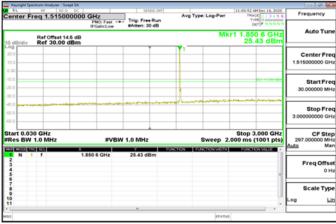


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#### 30MHz~3GHz\_Band2\_20MHz\_QPSK\_1\_0\_LowCH18700-1860



3GHz~10GHz\_Band2\_20MHz\_QPSK\_1\_0\_LowCH18700-1860



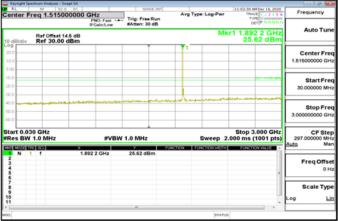
#### 30MHz~3GHz\_Band2\_20MHz\_QPSK\_1\_0\_MidCH18900-1880

			SENSE INT			17 17	bes ober	RL
Frequency	11:01:47 AM Dec 16, 2020 TRACE 2 3 4 5 6 TYPE M WWWWWW	Avg Type: Log-Pwr	g: Free Run	GHz	15000000 C		r Fr	
Auto Tu	DET P N N N N N		tten: 30 dB					
2010 10	r1 1.871 4 GHz 25.46 dBm	MK			set 14.5 dB 0.00 dBm		dia	dB/d
		Y1	Y			Rei 50.0	014	۰ <b>۲</b>
Center Fr								0 <b>—</b>
1.515000000 G								0
						_		10
Start Fr	Ct1-1200 dDe							
30.000000 M								0
30.000000 M								
	المراركين والمحال ورحاره ومردوقو	al have an an and a second of	++++++++++++++++++++++++++++++++++++++					
Stop Free								
3.000000000 G								ĩ
								"Γ
CF Ste	Stop 3.000 GHz					0 GHz		
297.000000 M	.000 ms (1001 pts)	Sweep 2	MHz	#VBW 1	z	1.0 MHz	BW	es E
<u>Auto</u> M	FUNCTION VALUE	TION FUNCTION WOTH			×	10 960 I		
			5.46 dBm	71 4 GHz	1.87	1	1 1	N
Freq Offs								
0								
Scale Ty								
Jocare Ty								
Log L								
			**			_	_	_
		STATUS						
							-	-

#### 3GHz~10GHz\_Band2\_20MHz\_QPSK\_1\_0\_MidCH18900-1880



30MHz~3GHz\_Band2\_20MHz\_QPSK\_1\_0\_HighCH19100-1900



3GHz~10GHz\_Band2\_20MHz\_QPSK\_1\_0\_HighCH19100-1900

						- Swept SA	ım Analyz	pectru		
Frequency	11:02:54 AM Dec 16, 2020 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P NNNN	Avg Type: Log-Pwr		Trig: Free	PNO: Fast *	0000000	q 11.5	Fre		er
		Ref Offset 14.5 dB Mkr3 5.700 GHz 0 dRidiy Ref 30.00 dBm -33.77 dBm								
Center Freq 11.500000000 GHz										20.0 10.0
Start Free 3.000000000 GHz	Q <sup>1</sup>	****				3		2 <sup>2</sup>		-10.0 -20.0 -30.0
Stop Free 20.000000000 GHz										40.0 50.0 60.0
CF Step 1.70000000 GHz Auto Mar	Stop 20.000 GHz 8.33 ms (1001 pts)			v 1.0 MHz	#VB		GHz 0 MHz	V 1.	s Bl	Re
Freq Offset 0 Hz	FURCTION VALUE	FUNCTION WOTH	11	-29.34 dB -32.29 dB -33.77 dB	9.235 GHz 3.800 GHz 5.700 GHz		1 1 1	1 1	NNN	123456
Scale Type										7 8 9 10
	•	STATUS						-	-	<

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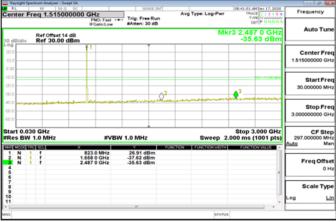
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# Report No.: ER/2020/C0010 Page: 111 of 201

#### 30MHz~3GHz\_Band5\_10MHz\_QPSK\_1\_0\_LowCH20450-829

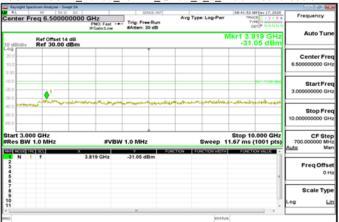


3GHz~10GHz\_Band5\_10MHz\_QPSK\_1\_0\_LowCH20450-829

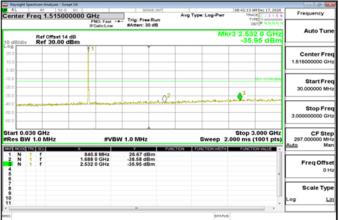


				<u>F 3K_1_0_IV</u>	11001120323	
RL	req 1.515	- Swept SA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SENSE 3NT	Avg Type: Log-Pwr	08:41:38 AM Dec 17, 2020 TRACE 1 2 3 4 5 6 TUPE N WWWWW	Frequency
10 dB/div	Ref Offset Ref 30.0	IFGain:Low	#Atten: 30 dB	Mk	or3 2.509 5 GHz -35.05 dBm	Auto Tun
0.0		¥1				Center Fre 1.515000000 GH
0.0					011-1200-dbm	Start Fre 30.000000 MH
0.0			in and the	ي والله والله والله الم المراجع		Stop Fre 3.000000000 GH
tart 0.03 Res BW	1.0 MHz	#VB	W 1.0 MHz	Sweep 2	Stop 3.000 GHz .000 ms (1001 pts)	CF Ste 297.000000 Mi Auto Ma
1 N 1 2 N 1 3 N 1 4 5	1	831.9 MHz 1.673 0 GHz 2.509 5 GHz	26.71 dBm -39.04 dBm -35.05 dBm			Freq Offse
6 7 8 9						Scale Typ

#### 3GHz~10GHz\_Band5\_10MHz\_QPSK\_1\_0\_MidCH20525-836.5



30MHz~3GHz\_Band5\_10MHz\_QPSK\_1\_0\_HighCH20600-844



#### 3GHz~10GHz\_Band5\_10MHz\_QPSK\_1\_0\_HighCH20600-844

📕 Keysight Spe	ctrum Analyzer - Swept S	A				
Center F	req 6.500000	ODO GHz	Trig: Free Run	Avg Type: Log-Pwr	08:42:27 AM Dec 17, 2020 TRACE 1 2 3 4 5 6 TVPE N NNNN DET P NNNNN	Frequency
10 dB/div	Ref Offset 14 dE Ref 30.00 dB	IFGain:Low	#Atten: 30 dB	,	4kr1 3.812 GHz -30.91 dBm	Auto Tune
20.0 10.0						Center Freq 6.50000000 GHz
-10.0	•1				DL1-10.00 (Day	Start Freq 3.00000000 GHz
40.0		an a	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	y, dr. progradi, royant olda	an a	Stop Freq 10.00000000 GHz
Start 3.00 #Res BW	1.0 MHz	#VB\	N 1.0 MHz	Sweep 1	Stop 10.000 GHz 1.67 ms (1001 pts)	CF Step 700.000000 MHz Auto Man
1 N 1 2 3 4 5	t	3.812 GHz	-30.91 dBm			Freq Offset 0 Hz
6 7 8 9						Scale Type
11				STATU	s -	

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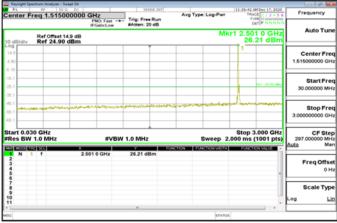
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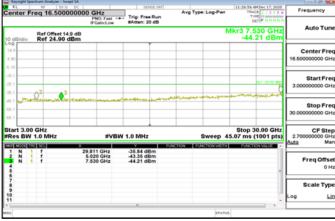


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#### 30MHz~3GHz\_Band7\_20MHz\_QPSK\_1\_0\_LowCH20850-2510



3GHz~10GHz\_Band7\_20MHz\_QPSK\_1\_0\_LowCH20850-2510



#### 30MHz~3GHz\_Band7\_20MHz\_QPSK\_1\_0\_MidCH21100-2535

nter Freg 1.51500000	0 GHz	SENSE INT	Avg Type: Log-Pwr	11:27:26 AM Dec 17, 2020 TRACE 1 2 3 4 5 6	
	PNO: Fast H IFGain:Low	#Atten: 20 dB		DET P NNNN	Auto Tu
Ref Offset 14.9 dB B/div Ref 24.90 dBm			MKr	2.524 8 GHz 26.46 dBm	
				1	Center F 1.515000000
				DL1-25-00 after	Start F 30.000000
					Stop F 3.000000000
t 0.030 GHz s BW 1.0 MHz	#VB	N 1.0 MHz	Sweep 2.0	Stop 3.000 GHz 00 ms (1001 pts)	CF \$ 297.000000
N 1 f	2.524 8 GHz	26.46 dBm			FreqOf
					Scale T
			STATUS		Log

#### 3GHz~10GHz\_Band7\_20MHz\_QPSK\_1\_0\_MidCH21100-2535



30MHz~3GHz\_Band7\_20MHz\_QPSK\_1\_0\_HighCH21350-2560

Keysight Spectrum Analyzer - Swept SA							
Center Freq 1.5150000	DO GHZ	SENSE INT	Avg Type: Log-Pwr	11:28:01 AM Dec 17, 2020 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P NN NN N	Frequency		
Ref Offset 14.9 dl 10 dB/div Ref 24.90 dBn		Galactow Mkr1 2.551 5 GHz 21.60 dBm					
49 6 10				1	Center Freq 1.515000000 GHz		
15.1				0.1 -25:00 offer	Start Free 30.000000 MHz		
	postation and the post	laikenen sitelite	iscontratification and the	positesermanice	Stop Free 3.00000000 GHz		
Start 0.030 GHz Res BW 1.0 MHz	#VBW		Sweep 2	Stop 3.000 GHz 000 ms (1001 pts)	CF Step 297.000000 MH Auto Mar		
1 N 1 f 2 3 4 5	2.551 5 GHz	21.60 dBm			Freq Offse		
6 7 8 9 10					Scale Type		
11 *			STATUS	· `			

3GHz~10GHz\_Band7\_20MHz\_QPSK\_1\_0\_HighCH21350-2560

🔤 Keysight Spi											0 0 0
Center F	req 16.	500000000 G	Hz	Trig: Free R	A	Avg Type: Log-Pwr		11:43:08 AM Dec 17, 2020 TRACE 1 2 3 4 5 6 TYPE H WWWWW		Frequency	
10 dB/div			aln:Low	#Atten: 20 d	58			1kr3 7.68	P NNNNN 10 GHz 1 dBm		Auto Tune
14.9 4.90 5.10											Center Fre
15.1 25.1 35.1	^ <del>2</del>	<b>3</b>			زەر خىمەرموملىيەن					3.00	Start Fre
45.1	Marca	or the second			and a second s					30.00	Stop Fre
Start 3.00 Res BW		z	#VBW	1.0 MHz		s	weep 4	Stop 30 5.07 ms (1		2.70 Auto	CF Ste
101 1000 10	0.000	×		Ŷ	FUNCTION	FUN	1000M000	FUNCTION	WALLER A	error a	ma
1 N 1 2 N 1 3 N 1 4 5	1		) GHz ) GHz ) GHz	-35.89 dBn -44.45 dBn -43.61 dBn	n					'	Freq Offse 0 H
7 8 9											Scale Typ
10										Log	Li
<											
190							STATUS	1			

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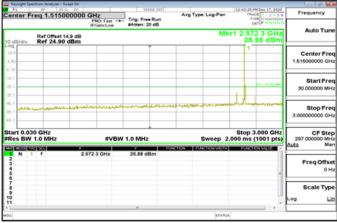
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#### 30MHz~3GHz\_Band38\_20MHz\_QPSK\_1\_0\_LowCH37850-2580



3GHz~10GHz\_Band38\_20MHz\_QPSK\_1\_0\_LowCH37850-2580

Keysight Spectrum Analyzer - Sive					
Center Freq 16.5000	00000 GHz	Trig: Free Run	Avg Type: Log-Pwr	12:43:34 PM Dec 17, 2020 TRACE 1 2 3 4 5 6 TVPE M 444445	Frequency
Ref Offset 14.	IFGain:Low 9 dB	#Atten: 20 dB		Akr3 7.740 GHz -42.06 dBm	Auto Tune
14.9 4.90 5.10					Center Free 16.500000000 GH
-15.1				R.1 -25 00 40m	Start Free 3.000000000 GH
-45.1 44 10 10 10 10 10 10 10 10 10 10 10 10 10		**************************************	معلم مراسط <mark>م</mark> عامل الدراور على المحالم		Stop Fre 30.000000000 GH
Start 3.00 GHz #Res BW 1.0 MHz		W 1.0 MHz		Stop 30.00 GHz 5.07 ms (1001 pts)	CF Ster 2.70000000 GH Auto Mar
1 N 1 f 2 N 1 f 3 N 1 f 4 5	29.784 GHz 5.160 GHz 7.740 GHz	-36.36 dBm -44.41 dBm -42.06 dBm	ARCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse
7 8 9 10					Scale Type
* [			STATU	5	L

