as Section 13.1.

13.5.2.Turn on the power of all equipment.

13.5.3.Let the EUT work in test mode and measure it.

# 13.6.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 500hm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2014 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.



Frequency	Transducer	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Remark
(MHz)	value	Level	Level	Limit	Limit	Margin	Margin	(Pass/Fail)
	(dB)	(dBµV)	(dBµV)	(dBµV)	(dBµV)	(dB)	(dB)	
X.XX	10.5	51.1	34.2	56.0	46.0	4.9	11.8	Pass

# 13.7.Data Sample

$$\label{eq:Frequency} \begin{split} Frequency(MHz) &= Emission \ frequency \ in \ MHz \\ Transducer \ value(dB) &= Insertion \ loss \ of \ LISN + Cable \ Loss \\ Level(dB\mu V) &= Quasi-peak \ Reading/Average \ Reading + Transducer \ value \\ Limit \ (dB\mu V) &= Limit \ stated \ in \ standard \end{split}$$

Calculation Formula: Margin = Limit (dBµV) - Level (dBµV)

# 13.8. Power Line Conducted Emission Measurement Results

# PASS.

The frequency range from 150kHz to 30MHz is checked.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

Emissions attenuated more than 20 dB below the permissible value are not reported.

All data was recorded in the Quasi-peak and average detection mode.

The spectral diagrams are attached as below.



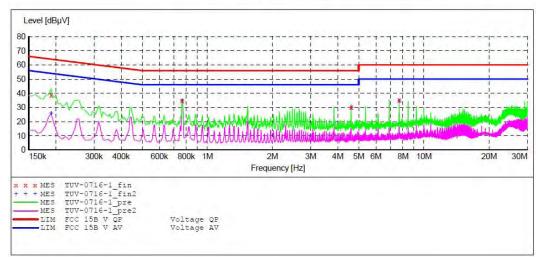
#### ACCURATE TECHNOLOGY CO., LTD

#### CONDUCTED EMISSION STANDARD FCC PART 15B

EUT:	4.1 Channel	SoundBar	(Home	Theater	System)	M/N:S90	
Manufacturer:	EDIFIER						
Operating Condition:	BT Communica	ation					
Test Site:	1#Shielding	Room					
Operator:	WADE						
Test Specification:	N 120V/60Hz						
Comment:	Mains port						
Start of Test:	7/16/2018 /						

#### SCAN TABLE: "V 9K-30MHz fin"

Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak Average	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak Average	1.0 s	9 kHz	NSLK8126 2008



#### MEASUREMENT RESULT: "TUV-0716-1\_fin"

7/16/2018

1	10/2010							
	Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.190000	38.80	10.5	64	25.2	QP	N	GND
	0.765000	34.70	10.8	56	21.3	QP	N	GND
	4.610000	30.30	11.1	56	25.7	QP	N	GND
	7.680000	35.20	11.2	60	24.8	QP	N	GND

#### MEASUREMENT RESULT: "TUV-0716-1 fin2"

7			

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190000	25.70	10.5	54	28.3	AV	N	GND
0.765000	34.40	10.8	46	11.6	AV	N	GND
4.610000	29.70	11.1	46	16.3	AV	Ν	GND
7.680000	34.30	11.2	50	15.7	AV	N	GND



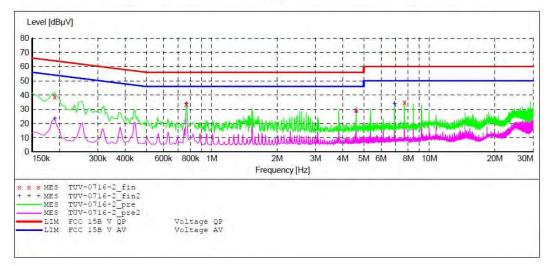
#### ACCURATE TECHNOLOGY CO., LTD

#### CONDUCTED EMISSION STANDARD FCC PART 15B

EUT:	4.1 Channel SoundBar (Home Theater System) M/N:S90
Manufacturer:	EDIFIER
Operating Condition:	BT Communication
Test Site:	1#Shielding Room
Operator:	WADE
Test Specification:	L 120V/60Hz
Comment:	Mains port
Start of Test:	7/16/2018 /

