

Low Band-edge



Lowest Channel & Modulation : GFSK

Low Band-edge Frequency Avg Type: Log-Pwr Trig: Free Run Atten: 30 dB PNO: Far 😱 IFGain:Low TYP Auto Tune Mkr1 2.399 870 GHz -45.05 dBm Ref 20.00 dBm 0 dB/div **Center Freq** 2.40000000 GHz Start Freq 2.395000000 GHz Stop Freq 2.40500000 GH: Span 10.00 MHz Sweep 1.00 ms (3001 pts) Center 2.400000 GHz #Res BW 100 kHz CF Step 1.000000 MHz Man VBW 300 kHz uto 2.399 870 GHz -45.05 dBr N 1 f Freq Offset 0 Hz 10 STATUS

<u>Hopping mode & Modulation : GFSK</u>



Lowest Channel & Modulation : GFSK

RF 50 Q 🛕 DC	PNO: Fast	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr	06:44:04 PM Mar 29, 2018 TRACE 2 3 4 5 TYPE MWWWWW DET P NNNN	Frequency
0 dB/div Ref 20.00 dBm	n			Mkr1 281.9 kHz -46.91 dBm	Auto Tun
0.00 10.0				-3 06 dBn	Center Fre 15.004500 MH
20.0 30.0 40.0 1					Start Fre 9.000 kH
0.0 +++++++++++++++++++++++++++++++++++	losisiontriduidheda.	hontaassentaleksei serielekseise	متر ومعالية المراجع ا	la, Ag, an strain the glate spin should	Stop Fro 30.000000 MF
tart 9 kHz Res BW 100 kHz	VBW	300 kHz	Sweep	Stop 30.00 MHz 5.33 ms (40001 pts)	CF Ste 2.999100 M
KR MODE TRC SCL	× 281.9 kHz	Y FU -46.91 dBm	NCTION FUNCTION WIDTI	H FUNCTION VALUE	Auto Mi
2 3 4 5 6					Freq Offs 0 H
7 8 9 0					
2					

RF 5	0 Q AC CORREC	SENSE:IN	ALIGNAUTO Avg Type: Log-Pwr	06:46:38 PM Mar 29, 2018 TRACE 2 3 4 5	Frequency
	PNO: Fas IFGain:Lo	Trig: Free Run Atten: 30 dB			
dB/div Ref 20.0			Mkr	4 9.371 89 GHz -40.34 dBm	Auto Tune
0.00 0.00 0.00	♦ 1			-9.06 dBm	Center Fre 5.015000000 GH
0.0	¢²		\$ ³	4	Start Fre 30.000000 MH
0.0					Stop Fre 10.000000000 GH
tart 30 MHz Res BW 1.0 MHz		3W 3.0 MHz		Stop 10.000 GHz 8.7 ms (40001 pts)	CF Ste 997.000000 MH
KR MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 N 1 f 5	× 2.402 11 GHz 3.107 49 GHz 6.228 60 GHz 9.371 89 GHz	-38.10 dBm -39.37 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Ma Freq Offse 0 H
7 8 9 0 1 2					
G			STATU		



Lowest Channel & Modulation : GFSK

RF	SD Q AC CORREC PNO: Fas IFGain:Lo	t 👝 Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr	06:48:55 PM Mar 29, 2018 TRACE 2 3 4 5 TYPE MULLING DET P N N N N	Frequency
10 dB/div Ref 20.	.00 dBm		Mkr2 2	22.297 375 GHz -32.93 dBm	
10.0 0.00 -10.0				-9.06 dBt	Center Fred 17.500000000 GH:
20.0 -30.0 -40.0	المتحدقين ومصالحا والمراجل			2 1 2	Start Free 10.000000000 GH
-50.0 -60.0 -70.0					Stop Free 25.000000000 GH:
Start 10.000 GHz #Res BW 1.0 MHz	vi vi	BW 3.0 MHz	Sweep 4	Stop 25.000 GHz 0.0 ms (40001 pts)	CF Step 1.50000000 GH
MKR MODE TRC SCL 1 N 1 f 2 N 1 f	× 24.988 000 GHz 22.297 375 GHz	-31.07 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Mar
3 4 5 6	22.297 375 GHZ				Freq Offse 0 H
7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9					
12 1 2			STATUS		