#### 30MHz~3GHz\_Band38\_20MHz\_QPSK\_1\_0\_MidCH38000-2595

er Freq 1.5150000	00 GHz	Trig: Free Run	Avg Type: Log-Pwr	12:43:57 PM Dec 17, 2020 TRACE 1 2 3 4 5 6	Freque
Ref Offset 14.9 dE		#Atten: 20 dB	Mkr	2.587 2 GHz 25.72 dBm	Auto
Ref 24.90 dBm				1	Cent 1.5150000
				CL1-25-00-00+-	Sta 30.0000
And and a state of the state of	مورد المصور مارد العما		***************************************	ah Ibayan ya ana ka	Sto 3.0000000
0.030 GHz BW 1.0 MHz	#VB	N 1.0 MHz	Sweep 2.0	Stop 3.000 GHz 00 ms (1001 pts)	с 297.0000 Амба
N 1 f	2.587 2 GHz	25.72 dBm			Freq
					Sca
			STATUS		Log

#### 3GHz~10GHz\_Band38\_20MHz\_QPSK\_1\_0\_MidCH38000-2595



30MHz~3GHz\_Band38\_20MHz\_QPSK\_1\_0\_HighCH38150-2610

Frequency	12:44:34 PM Dec 17, 2020	Type: Log-Pwr	ENSE:INT]	50	DC	num Analyzer - Swep	RL
	DET P NNNN			#Atten: 2	PNO: Fast IFGain:Low	1.01000	enter ri
Auto Tune	r1 2.602 0 GHz 26.09 dBm	Mk				Ref Offset 14.9 Ref 24.90 d	0 dB/div
Center Freq 1.515000000 GHz	1						4.90 5.10
Start Freq 30.000000 MHz	EU - 25.00 dbs						15.1 8.1 8.1
Stop Freq 3.000000000 GHz	served her and server	baseret konner	and the second state of the		show the second	ton subtractions	15.1 25.1 26.1
CF Step 297.000000 MHz Auto Man	Stop 3.000 GHz .000 ms (1001 pts)	Sweep 2	-	W 1.0 MHz	#VE	1.0 MHz	tart 0.03 Res BW
Freq Offset 0 Hz				26.09 dE	2.602 0 GHz	1	1 N 1 2 3 4 6
Scale Type							6 7 8 9
Log Lin							10
		STATUS					0

3GHz~10GHz\_Band38\_20MHz\_QPSK\_1\_0\_HighCH38150-2610

Keysight Spectrum Analyzer - Sive	ipt SA								
Center Freq 16.5000	00000 GHz	Trig: Free Run	Avg Type: Log-Pwr	12:44:50 PM Dec 17, 2020 TRACE 1 2 3 4 5 6 TVPE N NNNN DET P NNNNN	Frequency				
10 dB/div Ref 24.90 d	Ref Offset 14.9 dB Mkr3 7.830 GHz dB/div Ref 24.90 dBm -43.31 dBm								
14.9 4.90 6.10					Center Fred 16.500000000 GH				
.15.1 25.1 35.1				2 a	Start Free 3.000000000 GH				
45.1	erregenlet fülgentennige		Jan Barran Jack Brand		Stop Free 30.000000000 GH				
Start 3.00 GHz #Res BW 1.0 MHz	#VB	W 1.0 MHz		Stop 30.00 GHz 5.07 ms (1001 pts)	CF Step 2.70000000 GH Auto Mar				
MAGE MODEL THE SEC.	X		NCTON FUNCTION WOTH	FUNCTION VALUE +	CIMAR INTE				
1 N 1 f 2 N 1 f 3 N 1 f 4 6	26.382 GHz 6.220 GHz 7.830 GHz	-34.94 dBm -42.04 dBm -43.31 dBm			Freq Offse 0 Hi				
7 8 9					Scale Type				
10					Log Li				
<1									
90			STATU	5					

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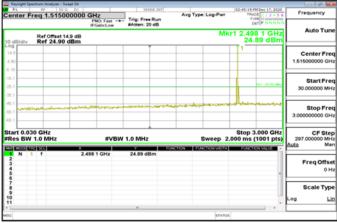
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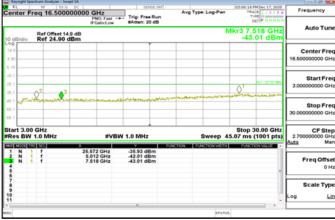


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#### 30MHz~3GHz\_Band41\_20MHz\_QPSK\_1\_0\_LowCH39750-2506



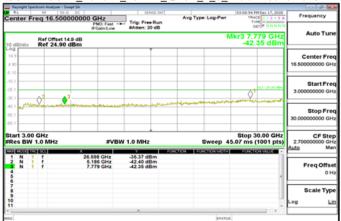
3GHz~10GHz\_Band41\_20MHz\_QPSK\_1\_0\_LowCH39750-2506



#### 30MHz~3GHz\_Band41\_20MHz\_QPSK\_1\_0\_MidCH40620-2593

Frequency	03:00:39 PM Dec 17, 2020 TRACE 2 3 4 5 6 TVPE H WWWWW	Avg Type: Log-Pwr	Trig: Free Run	0 DC 000000 GHz PNO: Fast	req 1.5150	Center Fi
Auto Tune	r1 2.584 2 GHz 26.42 dBm	Mk	#Atten: 20 dB	IFGain:Low	Ref Offset 1 Ref 24.90	0 dB/div
Center Free 1.515000000 GH	1					4.90 5.10
Start Free 30.000000 MH	0.1 -25:00 attes					-15.1 26.1 36.1
Stop Free 3.000000000 GH	arma/lababaraa	and a second		موريب بالمريد والمسرور والمسرور	har warmen of	45.1 65.1
CF Step 297.000000 MH Auto Mar	Stop 3.000 GHz .000 ms (1001 pts)	Sweep 2		×	1.0 MHz	Start 0.03 Res BW
Freq Offse 0 H			26.42 dBm	2.584 2 GHz	1	1 N 1 2 3 4 5
Scale Type						6 7 8 9 10 11
L	•	STATUS				80

#### 3GHz~10GHz\_Band41\_20MHz\_QPSK\_1\_0\_MidCH40620-2593



30MHz~3GHz\_Band41\_20MHz\_QPSK\_1\_0\_HighCH41490-2680

Keysight Spectrum						
Center Freq		D GHz	Trig: Free Run	Avg Type: Log-Pwr	03:01:21 PM Dec 17, 2020 TRACE 1 2 3 4 5 6 TVPE M WWWWW	Frequency
10 dB/div Re	f Offset 14.9 dB f 24.90 dBm	IFGain:Low	#Atten: 20 dB	M	kr1 2.670 3 GHz 25.53 dBm	
14.9 4.90 6.10					,	Center Freq 1.51500000 GHz
15.1 25.1 35.1					0.1-25-00-004	Start Freq 30.000000 MHz
45.1 55.1 (6.1	all and the second second	an a	n, pintan an distance an	and a second	and an analysis	Stop Free 3.000000000 GHz
tart 0.030 GI Res BW 1.0	MHz	#VB	V 1.0 MHz	Sweep 2	Stop 3.000 GHz 2.000 ms (1001 pts)	CF Step 297.000000 MHz Auto Man
1 N 1 f 2 3 4 5		2.670 3 GHz	25.53 dBm	UNCTION FUNCTION WOTH	FORCELON 402.01	Freq Offset 0 Hz
6 7 8 9						Scale Type
10						Log Lin
80				STATU	5	

3GHz~10GHz\_Band41\_20MHz\_QPSK\_1\_0\_HighCH41490-2680

					trum Analyzer -	ight Spect	
Frequency	03:01:40 PM Dec 17, 2020 TRACE 1 2 3 4 5 6 TYPE H WWWWWW DET P NNNNN	Avg Type: Log-Pwr	Trig: Free Run	00000000 GHz PNO: Fest		er Fre	ont
Auto Tur	1kr3 8.040 GHz -43.18 dBm	N	#Atten: 20 dB		Ref Offset Ref 24.9	ldiv	) dE
Center Fre 16.500000000 G							4.9 90
Start Fr 3.000000000 G	(1.125.00 effer			3	A2		5.1 5.1 5.1
Stop Fr 30.000000000 G		An	14999-14999-14999-14999-14999-14999-1499-1499-1499-1499-1499-1499-1499-1499-1499-1499-1499-1499-1499-1499-1499	Ser Ontertan di se nagana	See a series	ma	5.1 5.1 5.1
CF St 2.700000000 G Auto M	Stop 30.00 GHz 5.07 ms (1001 pts)		W 1.0 MHz	#VB	1.0 MHz		<b>le</b>
Freq Offs	FUNCTION VALUE	ON FUNCTION WOTH	-34.74 dBm -45.22 dBm -43.18 dBm	25.815 GHz 5.360 GHz 8.040 GHz	1	N 1 N 1 N 1	1
0 Scale Ty	1						5678
Log L							9
		STATUS					2

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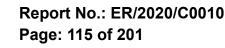
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#### FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT 9

#### 9.1 Standard Applicable

According to FCC §2.1053,

#### FCC §22.917(a), §24.238(a), §27.53(m)(2)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

#### FCC §27.53(m) (4) (6)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Measurement procedure. Compliance with these rules is based on the use of measurement nstrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

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Table 2 — Unwanted Emissions for Mobile, Portable and Low-Power Fixed Subscriber Equipment

Frequency (MHz)	Attenuation (dB)
<2200	$43 + 10 \log_{10}(p)$
2200 - 2288	$70 + 10 \log_{10}(p)$
2288 - 2292	$67 + 10 \log_{10}(p)$
2292 - 2296	$61 + 10 \log_{10}(p)$
2296 - 2300	$55 + 10 \log_{10}(p)$
2300 - 2305	$43 + 10 \log_{10}(p)$
2305 - 2320	$43 + 10 \log_{10}(p)^{Note}$
2320 - 2324	$55 + 10 \log_{10}(p)$
2324 - 2328	$61 + 10 \log_{10}(p)$
2328 - 2337	$67 + 10 \log_{10}(p)$
2337 - 2341	$61 + 10 \log_{10}(p)$
2341 - 2345	$55 + 10 \log_{10}(p)$
2345 - 2360	$43 + 10 \log_{10}(p)^{Note}$
2360 - 2365	$43 + 10 \log_{10}(p)$
2365 - 2395	$70 + 10 \log_{10}(p)$
>2395	$43 + 10 \log_{10}(p)$

Note: Measured at the edges of the highest and lowest frequency range(s) in which the equipment is designed to operate. See Section 1.2 for the permitted frequency ranges for various equipment types.

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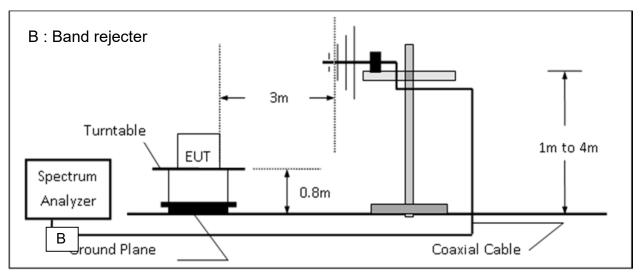
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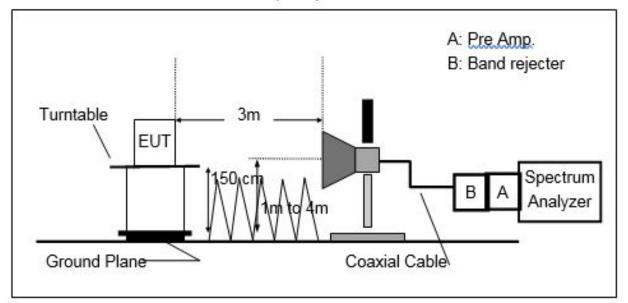


#### 9.2 **EUT Setup**

Radiated Emission Test Set-Up, Frequency Below 1000MHz



Radiated Emission Test Set-UP Frequency Over 1 GHz



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#### 9.3 **Measurement Procedure:**

The EUT was placed on a non-conductive; the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP (dBm) = SG Level(dBm) + Antenna Gain(dBd) + Cable Loss(dB)

EIRP (dBm) = SG Level(dBm) + Antenna Gain(dBi) + Cable Loss(dB)

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#### 9.4 **Measurement Equipment Used:**

ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.		
Horn Antenna	Schwarzbeck	BBHA9170	184	12/11/2020	12/10/2021		
Horn Antenna	Schwarzbeck	BBHA9120D	D803	12/17/2020	12/16/2021		
Bi-log Antenna	TESEO	CBL 6112D	35242 & AT-N0555	01/13/2020	01/12/2021		
Loop Antenna	ETS.LIND- GREN	6502	148045	10/19/2020	10/18/2021		
Spectrum Analyzer	Agilent	E4446A	MY51100003	10/29/2020	10/28/2021		
EMI Test Receiver	R&S	ESCI 7	100759	07/13/2020	07/12/2021		
Radio Communication Analyer	Anritsu	MT8815B	6200711454	04/01/2020	03/31/2021		
Pre-Amplifier	EMC Instru- ments	EMC184045B	980135	01/02/2020	01/01/2021		
Pre-Amplifier	EMC Instru- ments	EMC051825	980152	01/02/2020	01/01/2021		
Pre-Amplifier	HP	8447D	2944A09469	01/02/2020	01/01/2021		
Filter 800-1000	Micro-Tronics	EWT	M1	01/02/2020	01/01/2021		
Filter 1700-2000	Micro-Tronics	EWT	M3	01/02/2020	01/01/2021		
1GHz High Pass Filter	Micro-Tronics	HPM50108	32	01/02/2020	01/01/2021		
2GHz High Pass Filter	Micro-Tronics	HPM50110	36	01/02/2020	01/01/2021		
Coaxial Cable	Huber Suhner	succoflex 102	MY2622/2	01/02/2020	01/01/2021		
Coaxial Cable	Huber Suhner	succoflex 104A	800086/4a	01/02/2020	01/01/2021		
Coaxial Cable	Huber Suhner	EMC 104-SM-SM- 2000	160123	01/02/2020	01/01/2021		
Radio Communication Analyer	Anritsu	MT8821C	6261786084	01/18/2020	01/17/2021		
High Pass Filter	WI	WHKX4.0/18G- 10SS	WHKX4.0/18G- 10SS	01/02/2020	01/01/2021		