#### SCAN TABLE: "V 9K-30MHz fin"

	ription:		UB_STD_VTE			the second second second second
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
			Average			
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008
			Average			



#### MEASUREMENT RESULT: "TUV-0716-2\_fin"

7/16/2018

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.190000	38.80	10.5	64	25.2	QP	L1	GND	
0.765000	33.70	10.8	56	22.3	QP	L1	GND	
4.610000	29.50	11.1	56	26.5	QP	L1	GND	
7.680000	34.70	11.2	60	25.3	QP	L1	GND	

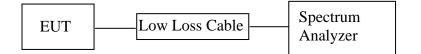
#### MEASUREMENT RESULT: "TUV-0716-2 fin2"

7/16/2018 Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.190000	23.50	10.5	54	30.5	AV	L1	GND
0.765000	33.50	10.8	46	12.5	AV	L1	GND
4.610000	28.70	11.1	46	17.3	AV	L1	GND
6.910000	33.80	11.2	50	16.2	AV	L1	GND



# **14.99% OCCUPIED BANDWIDTH**

# 14.1.Block Diagram of Test Setup



# 14.2. The Requirement for RSS-Gen Clause 6.7

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

In some cases, the "x dB bandwidth" is required, which is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated x dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.

# 14.3.EUT Configuration on Measurement

The following equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

# 14.4.Operating Condition of EUT

14.4.1.Setup the EUT and simulator as shown as Section 14.1.

- 14.4.2.Turn on the power of all equipment.
- 14.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.



# 14.5.Test Procedure

- 14.5.1.The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 14.5.2. The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- 14.5.3.The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
- 14.5.4. The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Channel	Frequency (MHz)	GFSK mode 99% Bandwidth (MHz)	8DPSK mode 99% Bandwidth (MHz)	Result
Low	2402	0.842	1.151	PASS
Middle	2441	0.838	1.142	PASS
High	2480	0.838	1.142	PASS

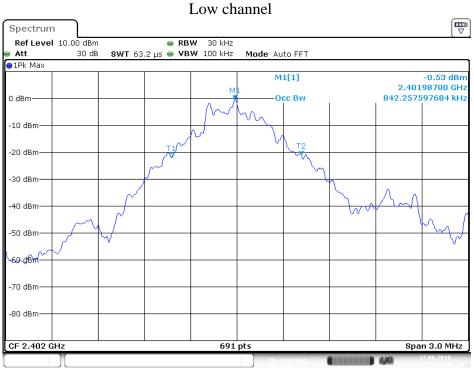
# 14.6.Measurement Result

Note: This testing was carried out on all operation modes, but only the worst case was presented in this report.

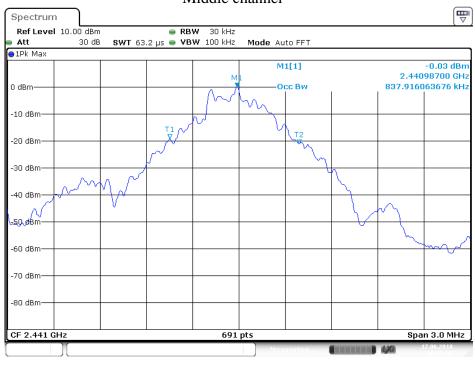
The spectrum analyzer plots are attached as below.