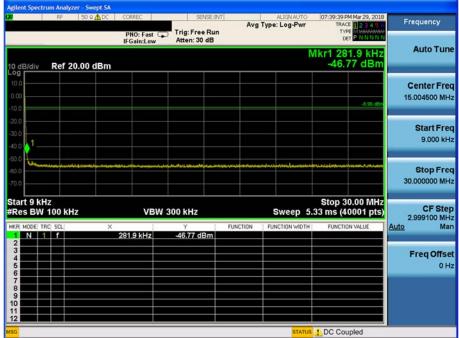


Reference for limit

Middle Channel & Modulation : GFSK



Conducted Spurious Emissions <u>Middle Channel & Modulation : GFSK</u>





Middle Channel & Modulation : GFSK







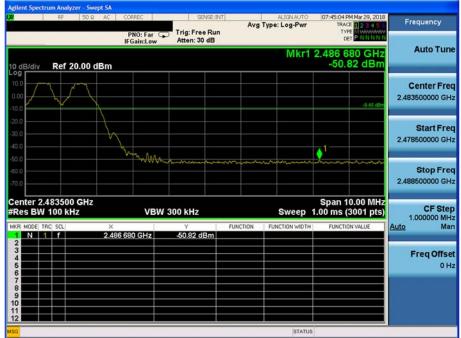
High Band-edge

Highest Channel & Modulation : GFSK



High Band-edge

Hopping mode & Modulation : GFSK





Highest Channel & Modulation : GFSK

RF 50 Q	DC CORREC	SENSE:IN	Avg T	ALIGNAUTO	07:46:55 PM Mar 29, 2018 TRACE	Frequency
	PNO: Fast IFGain:Low	Atten: 30 dB		Λ	Ikr1 281.9 kHz	Auto Tun
dB/div Ref 20.00 (iBm				-47.84 dBm	Center Fre
0 0 0 0 1						Start Fre 9.000 ki
0 Chambrean warten plan	มูกรูมทาริฐาริฐาริฐาร์แนะเปล่างเป็นการระบ	?#####################################	Hattamasaran	الماروقية (ر الأليانية)	alastinaan tu ya tu ya ayaa ayaa ayaa d	and the second sec
art 9 kHz les BW 100 kHz	VB X	W 300 kHz	FUNCTION		Stop 30.00 MHz 33 ms (40001 pts FUNCTION VALUE	30.000000 M CF Ste 2.999100 M
art 9 kHz les BW 100 kHz	VB	W 300 kHz		Sweep 5.	33 ms (40001 pts	30.000000 M CF Ste 2.999100 M <u>Auto</u> M Freq Offs
art 9 kHz es BW 100 kHz MOELTRC SCL N 1 f	VB X	W 300 kHz		Sweep 5.	33 ms (40001 pts	2.999100 M

RF 50	DA AC I	CORREC	SENS	E:INT		ALIGN AUTO		Mar 29, 2018	Frequency
		PNO: Fast G	Trig: Free F		Avgiyp	: Log-Pwr	TYPE	123450 MWAMAAA PNNNNN	
) dB/div Ref 20.0		IFGain:Low	Atten: 50 d	8		Mkr	2 5.647 6		Auto Tun
								-9.45 dBm	Center Fre 5.01500000 GH
0.0		-	المانية من المراجعة	¢2-			بالأدري الخات	مور بند المراجع مور بند المراجع	Start Fre 30.000000 MH
0.0									Stop Fr 10.00000000 G
tart 30 MHz Res BW 1.0 MHz		VBW	3.0 MHz			Sweep 1	Stop 10.0 8.7 ms (40		CF Ste 997.000000 Mi
R MODE TRC SCL		0 13 GHz 7 60 GHz	Y 10.85 dBr -39.42 dBr		TION FU	NCTION WIDTH	FUNCTION	VALUE	<u>Auto</u> M
	5.647		-39.42 UDI						Freq Offs 0
7 8 9 0 1									
2									



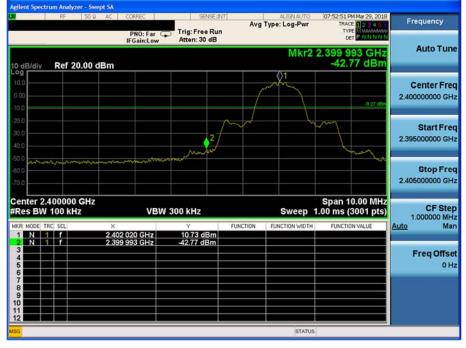
Highest Channel & Modulation : GFSK

RF	50 Q AC CORREC	C SEN	ISE:INT	ALIGN AUTO	07:51:13 PM Mar 29, TRACE	Frequency
	PNO: IFGain	Fast Trig: Free Atten: 30	Run		DET P N N	
0 dB/div Ref 20	0.00 dBm			Mkr2 2	2.380 250 G -33.48 dE	
0.00 10.00 10.00					-9.4	Center Fre 17.500000000 GH
0.0				والمراجع فالمحمد ومراجع	2 ²	Start Fre
50.0 50.0 70.0						Stop Fre 25.00000000 GH
Res BW 1.0 MH	z	VBW 3.0 MHz			Stop 25.000 G 0.0 ms (40001 p	ots) CF Ste 1.500000000 GH
tart 10.000 GHz Res BW 1.0 MH	z × 24.663 625 G	, Hz31.59 dB	FUNCTION	Sweep 4	Stop 25.000 G 0.0 ms (40001 p FUNCTION VALUE	Hz ots) CF Ste 1.500000000 GH Auto Ma
Res BW 1.0 MH KR MODE TRC SCL 1 N 1 f 2 N 1 f 3 4 5 5 6 6 6 6	z	, Hz31.59 dB	3m		0.0 ms (40001 p	ots) CF Ste 1.500000000 GH
Res BW 1.0 MH KR MODE TRC SCL 1 N 1 f 2 N 1 f 3	z × 24.663 625 G	, Hz31.59 dB	3m		0.0 ms (40001 p	Dts) CF Ste 1.50000000 GF Auto Ma Freq Offse