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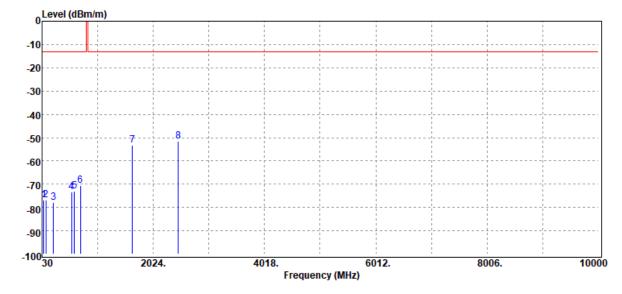


# Report No.: ER/2020/C0010 Page: 120 of 201

#### 9.5 **Measurement Result:**

Report Number	:ER/2020/C0010
Operation Mode	:GSM 850
Test Mode	:Tx CH Low
EUT Pol	:H Plane
Test Frequency	:824.2 MHz

Test Site	:SAC I Chamber
Test Date	:2020-12-22
Temp./Humi.	:22.0/64
Antenna Pol.	:VERTICAL
Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
65.89	-76.95	-63.07	-13.09	-0.79	-13.00	-63.95
100.81	-76.80	-69.65	-6.20	-0.95	-13.00	-63.80
238.55	-77.72	-74.53	-1.72	-1.47	-13.00	-64.72
556.71	-73.39	-69.78	-1.35	-2.26	-13.00	-60.39
613.94	-73.18	-69.32	-1.86	-2.00	-13.00	-60.18
720.64	-70.44	-66.58	-1.21	-2.65	-13.00	-57.44
1648.40	-53.44	-59.37	9.79	-3.86	-13.00	-40.44
2472.60	-51.41	-57.42	10.78	-4.77	-13.00	-38.41

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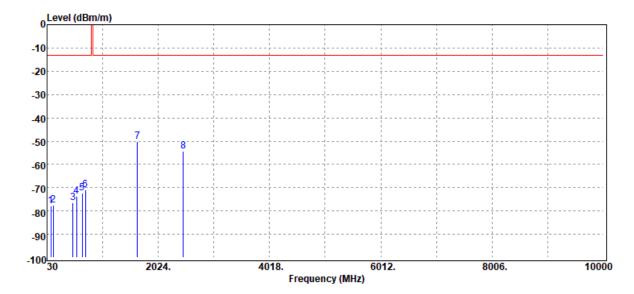
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# Report No.: ER/2020/C0010 Page: 121 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 850	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:824.2 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-77.72	-70.57	-6.20	-0.95	-13.00	-64.72
139.61	-77.39	-68.37	-7.93	-1.09	-13.00	-64.39
492.69	-76.47	-72.70	-1.63	-2.14	-13.00	-63.47
560.59	-73.64	-69.99	-1.37	-2.28	-13.00	-60.64
662.44	-72.24	-68.17	-1.35	-2.72	-13.00	-59.24
719.67	-70.96	-67.13	-1.19	-2.64	-13.00	-57.96
1648.40	-50.03	-55.96	9.79	-3.86	-13.00	-37.03
2472.60	-54.38	-60.39	10.78	-4.77	-13.00	-41.38

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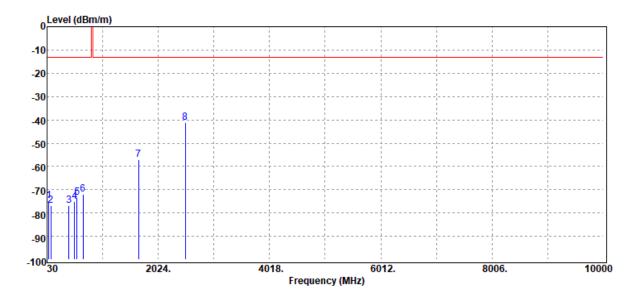
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# Report No.: ER/2020/C0010 Page: 122 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 850	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:836.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
65.89	-74.67	-60.79	-13.09	-0.79	-13.00	-61.67
97.90	-76.89	-70.16	-5.79	-0.94	-13.00	-63.89
420.91	-76.80	-73.23	-1.48	-2.09	-13.00	-63.80
524.70	-74.92	-71.59	-1.33	-2.00	-13.00	-61.92
565.44	-73.38	-69.69	-1.40	-2.29	-13.00	-60.38
672.14	-71.81	-67.62	-1.48	-2.71	-13.00	-58.81
1673.20	-57.21	-63.11	9.80	-3.90	-13.00	-44.21
2509.80	-41.14	-47.36	11.04	-4.82	-13.00	-28.14

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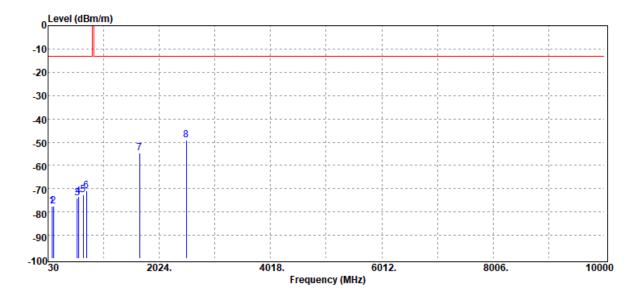
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# Report No.: ER/2020/C0010 Page: 123 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 850	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:836.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-77.47	-70.32	-6.20	-0.95	-13.00	-64.47
129.91	-77.56	-68.84	-7.74	-0.98	-13.00	-64.56
553.80	-74.18	-70.64	-1.31	-2.23	-13.00	-61.18
571.26	-73.26	-69.43	-1.52	-2.31	-13.00	-60.26
662.44	-72.62	-68.55	-1.35	-2.72	-13.00	-59.62
719.67	-70.99	-67.16	-1.19	-2.64	-13.00	-57.99
1673.20	-54.54	-60.44	9.80	-3.90	-13.00	-41.54
2509.80	-49.04	-55.26	11.04	-4.82	-13.00	-36.04

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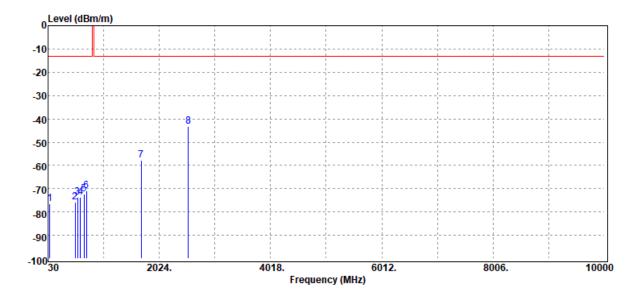
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# Report No.: ER/2020/C0010 Page: 124 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 850	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:848.8 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
65.89	-76.34	-62.46	-13.09	-0.79	-13.00	-63.34
519.85	-75.71	-72.14	-1.41	-2.16	-13.00	-62.71
560.59	-73.76	-70.11	-1.37	-2.28	-13.00	-60.76
609.09	-73.81	-69.91	-1.91	-1.99	-13.00	-60.81
672.14	-72.28	-68.09	-1.48	-2.71	-13.00	-59.28
716.76	-70.83	-66.96	-1.28	-2.59	-13.00	-57.83
1697.60	-57.74	-63.61	9.80	-3.93	-13.00	-44.74
2546.40	-43.10	-49.43	11.19	-4.86	-13.00	-30.10

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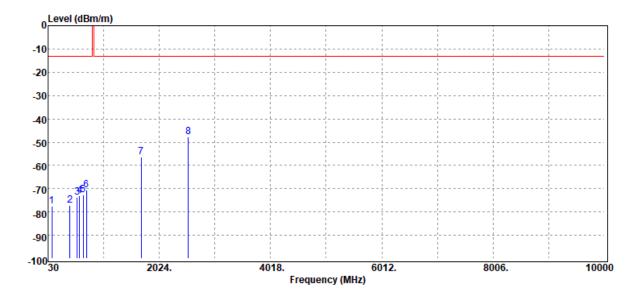
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# Report No.: ER/2020/C0010 Page: 125 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 850	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:848.8 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
400.04	77 50	70.07	0.00	0.05	40.00	04.50
100.81	-77.52	-70.37	-6.20	-0.95	-13.00	-64.52
419.94	-77.28	-73.74	-1.46	-2.08	-13.00	-64.28
551.86	-73.79	-70.31	-1.26	-2.22	-13.00	-60.79
594.54	-73.17	-68.88	-1.83	-2.46	-13.00	-60.17
663.41	-72.51	-68.42	-1.36	-2.73	-13.00	-59.51
719.67	-70.42	-66.59	-1.19	-2.64	-13.00	-57.42
1697.60	-56.47	-62.34	9.80	-3.93	-13.00	-43.47
2546.40	-47.64	-53.97	11.19	-4.86	-13.00	-34.64

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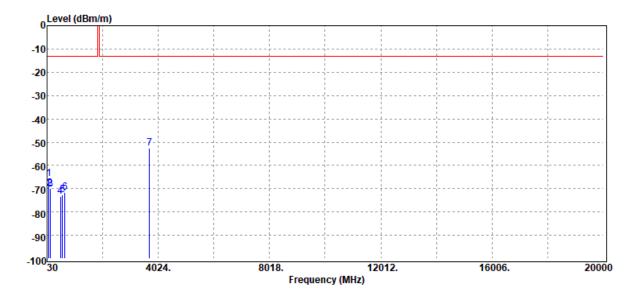
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# Report No.: ER/2020/C0010 Page: 126 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 1900	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1850.2 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
97.90	-65.61	-58.88	-5.79	-0.94	-13.00	-52.61
138.64	-69.86	-60.83	-7.95	-1.08	-13.00	-56.86
158.04	-70.22	-61.96	-7.05	-1.21	-13.00	-57.22
517.91	-73.51	-69.86	-1.44	-2.21	-13.00	-60.51
580.96	-72.70	-68.56	-1.66	-2.48	-13.00	-59.70
673.11	-71.63	-67.50	-1.46	-2.67	-13.00	-58.63
3700.40	-52.75	-59.29	12.40	-5.86	-13.00	-39.75

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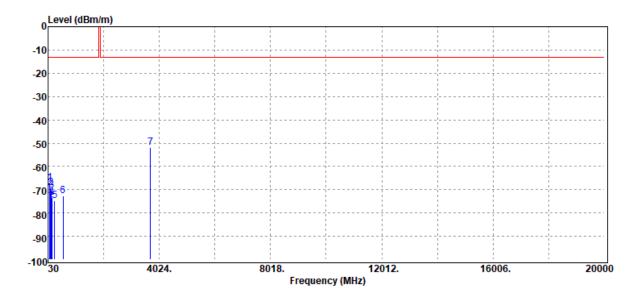
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# Report No.: ER/2020/C0010 Page: 127 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 1900	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1850.2 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
99.84	-67.25	-60.29	-6.01	-0.95	-13.00	-54.25
125.06	-69.30	-60.79	-7.49	-1.02	-13.00	-56.30
148.34	-70.37	-61.53	-7.64	-1.20	-13.00	-57.37
168.71	-73.20	-65.90	-6.04	-1.26	-13.00	-60.20
274.44	-74.61	-71.32	-1.75	-1.54	-13.00	-61.61
565.44	-72.77	-69.08	-1.40	-2.29	-13.00	-59.77
3700.40	-51.82	-58.36	12.40	-5.86	-13.00	-38.82

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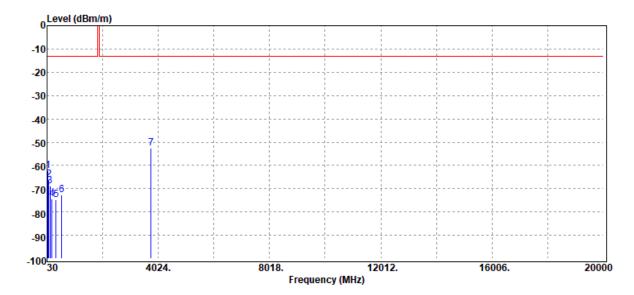
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# Report No.: ER/2020/C0010 Page: 128 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 1900	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1880 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-62.41	-47.05	-14.61	-0.75	-13.00	-49.41
95.96	-66.21	-59.70	-5.58	-0.93	-13.00	-53.21
144.46	-68.84	-59.90	-7.79	-1.15	-13.00	-55.84
216.24	-74.52	-71.35	-1.80	-1.37	-13.00	-61.52
357.86	-74.80	-71.56	-1.51	-1.73	-13.00	-61.80
551.86	-72.60	-69.12	-1.26	-2.22	-13.00	-59.60
3760.00	-52.64	-59.30	12.40	-5.74	-13.00	-39.64

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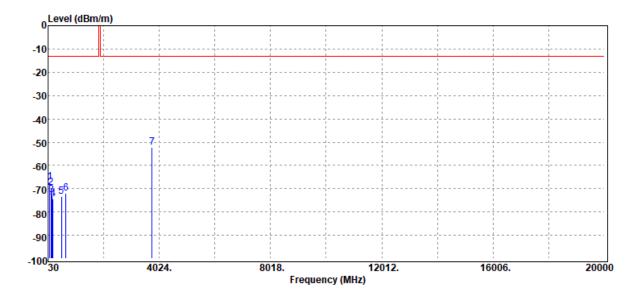
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# Report No.: ER/2020/C0010 Page: 129 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 1900	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1880 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-67.07	-59.92	-6.20	-0.95	-13.00	-54.07
138.64	-69.53	-60.50	-7.95	-1.08	-13.00	-56.53
165.80	-72.55	-64.94	-6.37	-1.24	-13.00	-59.55
209.45	-74.45	-71.37	-1.71	-1.37	-13.00	-61.45
517.91	-73.20	-69.55	-1.44	-2.21	-13.00	-60.20
670.20	-72.06	-67.75	-1.50	-2.81	-13.00	-59.06
3760.00	-52.22	-58.88	12.40	-5.74	-13.00	-39.22