# GFSK



Date: 17.JUN.2018 09:18:11

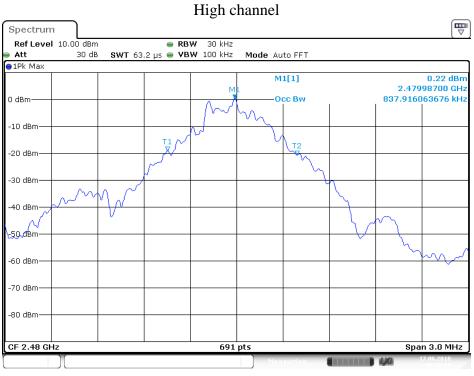


Middle channel

Date: 17.JUN.2018 09:17:37

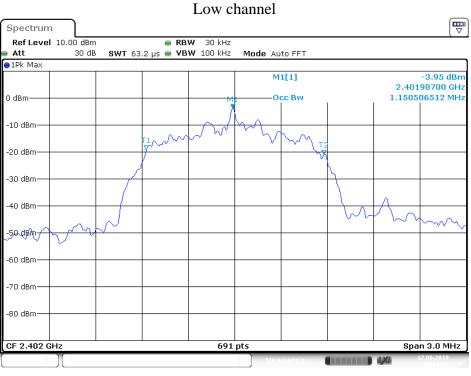
Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. ChinaTel: +86-755-26503290Fax: +86-755-26503396E-mail: webmaster@atc-lab.comHttp://www.atc-lab.com





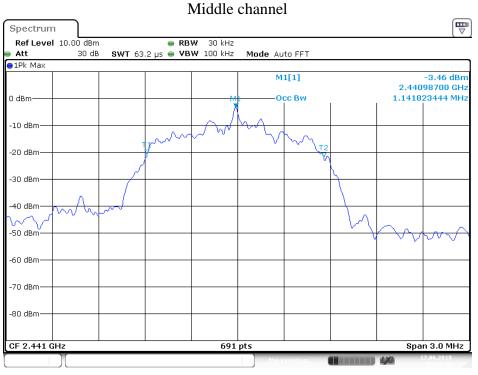
Date: 17.JUN.2018 09:17:00

**8DPSK** 



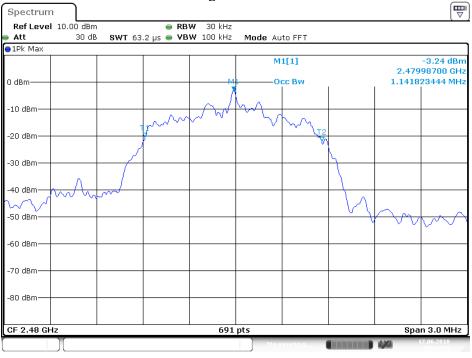
Date: 17.JUN.2018 09:14:43





Date: 17.JUN.2018 09:15:44





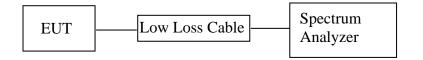
Date: 17.JUN.2018 09:16:15

Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. ChinaTel: +86-755-26503290Fax: +86-755-26503396E-mail: webmaster@atc-lab.comHttp://www.atc-lab.com



# **15.CONDUCTED SPURIOUS EMISSION COMPLIANCE TEST**

# 15.1.Block Diagram of Test Setup



# 15.2. The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

# 15.3.The Requirement For RSS-247 Section 5.5

Section 5.5: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.



# 15.4.EUT Configuration on Measurement

The equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

# 15.5.Operating Condition of EUT

- 15.5.1.Setup the EUT and simulator as shown as Section 15.1.
- 15.5.2.Turn on the power of all equipment.
- 15.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

# **15.6.Test Procedure**

- 15.6.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.
- 15.6.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz
- 15.6.3. The Conducted Spurious Emission was measured and recorded.

# 15.7.Test Result

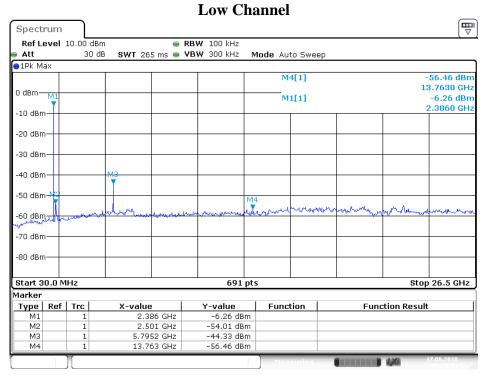
# PASS.

Note: This testing was carried out on all operation modes, but only the worst case was presented in this report.

The spectrum analyzer plots are attached as below.