Low Band-edge

Lowest Channel & Modulation : π/4DQPSK



Low Band-edge

Hopping mode & Modulation : π/4DQPSK



Lowest Channel & Modulation : π/4DQPSK

	PNO: Fast (IFGain:Low	Trig: Free Run Atten: 30 dB		alignauto e: Log-Pwr	07:55:01 PM Mar 29, 2018 TRACE 2 3 4 5 TYPE MWWWWWW DET P N N N N	Frequency
0 dB/div Ref 20.00 dE	3m			Ν	/kr1 281.9 kHz -50.20 dBm	Auto Tune
0.00 0.00 0.00					-9 27 dēs	Center Fre 15.004500 MH
0.0 0.0 0.0 + 1						Start Fre 9.000 k⊦
0.0	ىلى ئەرەر يەرەپىرىكى ئەرەپىرىدۇر. ئەرەر يەرەپىرىكى ئەرەپىرىدۇر يەرەپىرىكى ئەرەپىرىكى ئەرەپىرىكى ئەرەپىرىكى ئەرە	المالية المراجع	terreture der sicher sich verschieden	ndfillisseine Baises	ประกาศสมีพระบุริงษ์ให้ระสรงรับการไรการ	Stop Fre 30.000000 Mi
tart O kills				.	Stop 30.00 MHz	CF Ste
Res BW 100 kHz		V 300 kHz			33 ms (40001 pts)	2.999100 M
Res BW 100 kHz KR MODE TRC SCL 1 N 2 3 4	VBV × 281.9 kHz	Y 300 kHz -50.20 dBm		INCTION WIDTH	33 ms (40001 pts) FUNCTION VALUE	2.999100 Mi Auto Mi Freq Offs
tart 9 kHz Res BW 100 kHz KR MODE TRC SCL 1 N 1 f 2 3 4 5 6 5 7 7 8 9 9	X	Y				2.999100 MH

	RF	50 Q	AC	CORREC		SENSE:INT		ALIGN AUTO	07:56:03 PM		Frequency
				PNO: Fast		ree Run 30 dB	Avg	g Type: Log-Pwr	TYPE	123450 MWWWWWW PNNNNN	Frequency
0 dB/div	Ref 2	0.00 dl	Bm	Ir Gain.Low	- Autori			Mkr4	4 5.710 6 -39.5	6 GHz 0 dBm	Auto Tun
og 10.0 10.0			\$1							-9 27 c @n	Center Fre 5.015000000 GH
0.0			<) ³ _ ²			4	inconstitution of the second			Start Fre 30.000000 M⊦
0.0											Stop Fre 10.000000000 GH
tart 30 N Res BW	1.0 MH	z		VB	W 3.0 MH			Sweep 1		001 pts)	CF Ste 997.000000 MH
KR MODE TR 1 N 1 2 N 1 3 N 1			3.28	2 11 GHz 6 70 GHz 4 51 GHz	-38.09	dBm dBm dBm	FUNCTION	FUNCTION WIDTH	FUNCTION	VALUE	<u>Auto</u> Ma
4 N 1 5 6	f			0 66 GHz	-39.50						Freq Offs 0 H
7 8 9											
2											



Lowest Channel & Modulation : π/4DQPSK





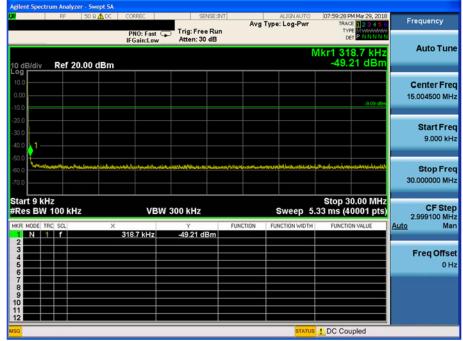
Reference for limit

Middle Channel & Modulation : π/4DQPSK



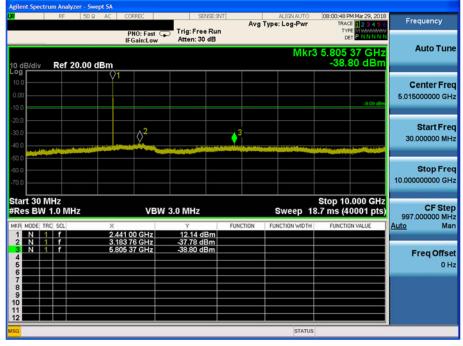
Conducted Spurious Emissions

Middle Channel & Modulation : π/4DQPSK





Middle Channel & Modulation : π/4DQPSK



	RF SO	Q AC	CORREC	SENSE:1		ALIGNAUTO	08:02:09 PM Mar 29, 2018 TRACE 2 3 4 5	Frequency
			PNO: Fast G	Trig: Free Run Atten: 30 dB		Type. Logi m		
0 dB/div	Ref 20.00					Mkr2 2	1.250 375 GHz -33.09 dBm	
og 10,0).00 0.0							-9.09.050	Center Fre 17.500000000 Gi
		-		-		2		Start Fr 10.000000000 G
0.0								Stop Fr 25.000000000 G
tart 10.00 Res BW 1.	0 MHz		VBW	3.0 MHz			Stop 25.000 GHz 0.0 ms (40001 pts)	CF St 1.500000000 G
KR MODE TRC	f	× 24.848 21.250	125 GHz 375 GHz	√ -30.84 dBm -33.09 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	Auto N
3								Freq Offs 0
8								
9								



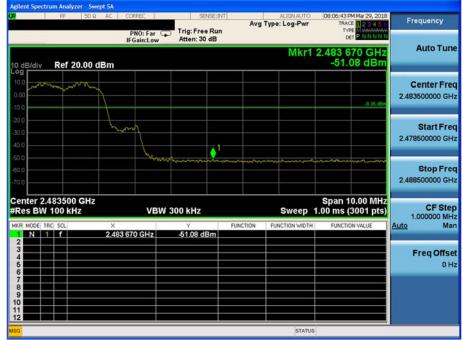
High Band-edge

Highest Channel & Modulation : π/4DQPSK



High Band-edge

Hopping mode & Modulation : π/4DQPSK





<u>Highest Channel & Modulation : π/4DQPSK</u>

RF 50 S	2 ▲ DC CORREC PNO: Fas IFGain:Lo	Trig: Free Run Atten: 30 dB		ALIGN AUTO	08:07:32 PM Mar 29, 201 TRACE 2 3 4 5 TYPE DET P N N N N	Frequency
dB/div Ref 20.00		W Atten of the		N	/kr1 300.7 kH: -49.88 dBm	Auto Tune
					-9.36 dB	Center Fre 15.004500 MH
0.0						Start Fre 9.000 kH
	สไม่กระเห็นของสุดสาราสต	wimanilahenaneatar		ugunaletingerissle	ana ta'anyi dajari afata ata ata	Stop Fre 30.000000 MH
tart 9 kHz Res BW 100 kHz KR MODE TRC SCL	×	300 kHz	FUNCTION FI	Sweep 5.	Stop 30.00 MH 33 ms (40001 pts FUNCTION VALUE	CF Ste 2.999100 Mi Auto Ma
1 N 1 f 2 3 4 4 5 6	300.7 kHz	-49.88 dBm				Freq Offs 0 F
8						
° 9 1 2						