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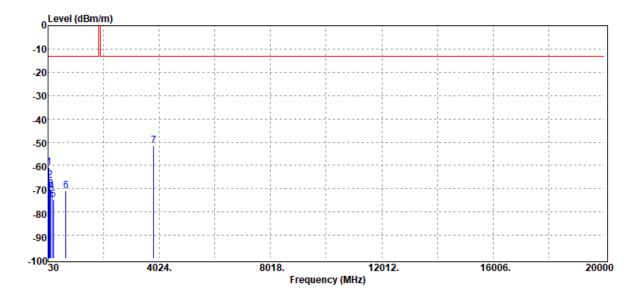
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# Report No.: ER/2020/C0010 Page: 130 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 1900	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1909.8 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
65.89	-60.82	-46.94	-13.09	-0.79	-13.00	-47.82
94.99	-66.39	-59.89	-5.57	-0.93	-13.00	-53.39
129.91	-70.25	-61.53	-7.74	-0.98	-13.00	-57.25
165.80	-71.18	-63.57	-6.37	-1.24	-13.00	-58.18
225.94	-74.66	-71.96	-1.30	-1.40	-13.00	-61.66
673.11	-71.08	-66.95	-1.46	-2.67	-13.00	-58.08
3819.60	-51.70	-58.35	12.44	-5.79	-13.00	-38.70

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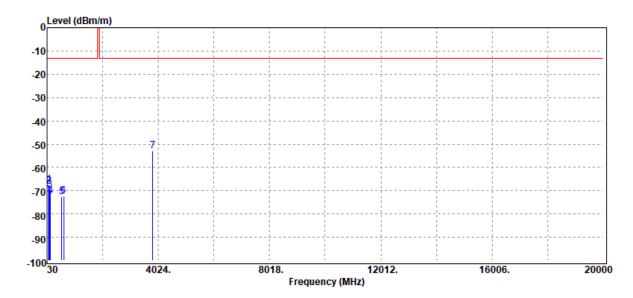
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# Report No.: ER/2020/C0010 Page: 131 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:GSM 1900	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1909.8 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-67.34	-60.19	-6.20	-0.95	-13.00	-54.34
114.39	-68.15	-59.82	-7.30	-1.03	-13.00	-55.15
136.70	-69.46	-60.50	-7.91	-1.05	-13.00	-56.46
159.01	-72.45	-64.24	-7.00	-1.21	-13.00	-59.45
558.65	-72.78	-69.15	-1.36	-2.27	-13.00	-59.78
624.61	-72.38	-68.39	-1.81	-2.18	-13.00	-59.38
3819.60	-52.82	-59.47	12.44	-5.79	-13.00	-39.82

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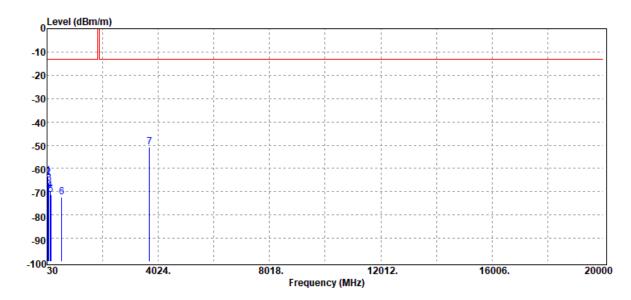
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# Report No.: ER/2020/C0010 Page: 132 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B2	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1852.4 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-63.35	-47.99	-14.61	-0.75	-13.00	-50.35
65.89	-64.06	-50.18	-13.09	-0.79	-13.00	-51.06
100.81	-66.51	-59.36	-6.20	-0.95	-13.00	-53.51
144.46	-69.52	-60.58	-7.79	-1.15	-13.00	-56.52
167.74	-71.22	-63.73	-6.23	-1.26	-13.00	-58.22
561.56	-72.37	-68.72	-1.37	-2.28	-13.00	-59.37
3704.80	-50.79	-57.34	12.40	-5.85	-13.00	-37.79

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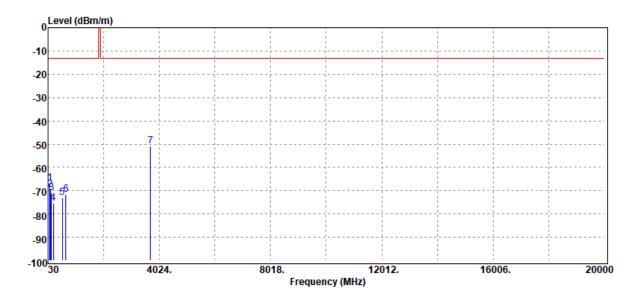
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# Report No.: ER/2020/C0010 Page: 133 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B2	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1852.4 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-66.84	-59.69	-6.20	-0.95	-13.00	-53.84
110.51	-69.59	-61.47	-7.11	-1.01	-13.00	-56.59
156.10	-70.81	-62.43	-7.17	-1.21	-13.00	-57.81
228.85	-75.50	-72.71	-1.37	-1.42	-13.00	-62.50
546.04	-73.11	-69.82	-1.20	-2.09	-13.00	-60.11
676.99	-71.54	-67.61	-1.45	-2.48	-13.00	-58.54
3704.80	-50.96	-57.51	12.40	-5.85	-13.00	-37.96

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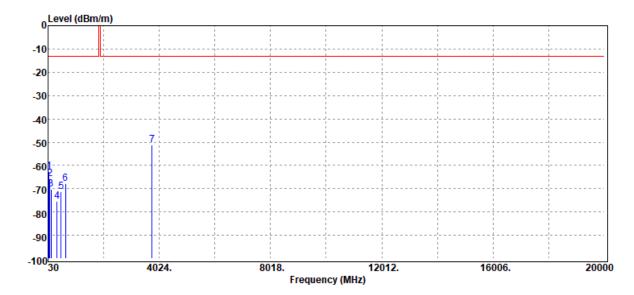
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# Report No.: ER/2020/C0010 Page: 134 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B2	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1880 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
63.95	-62.48	-47.80	-13.91	-0.77	-13.00	-49.48
94.99	-65.66	-59.16	-5.57	-0.93	-13.00	-52.66
144.46	-70.36	-61.42	-7.79	-1.15	-13.00	-57.36
359.80	-75.56	-72.35	-1.50	-1.71	-13.00	-62.56
498.51	-71.19	-67.46	-1.50	-2.23	-13.00	-58.19
652.74	-67.67	-63.80	-1.33	-2.54	-13.00	-54.67
3760.00	-51.04	-57.70	12.40	-5.74	-13.00	-38.04

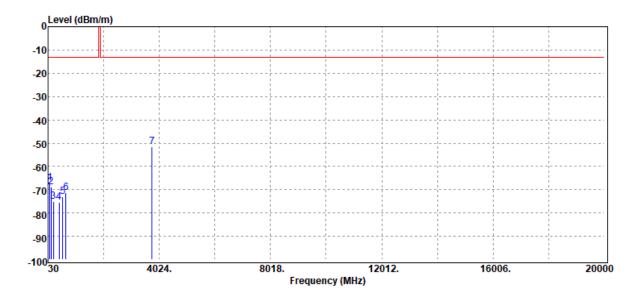
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# Report No.: ER/2020/C0010 Page: 135 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B2	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1880 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-67.16	-60.01	-6.20	-0.95	-13.00	-54.16
139.61	-69.01	-59.99	-7.93	-1.09	-13.00	-56.01
224.00	-74.99	-72.26	-1.34	-1.39	-13.00	-61.99
420.91	-75.60	-72.03	-1.48	-2.09	-13.00	-62.60
553.80	-72.86	-69.32	-1.31	-2.23	-13.00	-59.86
670.20	-71.23	-66.92	-1.50	-2.81	-13.00	-58.23
3760.00	-51.53	-58.19	12.40	-5.74	-13.00	-38.53

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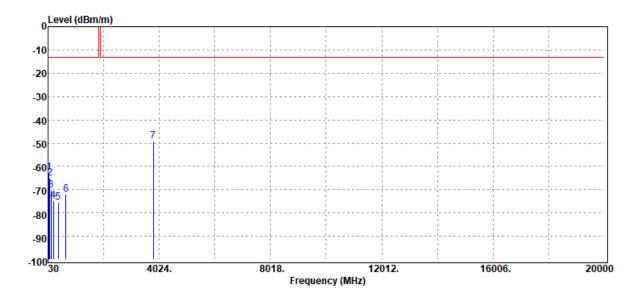
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B2	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1907.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-62.58	-47.22	-14.61	-0.75	-13.00	-49.58
97.90	-65.07	-58.34	-5.79	-0.94	-13.00	-52.07
143.49	-70.15	-61.17	-7.84	-1.14	-13.00	-57.15
224.00	-74.75	-72.02	-1.34	-1.39	-13.00	-61.75
395.69	-75.58	-72.16	-1.58	-1.84	-13.00	-62.58
672.14	-72.02	-67.83	-1.48	-2.71	-13.00	-59.02
3815.20	-49.05	-55.72	12.43	-5.76	-13.00	-36.05

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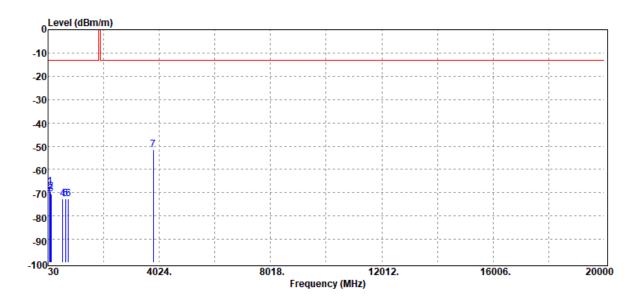
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B2	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1907.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
97.90	-67.46	-60.73	-5.79	-0.94	-13.00	-54.46
122.15	-69.49	-61.04	-7.40	-1.05	-13.00	-56.49
145.43	-70.60	-61.72	-7.72	-1.16	-13.00	-57.60
556.71	-72.55	-68.94	-1.35	-2.26	-13.00	-59.55
663.41	-72.80	-68.71	-1.36	-2.73	-13.00	-59.80
762.35	-72.72	-68.40	-1.78	-2.54	-13.00	-59.72
3815.20	-51.59	-58.26	12.43	-5.76	-13.00	-38.59

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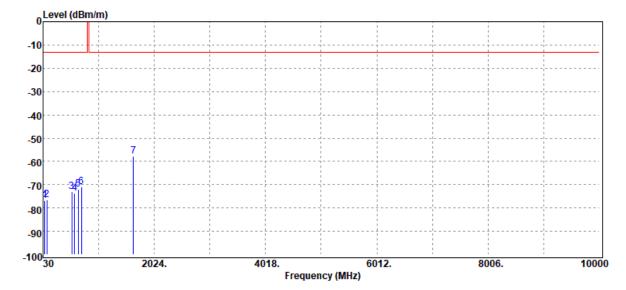
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B5	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:826.4 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
65.89	-76.96	-63.08	-13.09	-0.79	-13.00	-63.96
99.84	-76.36	-69.40	-6.01	-0.95	-13.00	-63.36
547.01	-73.05	-69.72	-1.21	-2.12	-13.00	-60.05
594.54	-73.55	-69.26	-1.83	-2.46	-13.00	-60.55
658.56	-71.98	-67.99	-1.33	-2.66	-13.00	-58.98
721.61	-70.91	-67.00	-1.26	-2.65	-13.00	-57.91
1652.80	-57.73	-63.66	9.80	-3.87	-13.00	-44.73

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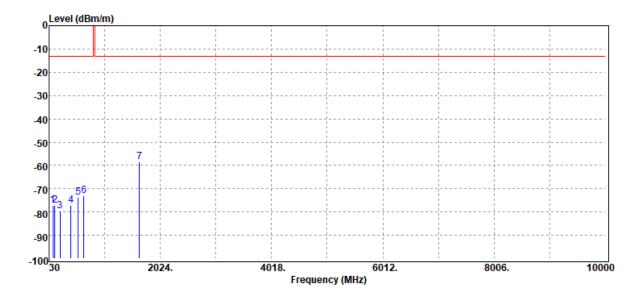
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# Report No.: ER/2020/C0010 Page: 139 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B5	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:826.4 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-77.24	-70.09	-6.20	-0.95	-13.00	-64.24
136.70	-77.21	-68.25	-7.91	-1.05	-13.00	-64.21
228.85	-79.61	-76.82	-1.37	-1.42	-13.00	-66.61
419.94	-77.14	-73.60	-1.46	-2.08	-13.00	-64.14
553.80	-73.69	-70.15	-1.31	-2.23	-13.00	-60.69
657.59	-73.02	-69.06	-1.32	-2.64	-13.00	-60.02
1652.80	-58.59	-64.52	9.80	-3.87	-13.00	-45.59

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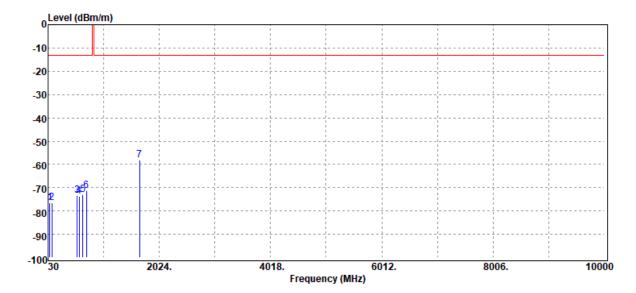
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B5	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:836.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
59.10	-76.36	-60.45	-15.18	-0.73	-13.00	-63.36
99.84	-76.40	-69.44	-6.01	-0.95	-13.00	-63.40
555.74	-73.50	-69.91	-1.34	-2.25	-13.00	-60.50
590.66	-73.68	-69.28	-1.81	-2.59	-13.00	-60.68
657.59	-72.93	-68.97	-1.32	-2.64	-13.00	-59.93
721.61	-71.24	-67.33	-1.26	-2.65	-13.00	-58.24
1673.20	-58.04	-63.94	9.80	-3.90	-13.00	-45.04