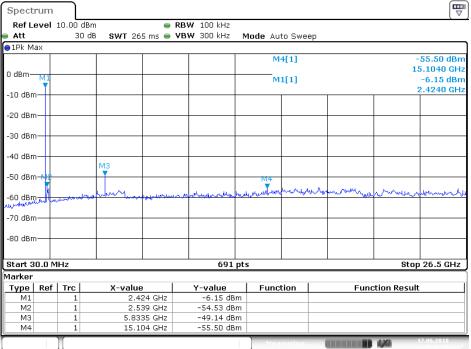


# **GFSK mode**



Date: 17.JUN.2018 09:19:44





Date: 17.JUN.2018 09:20:41



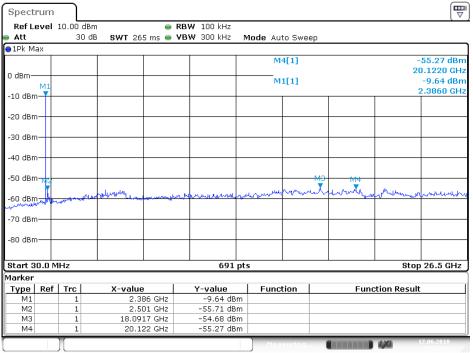
# High Channel

Spectrum	)								
Ref Level	10.00 dB	m	RBW 100 kHz						
Att	30 d	dB <b>SWT</b> 265 ms	VBW 300 kHz	Mode Au	to Swee	ер			
∋1Pk Max									
						M4[1]			
0 dBm							20.1220 GH		
M1				M	1[1]		-6.09 dBr		
-10 dBm							:	2.4620 GH	
-20 dBm									
-30 dBm									
40 40									
-40 dBm									
-50 dBm		M3				1014			
-60 dBm	manager	and and the second second	water have been and the back of the	Margary Curry and	m	manutu	mound	monteringer	
~	•••								
-70 dBm									
-80 dBm									
Start 30.0 №	1Hz		691	pts			Stop	) 26.5 GHz	
Marker									
Type Ref	Trc	X-value	Y-value	Func	tion	Fun	Function Result		
M1	1	2.462 GH							
M2 M3	1	2.577 GH 5.7569 GH							
M3 M4	1	20.122 GH							
1717	1 -1	20,122 00	2					17.05.0010	
	Л			Mea			1,20	09:22:31	

Date: 17.JUN.2018 09:22:31

## 8DPSK mode

## Low Channel



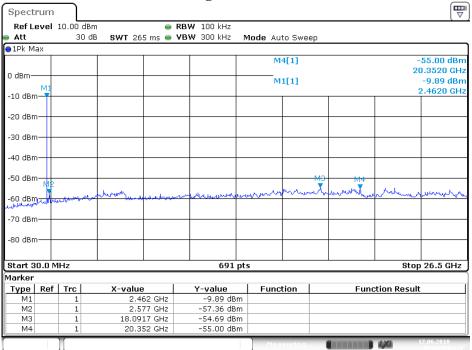
Date: 17.JUN.2018 09:25:48



#### ₩ Spectrum ● RBW 100 kHz SWT 265 ms ● VBW 300 kHz Ref Level 10.00 dBm 30 dB Mode Auto Sweep Att ●1Pk Max M4[1] -55.69 dBm 20.0840 GHz 0 dBm -10.83 dBm M1[1] 2.4240 GHz -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm u.L.n. with H. WALK -60 dBm -70 dBm -80 dBm Start 30.0 MHz Stop 26.5 GHz 691 pts Marker Y-value -10.83 dBm Type Ref Trc X-value Function **Function Result** 2.424 GHz M1 1 M2 2.616 GHz -55.97 dBm 1 МЗ 16.7126 GHz -54.93 dBm 1 M4 20.084 GHz -55.69 dBm

Date: 17.JUN.2018 09:24:53

# **High Channel**



Date: 17.JUN.2018 09:23:53

#### Shenzhen Accurate Technology Co., Ltd.

# Middle Channel



# **16.ANTENNA REQUIREMENT**

# 16.1.The Requirement

According to 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.

# 16.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.

\*\*\*\*\* End of Test Report \*\*\*\*\*