Center F Story 92 GHz Story 92 GHz Story 92 GHz Story 92 GHz	RF 50	AC C	ORREC	SENSE:INT		ALIGN AUTO	08:09:10 PM Mar 29, 2018	English
Center F Storp 92 GHz 0 1 33.60 dBm 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1		1	PNO: Fast 🕞 FGain:Low		Avg T	ype: Log-Pwr	TYPE MIMAAAAAAAA	
Center F Start F <t< th=""><th>dB/div Ref 20.00</th><th>) dBm</th><th></th><th></th><th></th><th>Mkra</th><th></th><th>Auto Tun</th></t<>	dB/div Ref 20.00) dBm				Mkra		Auto Tun
00 02 03 03 04 05 00 00 04 04 05 05 05 00 00 05 <	.0	0 1					-9.26 dBm	Center Fre 5.015000000 GH
O Stop F 0 Image: Stop 10,000 GHz art 30 MHz Stop 10,000 GHz res BW 1.0 MHz VBW 3.0 MHz res BW 1.0 MHz VBW 3.0 MHz Sweep 18.7 ms (40001 pts) Protection N 1 P 2.479 88 GHz N 1 F 3.160 08 GHz -37.67 dBm N 1 F 5.870 92 GHz -39.60 dBm	.0		\$ ²		3			Start Fre 30.000000 MH
N 1 f 5.870.92 GHz -39.60 dBm Function Function </td <td>o</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Stop Fre 10.000000000 G⊦</td>	o							Stop Fre 10.000000000 G⊦
N 1 f 2.479 88 GHz 11.67 dBm N 1 f 3.160 08 GHz -37.67 dBm Freq Off N 1 f 5.870 92 GHz -39.60 dBm Freq Off	es BW 1.0 MHz		VBW		DINCTION		3.7 ms (40001 pts)	CF Ste 997.000000 MH Auto Ma
		2.479 3.160	08 GHz	11.67 dBm -37.67 dBm				Freq Offse 0 H



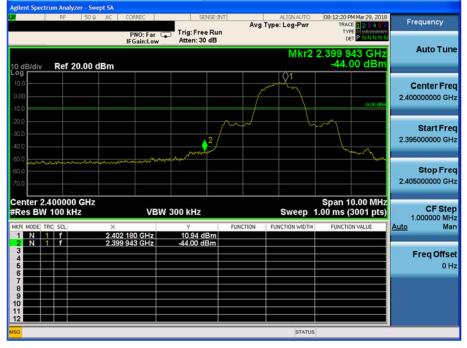
Highest Channel & Modulation : π/4DQPSK





Low Band-edge

Lowest Channel & Modulation : 8DPSK



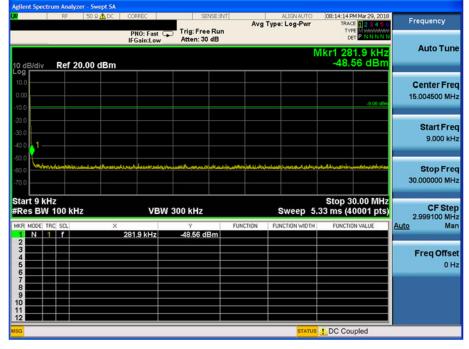
Low Band-edge

Hopping mode & Modulation : 8DPSK





Lowest Channel & Modulation : 8DPSK



	RF S	50.Q. AC	CORREC	SENS		ALIGNAUTO	08:15:13 PM Mar 29, 2018 TRACE	Frequency
			PNO: Fast		un	g Type: Log-Pwr	TYPE MUMANNA DET P N N N N	
_			IFGain:Lov	y Atten: 30 di	3	Mkr	3 5.690 22 GHz	Auto Tun
	Ref 20.0	00 dBm				WING	-39.60 dBm	
0.0		<	∕1					Center Fre
								5.015000000 GH
0.0							-9.06 d Dr	
0.0								
0.0			2		3			Start Fre 30.000000 MH
0.0		-	-					30.000000 MP
0.0							المصادلة فعد فتفح مقاتلة	
0.0								Stop Fre
0.0								10.00000000 GH
tart 30 MI	-lz						Stop 10.000 GHz	
Res BW 1	.0 MHz		VE	3W 3.0 MHz		Sweep 1	8.7 ms (40001 pts)	CF Ste 997.000000 MH
KR MODE TRC			×	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	Auto Ma
1 N 1 2 N 1	f f		2.401 86 GHz 2.651 36 GHz	-37.46 dBn	1			
3 N 1	f		5.690 22 GHz	-39.60 dBn	1			Freq Offs
5								0 H
7								
9					<u> </u>	+		
0								
4								
1								