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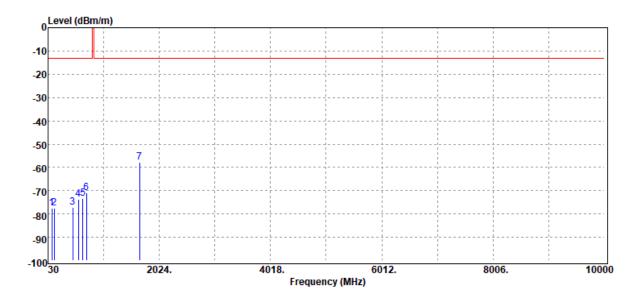
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# Report No.: ER/2020/C0010 Page: 141 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B5	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:836.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-77.58	-70.43	-6.20	-0.95	-13.00	-64.58
139.61	-77.44	-68.42	-7.93	-1.09	-13.00	-64.44
476.20	-77.09	-73.25	-1.77	-2.07	-13.00	-64.09
576.11	-73.65	-69.69	-1.56	-2.40	-13.00	-60.65
650.80	-73.44	-69.58	-1.36	-2.50	-13.00	-60.44
720.64	-71.08	-67.22	-1.21	-2.65	-13.00	-58.08
1673.20	-57.78	-63.68	9.80	-3.90	-13.00	-44.78

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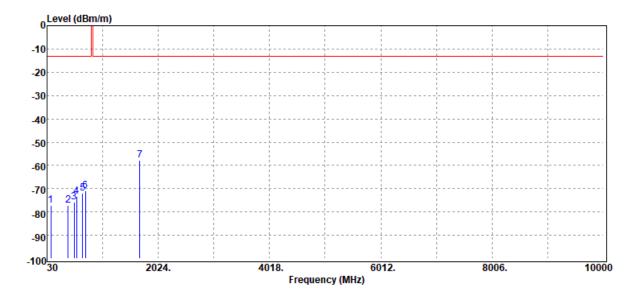
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# Report No.: ER/2020/C0010 Page: 142 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B5	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:846.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-77.00	-69.85	-6.20	-0.95	-13.00	-64.00
411.21	-77.25	-73.96	-1.39	-1.90	-13.00	-64.25
516.94	-75.91	-72.22	-1.46	-2.23	-13.00	-62.91
563.50	-73.31	-69.65	-1.38	-2.28	-13.00	-60.31
668.26	-71.94	-67.69	-1.46	-2.79	-13.00	-58.94
719.67	-71.06	-67.23	-1.19	-2.64	-13.00	-58.06
1693.20	-57.61	-63.49	9.80	-3.92	-13.00	-44.61

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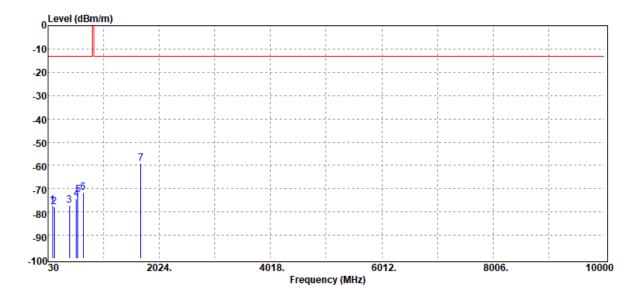
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# Report No.: ER/2020/C0010 Page: 143 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:WCMDA B5	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:846.6 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
112.45	-77.33	-69.10	-7.21	-1.02	-13.00	-64.33
144.46	-77.84	-68.90	-7.79	-1.15	-13.00	-64.84
418.00	-77.19	-73.69	-1.46	-2.04	-13.00	-64.19
542.16	-74.43	-71.20	-1.24	-1.99	-13.00	-61.43
568.35	-72.82	-69.06	-1.47	-2.29	-13.00	-59.82
660.50	-71.54	-67.51	-1.34	-2.69	-13.00	-58.54
1693.20	-59.03	-64.91	9.80	-3.92	-13.00	-46.03

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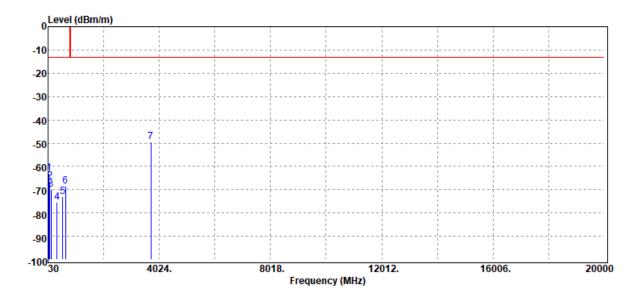
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B2	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1860 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
59.10	-63.13	-47.22	-15.18	-0.73	-13.00	-50.13
97.90	-66.55	-59.82	-5.79	-0.94	-13.00	-53.55
141.55	-69.75	-60.73	-7.91	-1.11	-13.00	-56.75
356.89	-75.58	-72.33	-1.51	-1.74	-13.00	-62.58
560.59	-72.95	-69.30	-1.37	-2.28	-13.00	-59.95
652.74	-68.44	-64.57	-1.33	-2.54	-13.00	-55.44
3720.00	-49.50	-56.08	12.40	-5.82	-13.00	-36.50

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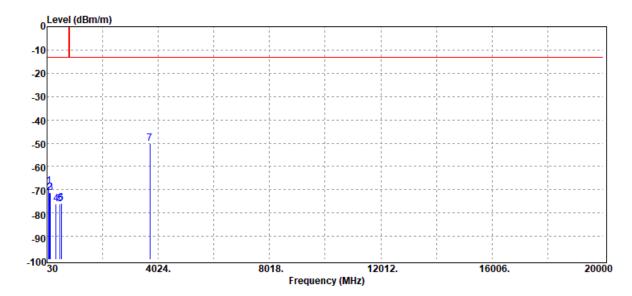
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# Report No.: ER/2020/C0010 Page: 145 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B2	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1860 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
94.99	-68.37	-61.87	-5.57	-0.93	-13.00	-55.37
122.15	-71.33	-62.88	-7.40	-1.05	-13.00	-58.33
146.40	-71.43	-62.53	-7.72	-1.18	-13.00	-58.43
361.74	-75.99	-72.75	-1.53	-1.71	-13.00	-62.99
497.54	-76.05	-72.30	-1.54	-2.21	-13.00	-63.05
547.01	-75.94	-72.61	-1.21	-2.12	-13.00	-62.94
3720.00	-50.14	-56.72	12.40	-5.82	-13.00	-37.14

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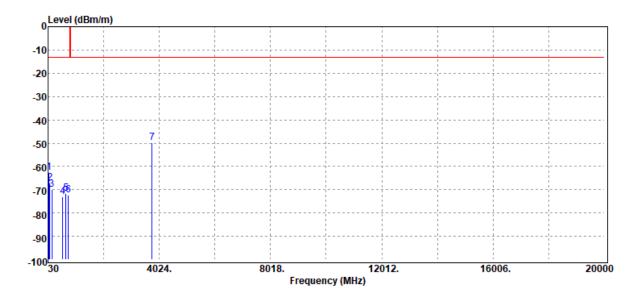
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# Report No.: ER/2020/C0010 Page: 146 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B2	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1880 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
59.10	-62.62	-46.71	-15.18	-0.73	-13.00	-49.62
97.90	-67.00	-60.27	-5.79	-0.94	-13.00	-54.00
160.95	-70.04	-62.03	-6.80	-1.21	-13.00	-57.04
550.89	-72.91	-69.46	-1.24	-2.21	-13.00	-59.91
675.05	-71.53	-67.52	-1.44	-2.57	-13.00	-58.53
757.50	-72.38	-67.87	-1.79	-2.72	-13.00	-59.38
3760.00	-49.87	-56.53	12.40	-5.74	-13.00	-36.87

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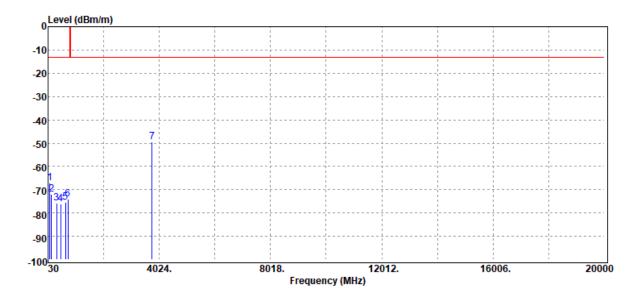
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# Report No.: ER/2020/C0010 Page: 147 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B2	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1880 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
99.84	-67.11	-60.15	-6.01	-0.95	-13.00	-54.11
149.31	-71.99	-63.17	-7.61	-1.21	-13.00	-58.99
347.19	-75.78	-72.38	-1.56	-1.84	-13.00	-62.78
479.11	-76.19	-72.38	-1.72	-2.09	-13.00	-63.19
660.50	-75.47	-71.44	-1.34	-2.69	-13.00	-62.47
738.10	-74.05	-69.62	-1.69	-2.74	-13.00	-61.05
3760.00	-49.43	-56.09	12.40	-5.74	-13.00	-36.43

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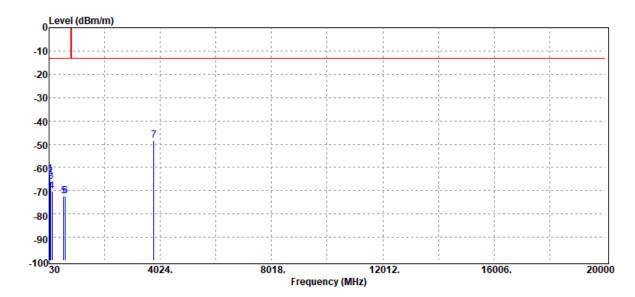
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# Report No.: ER/2020/C0010 Page: 148 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B2	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:1900 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
59.10	-62.81	-46.90	-15.18	-0.73	-13.00	-49.81
65.89	-63.89	-50.01	-13.09	-0.79	-13.00	-50.89
94.99	-66.20	-59.70	-5.57	-0.93	-13.00	-53.20
141.55	-70.16	-61.14	-7.91	-1.11	-13.00	-57.16
550.89	-72.35	-68.90	-1.24	-2.21	-13.00	-59.35
612.00	-72.18	-68.31	-1.89	-1.98	-13.00	-59.18
3800.00	-48.46	-55.20	12.40	-5.66	-13.00	-35.46

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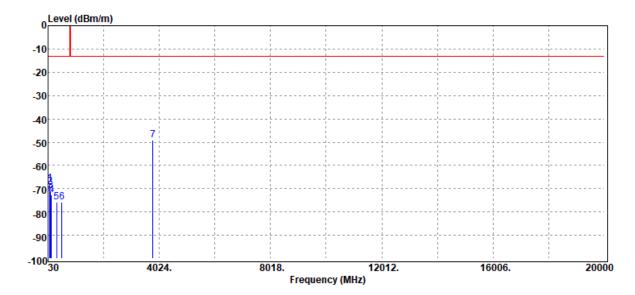
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# Report No.: ER/2020/C0010 Page: 149 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B2	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:1900 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
91.11	-67.73	-61.18	-5.64	-0.91	-13.00	-54.73
100.81	-69.14	-61.99	-6.20	-0.95	-13.00	-56.14
124.09	-71.09	-62.60	-7.46	-1.03	-13.00	-58.09
146.40	-72.75	-63.85	-7.72	-1.18	-13.00	-59.75
343.31	-75.74	-72.28	-1.61	-1.85	-13.00	-62.74
526.64	-75.73	-72.46	-1.33	-1.94	-13.00	-62.73
3800.00	-49.23	-55.97	12.40	-5.66	-13.00	-36.23

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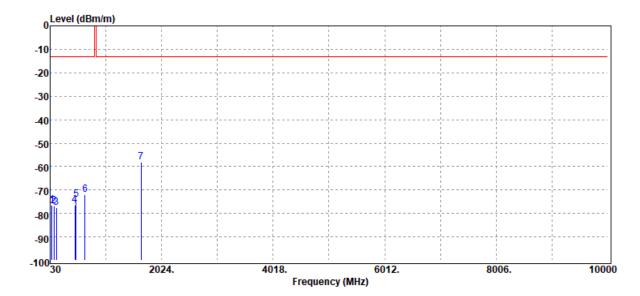
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# Report No.: ER/2020/C0010 Page: 150 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B5	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:829 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
59.10	-76.54	-60.63	-15.18	-0.73	-13.00	-63.54
100.81	-76.80	-69.65	-6.20	-0.95	-13.00	-63.80
138.64	-77.39	-68.36	-7.95	-1.08	-13.00	-64.39
476.20	-76.58	-72.74	-1.77	-2.07	-13.00	-63.58
498.51	-74.14	-70.41	-1.50	-2.23	-13.00	-61.14
655.65	-71.97	-68.06	-1.31	-2.60	-13.00	-58.97
1658.00	-58.10	-64.02	9.80	-3.88	-13.00	-45.10

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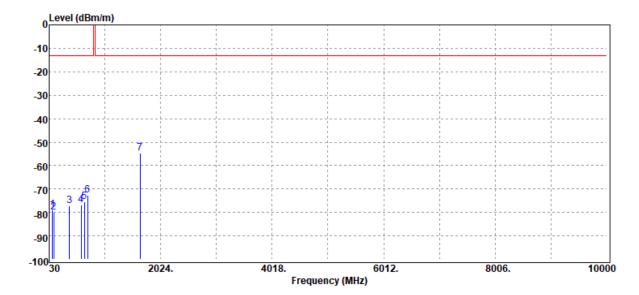
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# Report No.: ER/2020/C0010 Page: 151 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B5	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:829 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
94.02	-79.00	-72.61	-5.47	-0.92	-13.00	-66.00
115.36	-80.00	-71.67	-7.29	-1.04	-13.00	-67.00
390.84	-77.06	-73.74	-1.52	-1.80	-13.00	-64.06
605.21	-76.97	-72.97	-1.89	-2.11	-13.00	-63.97
662.44	-75.53	-71.46	-1.35	-2.72	-13.00	-62.53
718.70	-72.80	-68.95	-1.22	-2.63	-13.00	-59.80
1658.00	-54.58	-60.50	9.80	-3.88	-13.00	-41.58

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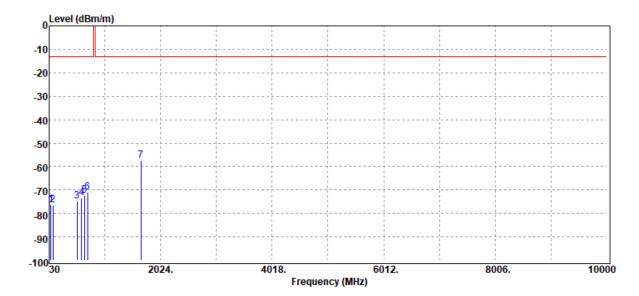
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# Report No.: ER/2020/C0010 Page: 152 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B5	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:836.5 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-76.29	-60.93	-14.61	-0.75	-13.00	-63.29
97.90	-76.63	-69.90	-5.79	-0.94	-13.00	-63.63
534.40	-74.70	-71.47	-1.36	-1.87	-13.00	-61.70
613.94	-73.29	-69.43	-1.86	-2.00	-13.00	-60.29
662.44	-72.45	-68.38	-1.35	-2.72	-13.00	-59.45
719.67	-71.01	-67.18	-1.19	-2.64	-13.00	-58.01
1673.00	-57.29	-63.19	9.80	-3.90	-13.00	-44.29

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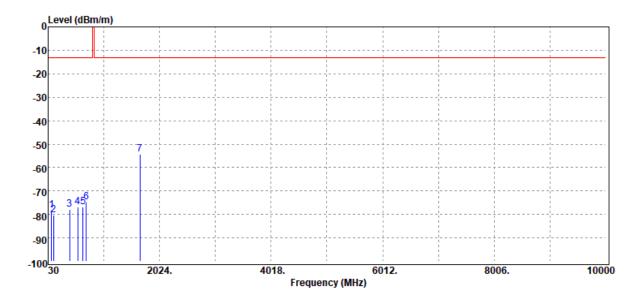
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# Report No.: ER/2020/C0010 Page: 153 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B5	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:836.5 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
94.02	-78.27	-71.88	-5.47	-0.92	-13.00	-65.27
127.00	-80.37	-71.71	-7.65	-1.01	-13.00	-67.37
416.06	-77.90	-74.44	-1.46	-2.00	-13.00	-64.90
560.59	-76.74	-73.09	-1.37	-2.28	-13.00	-63.74
655.65	-76.72	-72.81	-1.31	-2.60	-13.00	-63.72
711.91	-74.75	-70.85	-1.38	-2.52	-13.00	-61.75
1673.00	-54.46	-60.36	9.80	-3.90	-13.00	-41.46

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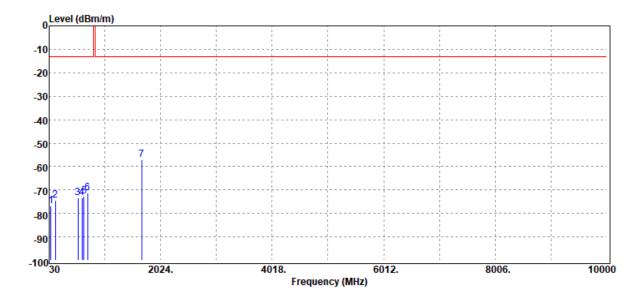
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# Report No.: ER/2020/C0010 Page: 154 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B5	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:844 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-76.88	-61.52	-14.61	-0.75	-13.00	-63.88
143.49	-74.47	-65.49	-7.84	-1.14	-13.00	-61.47
546.04	-73.40	-70.11	-1.20	-2.09	-13.00	-60.40
616.85	-73.31	-69.46	-1.82	-2.03	-13.00	-60.31
655.65	-72.79	-68.88	-1.31	-2.60	-13.00	-59.79
715.79	-71.18	-67.28	-1.32	-2.58	-13.00	-58.18
1688.00	-57.23	-63.11	9.80	-3.92	-13.00	-44.23

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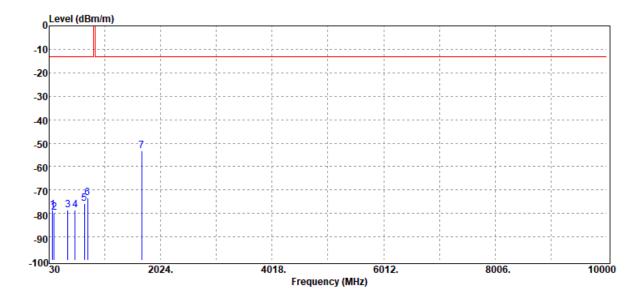
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# Report No.: ER/2020/C0010 Page: 155 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B5	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:844 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
93.05	-78.41	-71.94	-5.55	-0.92	-13.00	-65.41
120.21	-79.65	-71.24	-7.35	-1.06	-13.00	-66.65
367.56	-78.38	-75.08	-1.57	-1.73	-13.00	-65.38
493.66	-78.54	-74.75	-1.63	-2.16	-13.00	-65.54
658.56	-75.68	-71.69	-1.33	-2.66	-13.00	-62.68
719.67	-73.50	-69.67	-1.19	-2.64	-13.00	-60.50
1688.00	-53.37	-59.25	9.80	-3.92	-13.00	-40.37

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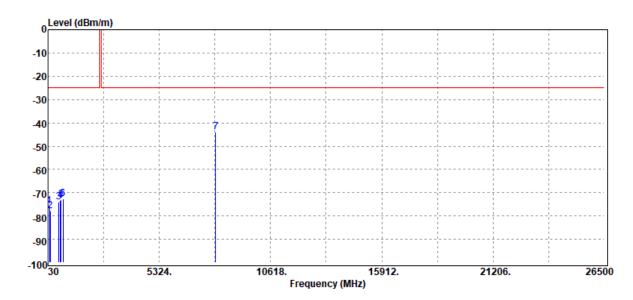
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# Report No.: ER/2020/C0010 Page: 156 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B7	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2510 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
94.99	-75.93	-69.43	-5.57	-0.93	-25.00	-50.93
139.61	-77.72	-68.70	-7.93	-1.09	-25.00	-52.72
547.01	-74.12	-70.79	-1.21	-2.12	-25.00	-49.12
614.91	-73.37	-69.51	-1.85	-2.01	-25.00	-48.37
653.71	-73.01	-69.13	-1.32	-2.56	-25.00	-48.01
744.89	-72.68	-68.06	-1.78	-2.84	-25.00	-47.68
8000.00	-44.06	-46.35	11.10	-8.81	-25.00	-19.06

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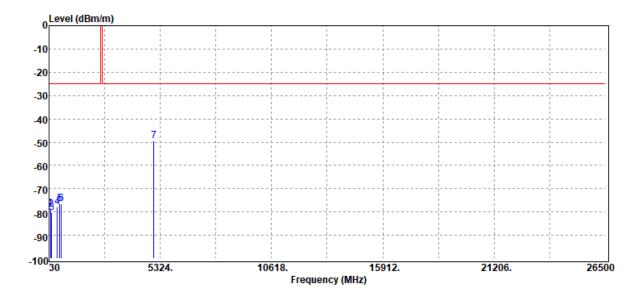
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B7	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2510 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
93.05	-78.43	-71.96	-5.55	-0.92	-25.00	-53.43
120.21	-79.01	-70.60	-7.35	-1.06	-25.00	-54.01
153.19	-80.37	-71.83	-7.32	-1.22	-25.00	-55.37
419.94	-77.76	-74.22	-1.46	-2.08	-25.00	-52.76
532.46	-76.57	-73.37	-1.35	-1.85	-25.00	-51.57
607.15	-76.47	-72.52	-1.90	-2.05	-25.00	-51.47
5020.00	-49.60	-55.41	12.66	-6.85	-25.00	-24.60

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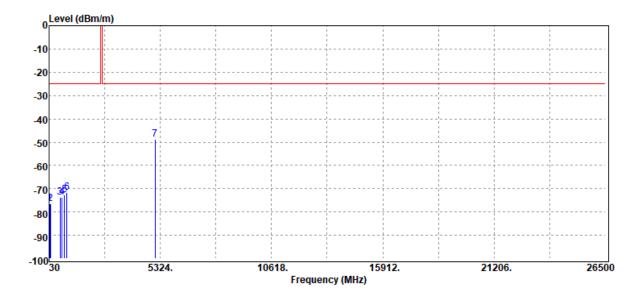
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B7	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2535 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-76.34	-60.98	-14.61	-0.75	-25.00	-51.34
97.90	-76.53	-69.80	-5.79	-0.94	-25.00	-51.53
563.50	-73.60	-69.94	-1.38	-2.28	-25.00	-48.60
650.80	-73.56	-69.70	-1.36	-2.50	-25.00	-48.56
760.41	-72.77	-68.32	-1.81	-2.64	-25.00	-47.77
881.66	-71.55	-67.10	-1.45	-3.00	-25.00	-46.55
5070.00	-48.76	-54.52	12.56	-6.80	-25.00	-23.76

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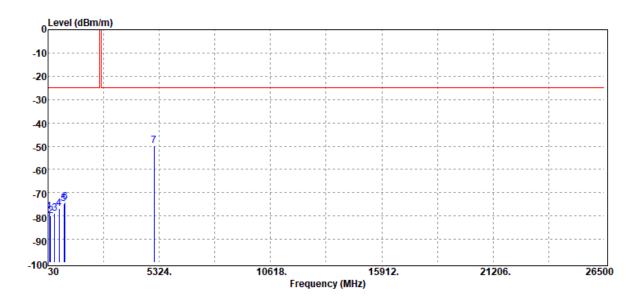
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B7	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2535 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
97.90	-78.23	-71.50	-5.79	-0.94	-25.00	-53.23
146.40	-79.97	-71.07	-7.72	-1.18	-25.00	-54.97
352.04	-78.85	-75.50	-1.54	-1.81	-25.00	-53.85
551.86	-76.78	-73.30	-1.26	-2.22	-25.00	-51.78
778.84	-74.64	-70.66	-1.72	-2.26	-25.00	-49.64
839.95	-74.16	-69.64	-1.64	-2.88	-25.00	-49.16
5070.00	-49.74	-55.50	12.56	-6.80	-25.00	-24.74

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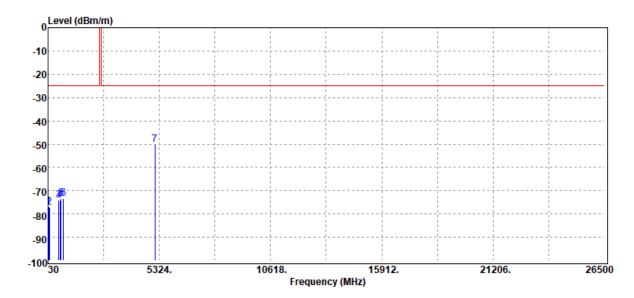
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# Report No.: ER/2020/C0010 Page: 160 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B7	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2560 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-76.94	-61.58	-14.61	-0.75	-25.00	-51.94
100.81	-77.21	-70.06	-6.20	-0.95	-25.00	-52.21
531.49	-74.15	-70.96	-1.35	-1.84	-25.00	-49.15
587.75	-73.93	-69.60	-1.75	-2.58	-25.00	-48.93
650.80	-73.50	-69.64	-1.36	-2.50	-25.00	-48.50
774.96	-73.40	-69.34	-1.84	-2.22	-25.00	-48.40
5120.00	-50.00	-55.73	12.58	-6.85	-25.00	-25.00

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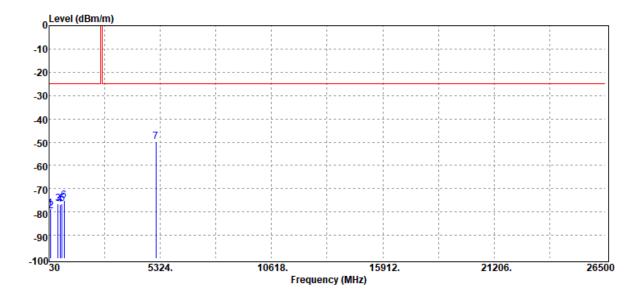
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B7	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2560 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
90.14	-78.58	-71.87	-5.81	-0.90	-25.00	-53.58
119.24	-79.68	-71.30	-7.32	-1.06	-25.00	-54.68
459.71	-76.63	-72.77	-1.98	-1.88	-25.00	-51.63
551.86	-76.80	-73.32	-1.26	-2.22	-25.00	-51.80
648.86	-76.63	-72.76	-1.38	-2.49	-25.00	-51.63
741.01	-74.93	-70.40	-1.75	-2.78	-25.00	-49.93
5120.00	-49.71	-55.44	12.58	-6.85	-25.00	-24.71