Lowest Channel & Modulation : 8DPSK





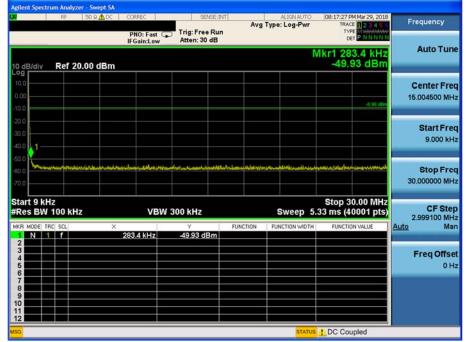
Reference for limit

Middle Channel & Modulation : 8DPSK



Conducted Spurious Emissions

Middle Channel & Modulation : 8DPSK





Middle Channel & Modulation : 8DPSK

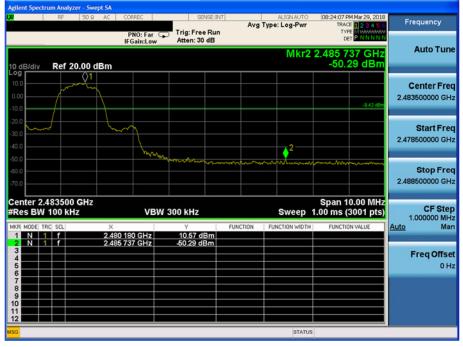


	RF	50 9	AC	CORREC	SEN	SE:INT	Aug Tu	ALIGNAUTO		1 Mar 29, 2018	Frequency
	_			PNO: Fast	Trig: Free Atten: 30		Avgiy	be: Log-Pwr	TYPE	P NNNNN	
				IFGain:Low	Atten. 30	40		Mkr2 1	6.676 12	25 CH7	Auto Tun
0 dB/div	Ref 2	0.00 d	IBm					WIKIZ I		4 dBm	
og 10,0											Center Fre
			_					-			17.50000000 GH
0.0										-8.98 dBm	
0.0					2					1/	Start Fre
0.0			the second second		in the second second	In the competition					10.00000000 G
0.0											
0.0											Stop Fre
70.0											25.00000000 GI
tart 10.0	000 GH	z							Stop 25.	000 GHz	
Res BW	1.0 MH	IZ		VBW	3.0 MHz			Sweep 40	0.0 ms (40	0001 pts)	CF Ste 1.50000000 GI
KR MODE T	RC SCL		× 24.943	3 375 GHz	, -31.07 d⊟		CTION F	UNCTION WIDTH	FUNCTION	N VALUE	Auto M
2 N				5 125 GHz	-33.54 dB						Less second
4											Freq Offs
6											01
8											
10											
1											
G								STATUS	2		



High Band-edge

Highest Channel & Modulation : 8DPSK



High Band-edge

Hopping mode & Modulation : 8DPSK





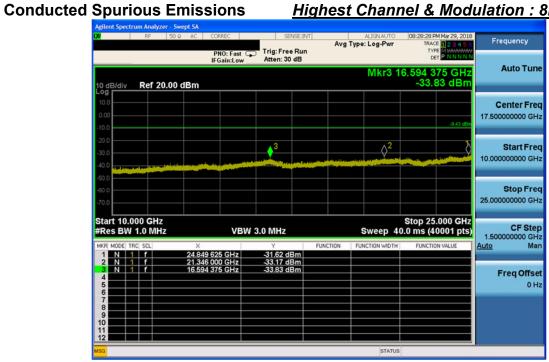
Highest Channel & Modulation : 8DPSK

F	F 50 ቧ 🛕 DC	CORREC	Trig: Free F	Run		ALIGNAUTO E: Log-Pwr	TRAC	M Mar 29, 2018 E 1 2 3 4 5 6 E MUNICIPALITY T P N N N N N	Frequency
0 dB/div R	ef 20.00 dBm	IFGain:Low	Atten: 30 d	B		N	/kr1 28		Auto Tu
og 10.0 0.00 10.0								-9.43 dBm	Center Fr 15.004500 M
20.0									Start Fr 9.000 k
50.0 50.0 70.0	a haran sala Hasara da Madalika	ູ, ແລະ, ເຊິ່ງ,	erines utrandore	البرينا ويرار وإرار مرادو	samesala	Annsang jagetari da Ans	glanana Lonaitria	adia-taorradianta	Stop Fr 30.000000 M
tart 9 kHz Res BW 100		VBW	300 kHz	11 01-02-02-02		Sweep 5.	33 ms (4		CF St 2.999100 M
KR MODE TRC SI		283.4 kHz	49.26 dBi	FUNCTI	ION FUI	NCTION WIDTH	FUNCTIO	N VALUE	Auto M
3 4 5 6									Freq Offs 0
7 8 9 0									
2									

RF 50 (R AC CORREC PNO: Fast (Trig: Free Run Atten: 30 dB	Avg T	ALIGNAUTO (pe: Log-Pwr	08:27:42 PM Mar 29, 2018 TRACE 2 3 4 5 TYPE MUSEUM	Frequency
0 dB/div Ref 20.00	IFGain:Low	Atten: 30 dB		Mkr4	5.808 11 GHz -39.31 dBm	Auto Tune
og 10.0 0.00 10.0	Q1				-9.43 d D n	Center Fre 5.015000000 GH
20.0 30.0 40.0	$\diamond^2 \diamond^3$		4			Start Fre 30.000000 MH
50.0						Stop Fre 10.000000000 GH
tart 30 MHz Res BW 1.0 MHz	VBV	V 3.0 MHz		Sweep 1	Stop 10.000 GHz 8.7 ms (40001 pts)	CF Ste 997.000000 MH
KR MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 N 1 f 5 1 f 6 1 f 8 1 f 9 1 f	× 2.480 13 GHz 2.765 77 GHz 3.134 66 GHz 5.808 11 GHz	Y 12.06 dBm -38.15 dBm -38.51 dBm -39.31 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	Auto Ma Freq Offse 0 H



Highest Channel & Modulation : 8DPSK



8. Transmitter AC Power Line Conducted Emission

8.1 Test Setup

See test photographs for the actual connections between EUT and support equipment.