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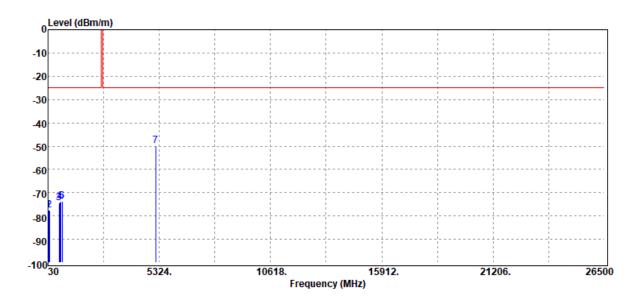
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# Report No.: ER/2020/C0010 Page: 162 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B38	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2580 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
59.10	-77.64	-61.73	-15.18	-0.73	-25.00	-52.64
97.90	-77.63	-70.90	-5.79	-0.94	-25.00	-52.63
550.89	-74.50	-71.05	-1.24	-2.21	-25.00	-49.50
592.60	-73.98	-69.64	-1.82	-2.52	-25.00	-48.98
650.80	-73.78	-69.92	-1.36	-2.50	-25.00	-48.78
718.70	-73.72	-69.87	-1.22	-2.63	-25.00	-48.72
5160.00	-49.74	-55.49	12.76	-7.01	-25.00	-24.74

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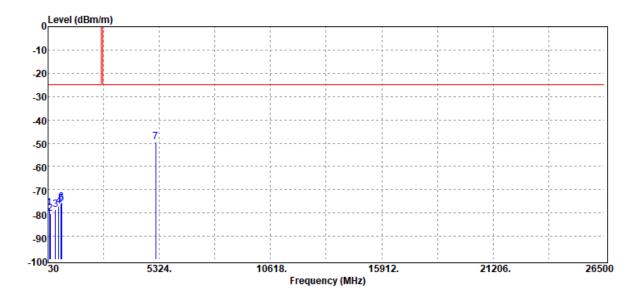
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B38	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2580 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
100.81	-77.74	-70.59	-6.20	-0.95	-25.00	-52.74
144.46	-80.11	-71.17	-7.79	-1.15	-25.00	-55.11
388.90	-78.49	-75.18	-1.51	-1.80	-25.00	-53.49
534.40	-77.19	-73.96	-1.36	-1.87	-25.00	-52.19
653.71	-76.28	-72.40	-1.32	-2.56	-25.00	-51.28
677.96	-75.58	-71.68	-1.46	-2.44	-25.00	-50.58
5160.00	-49.61	-55.36	12.76	-7.01	-25.00	-24.61

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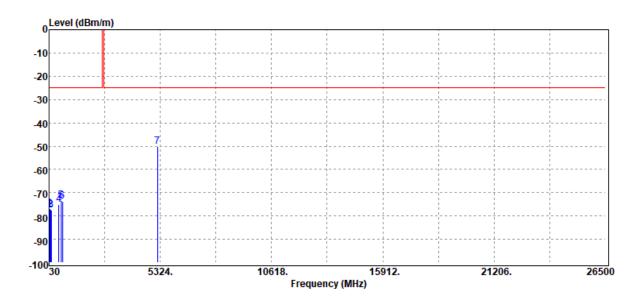
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# Report No.: ER/2020/C0010 Page: 164 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B38	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2595 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-76.68	-61.32	-14.61	-0.75	-25.00	-51.68
97.90	-77.33	-70.60	-5.79	-0.94	-25.00	-52.33
144.46	-77.54	-68.60	-7.79	-1.15	-25.00	-52.54
498.51	-75.00	-71.27	-1.50	-2.23	-25.00	-50.00
599.39	-73.49	-69.34	-1.86	-2.29	-25.00	-48.49
662.44	-73.58	-69.51	-1.35	-2.72	-25.00	-48.58
5190.00	-50.05	-55.86	12.94	-7.13	-25.00	-25.05

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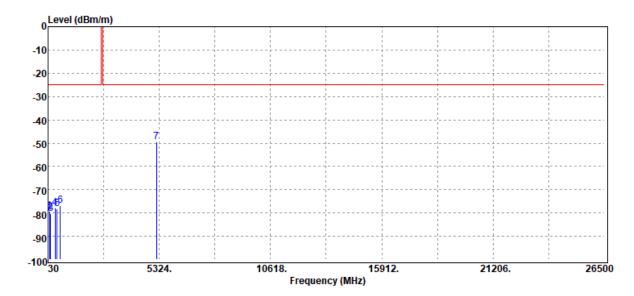
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B38	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2595 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
88.20	-79.35	-72.26	-6.20	-0.89	-25.00	-54.35
125.06	-79.75	-71.24	-7.49	-1.02	-25.00	-54.75
148.34	-80.11	-71.27	-7.64	-1.20	-25.00	-55.11
359.80	-78.00	-74.79	-1.50	-1.71	-25.00	-53.00
469.41	-78.05	-74.23	-1.81	-2.01	-25.00	-53.05
605.21	-76.88	-72.88	-1.89	-2.11	-25.00	-51.88
5190.00	-49.33	-55.14	12.94	-7.13	-25.00	-24.33

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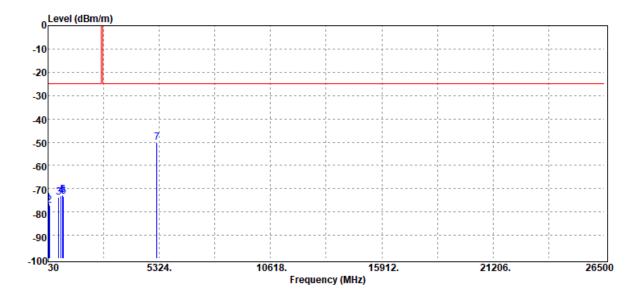
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B38	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2610 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-76.19	-60.83	-14.61	-0.75	-25.00	-51.19
98.87	-77.21	-70.37	-5.90	-0.94	-25.00	-52.21
541.19	-73.69	-70.47	-1.26	-1.96	-25.00	-48.69
658.56	-73.17	-69.18	-1.33	-2.66	-25.00	-48.17
728.40	-72.73	-68.62	-1.45	-2.66	-25.00	-47.73
776.90	-73.30	-69.28	-1.78	-2.24	-25.00	-48.30
5220.00	-50.24	-56.19	13.12	-7.17	-25.00	-25.24

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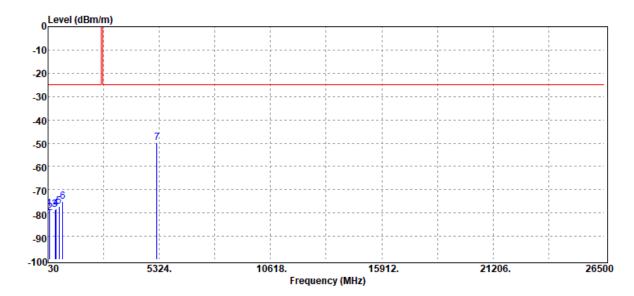
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## Report No.: ER/2020/C0010 Page: 167 of 201

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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B38	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2610 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
97.90	-78.08	-71.35	-5.79	-0.94	-25.00	-53.08
120.21	-80.10	-71.69	-7.35	-1.06	-25.00	-55.10
356.89	-78.60	-75.35	-1.51	-1.74	-25.00	-53.60
411.21	-78.19	-74.90	-1.39	-1.90	-25.00	-53.19
558.65	-77.21	-73.58	-1.36	-2.27	-25.00	-52.21
733.25	-75.06	-70.82	-1.55	-2.69	-25.00	-50.06
5220.00	-49.91	-55.86	13.12	-7.17	-25.00	-24.91

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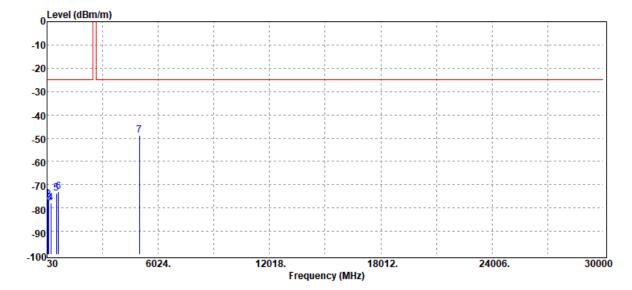
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# Report No.: ER/2020/C0010 Page: 168 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B41	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2506 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-76.04	-60.68	-14.61	-0.75	-25.00	-51.04
97.90	-76.57	-69.84	-5.79	-0.94	-25.00	-51.57
134.76	-78.00	-69.06	-7.91	-1.03	-25.00	-53.00
240.49	-77.76	-74.56	-1.72	-1.48	-25.00	-52.76
544.10	-73.70	-70.45	-1.21	-2.04	-25.00	-48.70
657.59	-73.05	-69.09	-1.32	-2.64	-25.00	-48.05
5012.00	-48.66	-54.48	12.68	-6.86	-25.00	-23.66

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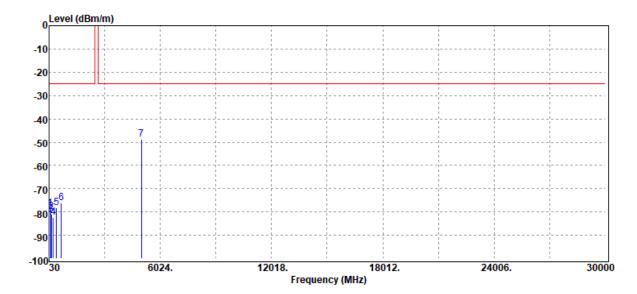
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# Report No.: ER/2020/C0010 Page: 169 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B41	Test Date	:2020-12-22
Test Mode	:Tx CH Low	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2506 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
97.90	-78.49	-71.76	-5.79	-0.94	-25.00	-53.49
122.15	-79.81	-71.36	-7.40	-1.05	-25.00	-54.81
144.46	-80.84	-71.90	-7.79	-1.15	-25.00	-55.84
262.80	-82.42	-79.24	-1.65	-1.53	-25.00	-57.42
420.91	-78.19	-74.62	-1.48	-2.09	-25.00	-53.19
689.60	-76.23	-72.73	-1.45	-2.05	-25.00	-51.23
5012.00	-48.74	-54.56	12.68	-6.86	-25.00	-23.74

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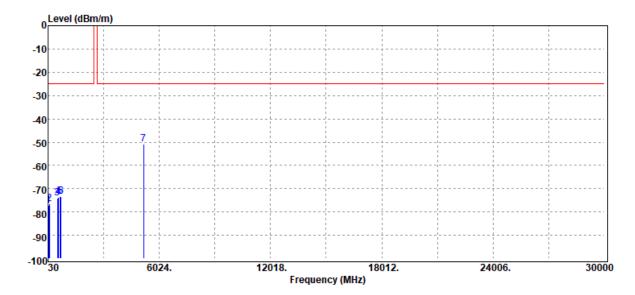
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# Report No.: ER/2020/C0010 Page: 170 of 201

Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B41	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2593 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
61.04	-77.27	-61.91	-14.61	-0.75	-25.00	-52.27
97.90	-76.64	-69.91	-5.79	-0.94	-25.00	-51.64
537.31	-74.08	-70.86	-1.32	-1.90	-25.00	-49.08
587.75	-73.74	-69.41	-1.75	-2.58	-25.00	-48.74
668.26	-73.44	-69.19	-1.46	-2.79	-25.00	-48.44
730.34	-73.22	-69.09	-1.47	-2.66	-25.00	-48.22
5186.00	-50.85	-56.66	12.92	-7.11	-25.00	-25.85

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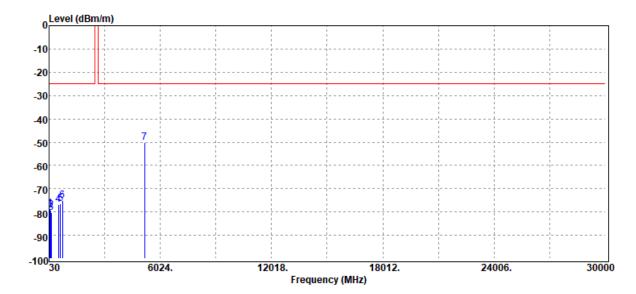
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B41	Test Date	:2020-12-22
Test Mode	:Tx CH Mid	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2593 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
93.05	-78.62	-72.15	-5.55	-0.92	-25.00	-53.62
122.15	-79.35	-70.90	-7.40	-1.05	-25.00	-54.35
148.34	-80.24	-71.40	-7.64	-1.20	-25.00	-55.24
544.10	-76.98	-73.73	-1.21	-2.04	-25.00	-51.98
648.86	-76.51	-72.64	-1.38	-2.49	-25.00	-51.51
752.65	-75.05	-70.45	-1.75	-2.85	-25.00	-50.05
5186.00	-50.10	-55.91	12.92	-7.11	-25.00	-25.10

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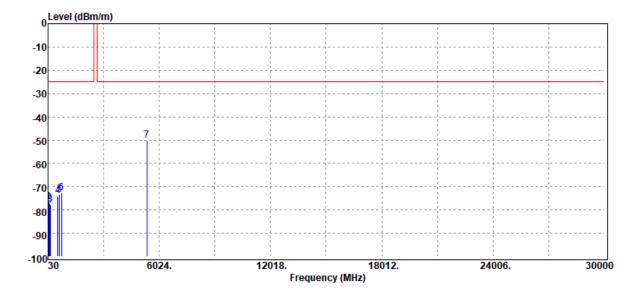
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B41	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:VERTICAL
Test Frequency	:2680 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
59.10	-76.37	-60.46	-15.18	-0.73	-25.00	-51.37
99.84	-77.13	-70.17	-6.01	-0.95	-25.00	-52.13
143.49	-77.89	-68.91	-7.84	-1.14	-25.00	-52.89
555.74	-74.21	-70.62	-1.34	-2.25	-25.00	-49.21
652.74	-73.22	-69.35	-1.33	-2.54	-25.00	-48.22
749.74	-72.60	-67.96	-1.73	-2.91	-25.00	-47.60
5360.00	-50.16	-56.60	13.48	-7.04	-25.00	-25.16