8.2 Limit

According to §15.207(a) for an intentional radiator that is designed to be connected to the public utility (AC) power line, 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, as measured using a 50 uH/50 ohm line impedance stabilization network (LISN).

Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

Eroquopov Bongo (MHz)	Conducted Limit (dBuV)					
Frequency Range (MHz)	Quasi-Peak	Average				
0.15 ~ 0.5	66 to 56 *	56 to 46 *				
0.5 ~ 5	56	46				
5 ~ 30	60	50				

* Decreases with the logarithm of the frequency

8.3 Test Procedures

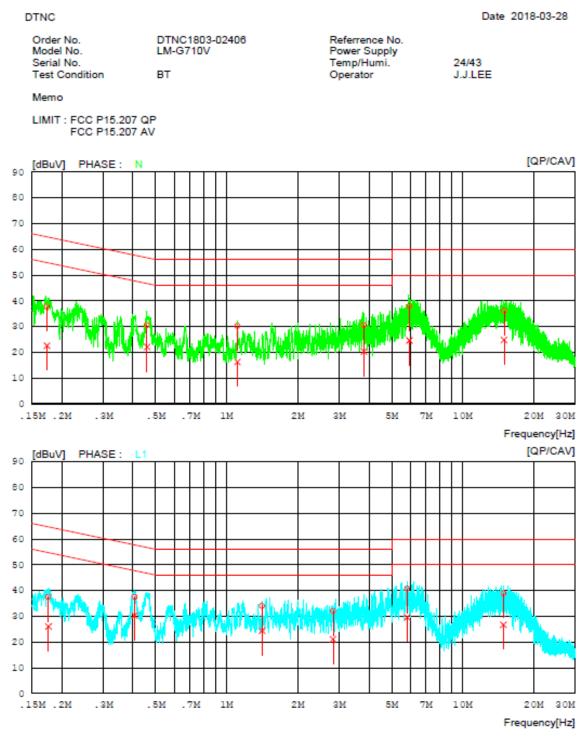
Conducted emissions from the EUT were measured according to the ANSI C63.10.

- 1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
- 2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
- 3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
- 4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

8.4 Test Results

AC Line Conducted Emissions (Graph) = Modulation : <u>8DPSK</u>

Results of Conducted Emission



AC Line Conducted Emissions (List) = Modulation : <u>8DPSK</u>

Results of Conducted Emission

DTNC							Date	2018-03-28
Order No. Model No. Serial No. Test Condition		DTNC18 LM-G71 BT	Referrence No. Power Supply Temp/Humi. Operator			24/43 J.J.LEE		
Memo								
LIMIT	FCC P15 FCC P15							
NO	FREQ		C.FACTOR	RESULT		TIM	MARGIN	PHASE
		QP CAV		QP CAV	QP		QP CAV	
	[MHz]	[dBuV][dBuV]	[dB]	[dBuV][dBuV] [dBuV]] [dBuV]	[dBuV][dBuV	7]
1		[dBuV][dBuV] 27.79 12.55	[dB] 9.97	[dBuV] [dBuV 37.76 22.52		54.81	[dBuV][dBuV 27.05 32.29	רז א
1 2	0.17310				64.81			-
_	0.17310	27.79 12.55	9.97	37.7622.52	64.81 56.70	54.81	27.05 32.29	N N N
2 3 4	0.17310 0.45975 1.11080 3.81520	27.7912.55 20.5812.10 20.276.24 20.4910.20	9.97 9.98 10.00 10.06	37.7622.52 30.5622.08 30.2716.24 30.5520.26	64.81 56.70 56.00 56.00	54.81 46.70 46.00 46.00	27.0532.29 26.1424.62 25.7329.76 25.4525.74	N N N N
2 3 4 5	0.17310 0.45975 1.11080 3.81520 5.95240	27.79 12.55 20.58 12.10 20.27 6.24 20.49 10.20 27.78 14.52	9.97 9.98 10.00 10.06 10.11	37.7622.52 30.5622.08 30.2716.24 30.5520.26 37.8924.63	64.81 56.70 56.00 56.00 60.00	54.81 46.70 46.00 46.00 50.00	27.05 32.29 26.14 24.62 25.73 29.76 25.45 25.74 22.11 25.37	N N N N N
2 3 4 5 6	0.17310 0.45975 1.11080 3.81520 5.95240 14.97600	27.79 12.55 20.58 12.10 20.27 6.24 20.49 10.20 27.78 14.52 25.82 14.53	9.97 9.98 10.00 10.06 10.11 10.31	37.7622.52 30.5622.08 30.2716.24 30.5520.26 37.8924.63 36.1324.84	64.81 56.70 56.00 56.00 60.00 60.00	54.81 46.70 46.00 46.00 50.00 50.00	27.0532.29 26.1424.62 25.7329.76 25.4525.74 22.1125.37 23.8725.16	N N N N N
2 3 4 5 6 7	0.17310 0.45975 1.11080 3.81520 5.95240 14.97600 0.17572	27.79 12.55 20.58 12.10 20.27 6.24 20.49 10.20 27.78 14.52 25.82 14.53 27.53 16.01	9.97 9.98 10.00 10.06 10.11 10.31 9.96	37.7622.52 30.5622.08 30.2716.24 30.5520.26 37.8924.63 36.1324.84 37.4925.97	64.81 56.70 56.00 56.00 60.00 60.00 60.00 64.69	54.81 46.70 46.00 46.00 50.00 50.00 50.00 54.69	27.0532.29 26.1424.62 25.7329.76 25.4525.74 22.1125.37 23.8725.16 27.2028.72	N N N N N L1
2 3 4 5 6 7 8	0.17310 0.45975 1.11080 3.81520 5.95240 14.97600 0.17572 0.40707	27.7912.55 20.5812.10 20.276.24 20.4910.20 27.7814.52 25.8214.53 27.5316.01 27.4520.22	9.97 9.98 10.00 10.06 10.11 10.31 9.96 9.97	37.7622.52 30.5622.08 30.2716.24 30.5520.26 37.8924.63 36.1324.84 37.4925.97 37.4230.19	64.81 56.70 56.00 56.00 60.00 60.00 64.69 57.71	54.81 46.70 46.00 46.00 50.00 50.00 54.69 47.71	27.0532.29 26.1424.62 25.7329.76 25.4525.74 22.1125.37 23.8725.16 27.2028.72 20.2917.52	N N N N N L1 L1
2 3 4 5 6 7 8 9	0.17310 0.45975 1.11080 3.81520 5.95240 14.97600 0.17572 0.40707 1.41280	27.7912.55 20.5812.10 20.276.24 20.4910.20 27.7814.52 25.8214.53 27.5316.01 27.4520.22 23.9114.37	9.97 9.98 10.00 10.06 10.11 10.31 9.96 9.97 10.01	37.7622.52 30.5622.08 30.2716.24 30.5520.26 37.8924.63 36.1324.84 37.4925.97 37.4230.19 33.9224.38	64.81 56.70 56.00 60.00 60.00 64.69 57.71 56.00	54.81 46.70 46.00 50.00 50.00 50.00 54.69 47.71 46.00	27.05 32.29 26.14 24.62 25.73 29.76 25.45 25.74 22.11 25.37 23.87 25.16 27.20 28.72 20.29 17.52 22.08 21.62	N N N N L1 L1 L1
2 3 4 5 6 7 8 9 10	0.17310 0.45975 1.11080 3.81520 5.95240 0.17572 0.40707 1.41280 2.82480	27.7912.55 20.5812.10 20.276.24 20.4910.20 27.7814.52 25.8214.53 27.5316.01 27.4520.22 23.9114.37 21.9311.01	9.97 9.98 10.00 10.06 10.11 10.31 9.96 9.97 10.01 10.05	37.7622.52 30.5622.08 30.2716.24 30.5520.26 37.8924.63 36.1324.84 37.4925.97 37.4230.19 33.9224.38 31.9821.06	64.81 56.00 56.00 60.00 60.00 64.69 57.71 56.00 56.00	54.81 46.70 46.00 50.00 50.00 54.69 47.71 46.00 46.00	27.05 32.29 26.14 24.62 25.73 29.76 25.45 25.74 22.11 25.37 23.87 25.16 27.20 28.72 20.29 17.52 22.08 21.62 24.02 24.94	N N N N L1 L1 L1 L1 L1
2 3 4 5 6 7 8 9 10 11	0.17310 0.45975 1.11080 3.81520 5.95240 0.17572 0.40707 1.41280 2.82480 5.82820	27.7912.55 20.5812.10 20.276.24 20.4910.20 27.7814.52 25.8214.53 27.5316.01 27.4520.22 23.9114.37 21.9311.01 30.4919.48	9.97 9.98 10.00 10.06 10.11 10.31 9.96 9.97 10.01	37.7622.52 30.5622.08 30.2716.24 30.5520.26 37.8924.63 36.1324.84 37.4925.97 37.4230.19 33.9224.38	64.81 56.00 56.00 60.00 64.69 57.71 56.00 56.00 56.00 60.00	54.81 46.70 46.00 50.00 50.00 50.00 54.69 47.71 46.00	27.05 32.29 26.14 24.62 25.73 29.76 25.45 25.74 22.11 25.37 23.87 25.16 27.20 28.72 20.29 17.52 22.08 21.62	N N N N L1 L1 L1



9. Antenna Requirement

Describe how the EUT complies with the requirement that either its antenna is permanently attached, or that it employs a unique antenna connector, for every antenna proposed for use with the EUT.

Conclusion: Comply

The internal antenna is attached on the main PCB using the special spring tension. Therefore this E.U.T Complies with the requirement of §15.203

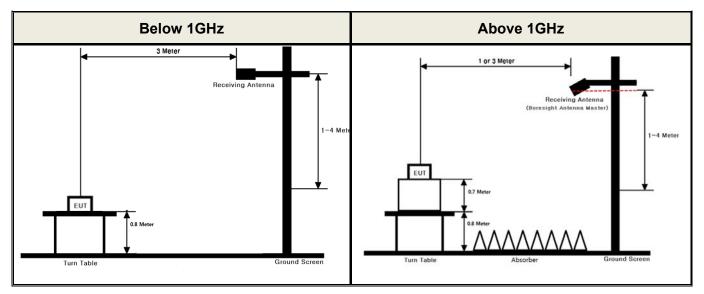
- Minimum Standard :

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions.

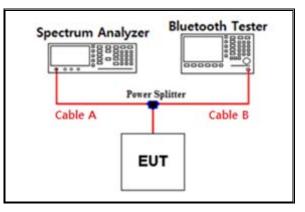
APPENDIX I

Test set up diagrams

Radiated Measurement



Conducted Measurement



Path loss information

Frequency (GHz)	Path Loss (dB)	Frequency (GHz)	Path Loss (dB)
0.03	6.09	15	8.28
1	6.72	20	8.54
2.402 & 2.441 & 2.480	7.29	25	8.73
5	7.85	-	-
10	8.18	-	-

Note 1: The path loss from EUT to Spectrum analyzer was measured and used for test. Path loss (S/A's correction factor) = Cable A

Detector Mode : PK

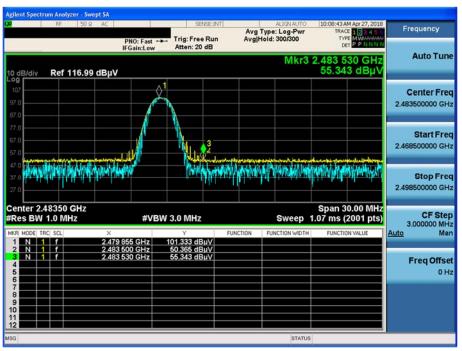
APPENDIX II

Unwanted Emissions (Radiated) Test Plot

GFSK & Lowest & X & Hor

Frequency Avg Type: Log-Pw Avg|Hold: 300/300 TYPE MW DET P P Trig: Free Run Atten: 20 dB PNO: Fast Auto Tune Mkr3 2.388 530 GH: 53.495 dBµ\ Ref 116.99 dBµV **Center Freq** 2.39000000 GHz Start Freq 2.375000000 GHz 3 ∧2 algebra and a line for al and the second states and the second s **And Albert** Stop Freq 2.40500000 GHz Center 2.39000 GHz #Res BW 1.0 MHz Span 30.00 MHz 1.07 ms (2001 pts) CF Step 3.000000 MHz #VBW 3.0 MHz Sweep Auto Mar 51.037 dBu NN Freq Offset 0 H; 10

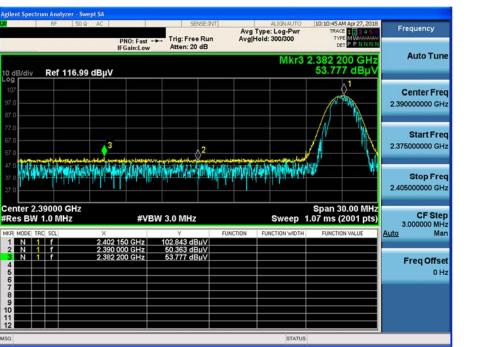
GFSK & Highest & X & Hor



Detector Mode : PK

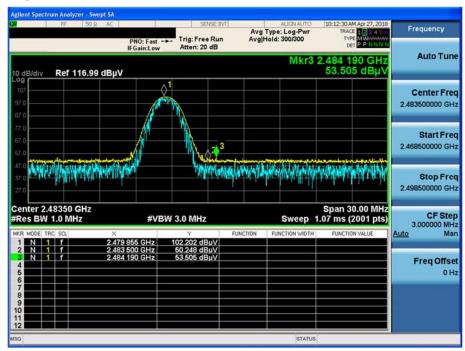
Detector Mode : PK

π/4DQPSK & Lowest & X & Hor



$\pi/4DQPSK$ & Highest & X & Hor

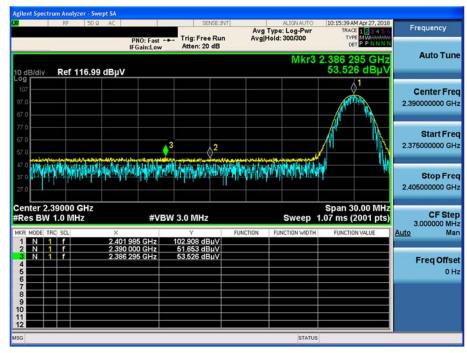
Detector Mode : PK





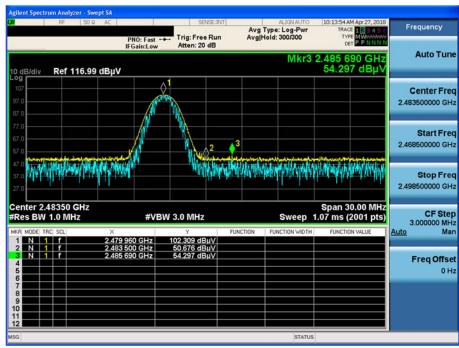
8DPSK & Lowest & X & Hor

Detector Mode : PK



Detector Mode : PK

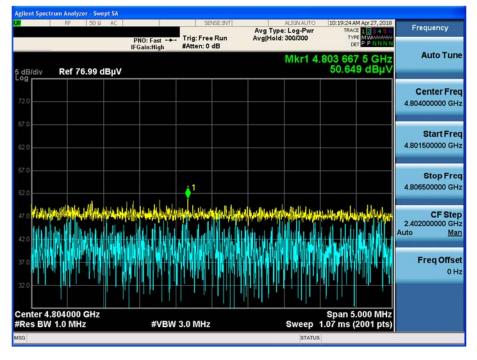
8DPSK & Highest & X & Hor





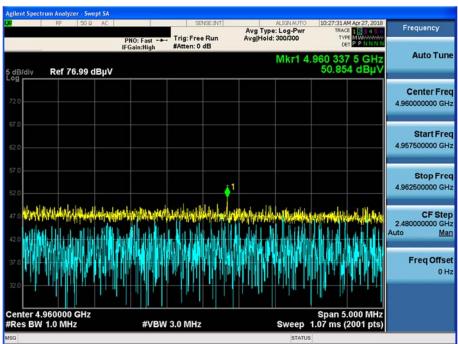
Detector Mode : PK

GFSK & Lowest & X & Hor



π/4DQPSK & Highest & X & Hor

Detector Mode : PK





Detector Mode : PK

8DPSK & Highest & X & Hor