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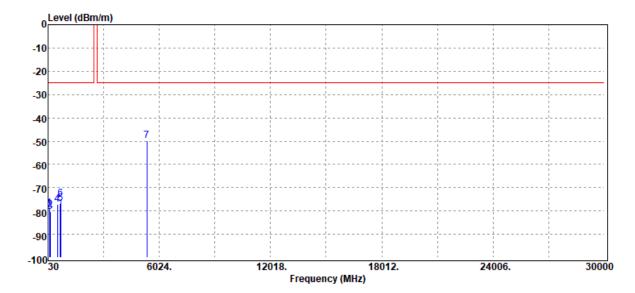
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Report Number	:ER/2020/C0010	Test Site	:SAC I Chamber
Operation Mode	:LTE B41	Test Date	:2020-12-22
Test Mode	:Tx CH High	Temp./Humi.	:22.0/64
EUT Pol	:H Plane	Antenna Pol.	:HORIZONTAL
Test Frequency	:2680 MHz	Engineer	:Neo Tsai



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
99.84	-78.79	-71.83	-6.01	-0.95	-25.00	-53.79
125.06	-79.48	-70.97	-7.49	-1.02	-25.00	-54.48
154.16	-80.28	-71.79	-7.27	-1.22	-25.00	-55.28
548.95	-77.10	-73.71	-1.22	-2.17	-25.00	-52.10
682.81	-76.72	-73.02	-1.44	-2.26	-25.00	-51.72
721.61	-74.89	-70.98	-1.26	-2.65	-25.00	-49.89
5360.00	-49.87	-56.31	13.48	-7.04	-25.00	-24.87

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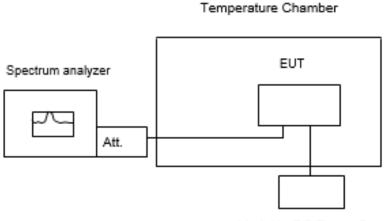


# **10 FREQUENCY STABILITY MEASUREMENT**

#### 10.1 Standard Applicabl

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

#### 10.2 Test Set-up



Variable DC Power Supply

#### 10.3 Measurement Procedure

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Set chamber temperature to  $25^{\circ}$ C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint as

Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint as declared by the manufacturer, record the maximum frequency change.

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Note: Measurement setup for testing on Antenna connector



#### 10.4 **Measurement Equipment Used**

Conduc	Conducted Emission (measured at antenna port) Test Site							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
PXA Spectrum Ana- lyzer	Agilent	N9030A	MY53120760	04/21/2020	04/20/2021			
DC Power Supply	Agilent	E3640A	KR93300208	08/19/2020	08/18/2021			
Radio Communication Analyer	Anritsu	MT8815B	6200711454	04/01/2020	03/31/2021			
Temperature Chamber	TERCHY	MHG-120LF	911009	05/20/2020	05/19/2021			
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2020	01/01/2021			
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2020	01/01/2021			
Splitter	RF-LAMBAD	RFLT2W1G1 8G	11-JSPF412- 018	01/02/2020	01/01/2021			
Radio Communication Analyer	Anritsu	MT8821C	6261786084	01/18/2020	01/17/2021			

#### 10.5 **Measurement Result**

Note: The battery is rated 3.85V dc.

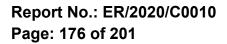
Test Date: Dec. 16, 2020

GPRS 850 Mid Channel 836.6 MHz								
Limit: +/- 2.5 ppm								
Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit (Hz)				
	FREQUENCY ERROR vs. VOLTAGE							
4.235	20	836.599997	-3	2091				
3.85	20	836.599991	-9	2091				
3.465	20	836.600005	5	2091				
3.1 (End point)	20	836.600008	8	2091				
	FREQU	ENCY ERROR vs	. Temp.					
3.85	50	836.599999	-1	2091				
3.85	40	836.600006	6	2091				
3.85	30	836.599992	-8	2091				
3.85	20	836.600003	3	2091				
3.85	10	836.600007	7	2091				
3.85	0	836.599991	-9	2091				
3.85	-10	836.599996	-4	2091				
3.85	-20	836.599995	-5	2091				
3.85	-30	836.59999	-10	2091				

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	GPRS 1	900 Mid Channel	1880	MHz				
	Limit: +/- 2.5 ppm							
Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit (Hz)				
	FREQUENCY ERROR vs. VOLTAGE							
4.235	20	1879.999999	-1	4700				
3.85	20	1880.00001	10	4700				
3.465	20	1879.999995	-5	4700				
3.1 (End point)	20	1879.999993	-7	4700				
FREQUENCY ERROR vs. Temp.								
3.85	50	1879.999991	-9	4700				
3.85	40	1880.000007	7	4700				
3.85	30	1879.999999	-1	4700				
3.85	20	1879.999995	-5	4700				
3.85	10	1879.999996	-4	4700				
3.85	0	1880.000003	3	4700				
3.85	-10	1879.999993	-7	4700				
3.85	-20	1879.999992	-8	4700				
3.85	-30	1880.000001	1	4700				
	WCDI	MA II Mid Channel		MHz				
		Limit: +/- 2.5 ppm						
Vdc	Тетр. (°С )	Freq. (MHz)	Delta (Hz)	Limit (Hz)				
	FREQUE	NCY ERROR vs. V	/OLTAGE					
4.235	20	1880.000008	8	4700				
3.85	20	1879.99999	-10	4700				
3.465	20	1879.999997	-3	4700				
3.1 (End point)	20	1880.000009	9	4700				
	FREQU	ENCY ERROR vs	. Temp.					
3.85	50	1879.999994	-6	4700				
3.85	40	1880.000007	7	4700				
3.85	30	1880.000009	9	4700				
3.85	20	1880.000008	8	4700				
3.85	10	1880.000005	5	4700				
3.85	0	1879.999997	-3	4700				
3.85	-10	1879.999996	-4	4700				
3.85	-20	1879.999991	-9	4700				
3.85	-30	1879.99999	-10	4700				

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	WCDM	MA V Mid Chanr	nel 8	336.6	MHz
		Limit: +/- 2.5 pp	om		
Vdc	Temp. (°C)	Freq. (MHz)	De	lta (Hz)	Limit (Hz)
	FREQUE	NCY ERROR vs	s. VOLTA	GE	
4.235	20	836.599991		-9	2091
3.85	20	836.600007		7	2091
3.465	20	836.600002		2	2091
3.1 (End point)	20	836.599997		-3	2091
· · · ·	FREQL	JENCY ERROR	vs. Temp	).	
3.85	50	836.599992		-8	2091
3.85	40	836.600002		2	2091
3.85	30	836.599995		-5	2091
3.85	20	836.599999		-1	2091
3.85	10	836.59999		-10	2091
3.85	0	836.600006		6	2091
3.85	-10	836.600007		7	2091
3.85	-20	836.600004		4	2091
3.85	-30	836.600008		8	2091
	IT	E B2 Mid			
Reference Freq.:		hannel	1880	MHz 10	M QPSK CH 18900
Power Supply Vd	c Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit =	+/- 2.5 ppm (Hz)
	Fre	eq. ERROR vs. VO	LTAGE	-	
4.235	25	1880.000007	7		4700
3.85	25	1879.999997	-3		4700
3.465	25	1880.000006	6		4700
3.1 (End Daint)	25	1880.000009	9		4700
(End Point)	F	req. ERROR vs. T	emn		
3.85	-30	1879.999996	-4		4700
3.85	-20	1880.000005	5		4700
3.85	-10	1880.000004	4	4700	
3.85	0	1880.000008	8	4700	
3.85	10	1880.000010	10	4700	
3.85	20	1880.000007	7		4700
3.85	30	1879.999994	-6		4700
3.85	40	1880.000001	1	1	4700
3.85	50	1879.999999	-1		4700

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Reference Freq.:		B5 Mid nannel	836.5	MHz 10M QPSK CH 20525	
Power Supply Vdc	Temp. (°C)			Limit = +/- 2.5 ppm (Hz)	
		q. ERROR vs. VO	Delta (Hz)		
4.235	25	836.499996	-4	2091	
3.85	25	836.499995	-5	2091	
3.465	25	836.500006	6	2091	
3.1 (End Point)	- 25	836.499993	-7	2091	
	Fr	eq. ERROR vs. T	emp.		
3.85	-30	836.500002	2	2091	
3.85	-20	836.499993	-7	2091	
3.85	-10	836.499997	-3	2091	
3.85	0	836.500009	9	2091	
3.85	10	836.500005	5	2091	
3.85	20	836.500004	4	2091	
3.85	30	836.499992	-8	2091	
3.85	40	836.499997	-3	2091	
3.85	50	836.500003	3	2091	
Reference Freq .:		E B7 Mid hannel	2535	MHz 10M QPSK CH 21100	
Power Supply Vdc	Temp. (℃)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)	
		a. ERROR vs. VO			
4.235	25	2534.999999	-1	6338	
3.85	25	2534.999996	-4	6338	
3.465	25	2534.999992	-8	6338	
3.1 (End Point)	25	2535.000010	10	6338	
· · ·	Fr	eq. ERROR vs. T	emp.		
3.85	-30	2535.000003	3	6338	
3.85	-20	2534.999991	-9	6338	
3.85	-10	2535.000002	2	6338	
3.85	0	2534.999999	-1	6338	
3.85	10	2534.999992	-8	6338	
3.85	20	2534.999995	-5	6338	
3.85	30	2535.000007	7	6338	
3.85	40	2534.999995	-5	6338	

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Reference Freq.:	LTE	B38 Mid	2595	MHz 10M QPSK CH 38000	
Relefence Fleq	С	hannel	2090		
Power Supply Vdc	Temp. (℃)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)	
	Free	q. ERROR vs. VO	LTAGE		
4.235	25	2595.000009	9	6488	
3.85	25	2594.999995	-5	6488	
3.465	25	2594.999992	-8	6488	
3.1	- 25	2594.999996	-4	6488	
(End Point)				0.00	
		eq. ERROR vs. T			
3.85	-30	2595.000002	2	6488	
3.85	-20	2595.000006	6	6488	
3.85	-10	2594.999993	-7	6488	
3.85	0	2594.999991	-9	6488	
3.85	10	2595.000003	3	6488	
3.85	20	2595.000008	8	6488	
3.85	30	2595.000004	4	6488	
3.85	40	2594.999990	-10	6488	
3.85	50	2595.000005	5	6488	
Reference Freq .:	LTE B41 Mid		2593	MHz 10M QPSK CH 40620	
Koloronoo moqu		Channel			
Power Supply Vdc	-	Temp. (°C) Freq. (MHz)		Limit = +/- 2.5 ppm (Hz)	
		q. ERROR vs. VO			
4.235	25	2592.999992	-8	6483	
3.85	25	2592.999994	-6	6483	
3.465	25	2592.999998	-2	6483	
3.1 (End Point)	25	2593.000007	7	6483	
(	F	req. ERROR vs. T	emp.		
3.85	-30	2592.999995	-5	6483	
3.85	-20	2592.999992	-8	6483	
3.85	-10	2592.999990	-10	6483	
3.85	0	2593.000003	3	6483	
3.85	10	2593.000009	9	6483	
3.85	20	2592.999993	-7	6483	
3.85	30	2592.999994	-6	6483	
3.85	40	2592.999998	-2	6483	
3.85	50	2592.999996	-4	6483	

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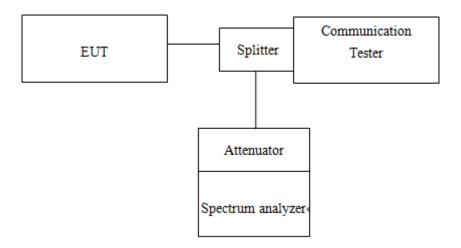


# **11 PEAK TO AVERAGE RATIO**

#### 11.1 Standard Applicable

The peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

# 11.2 Test SET-UP



#### 11.3 **Measurement Procedure**

- 1. KDB 971168 D01 is employed as the following procedure is proper adjusted accordingly:
- 2. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth; & internal =1ms
- 3. Set the number of counts to a value that stabilizes the measured CCDF curve.

#### 11.4 **Measurement Equipment Used**

Conduc	Conducted Emission (measured at antenna port) Test Site											
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.							
PXA Spectrum Ana- lyzer	Agilent	N9030A	MY53120760	04/21/2020	04/20/2021							
DC Power Supply	Agilent	E3640A	KR93300208	08/19/2020	08/18/2021							
Radio Communication Analyer	Anritsu	MT8815B	6200711454	04/01/2020	03/31/2021							
Temperature Chamber	TERCHY	MHG-120LF	911009	05/20/2020	05/19/2021							
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2020	01/01/2021							
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2020	01/01/2021							
Splitter	RF-LAMBAD	RFLT2W1G1 8G	11-JSPF412- 018	01/02/2020	01/01/2021							
Radio Communication Analyer	Anritsu	MT8821C	6261786084	01/18/2020	01/17/2021							

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#### 11.5 **Measurement Result**

	E	eq.			Peak	-to-Av	erage I	Ratio					
		(MHz)		CH	GS	SM	GP	RS					
	(IV	11 12)			8	50	85	0					
	82	24.2	1	28	9.	69	10.	03					
	83	36.6	1	90	9.4	43	9.	4					
	84	18.8	2	51	9.	34	9.4	18					
	с,	rog			Peak	-to-Av	erage F	Ratio					
	(MHz)				Freq.		(	СН	GS	SM	GP	RS	
					19	00	19	00					
	18	50.2	5	512 9.2		26	9.7	72					
	1	880	661		9.	9.87		15					
	19	09.8	8	10	9.	62	9.5	58					
Fre	a			F	Peak-to	-Avera	age Ra	tio (dE	3)				
	•	Cl	-	WCE	DMA	HSI	OPA	HS	UPA				
(IVII	(MHz)				II		II		II				
1852	2.4	926	52 3.0		09	3.	94	3.	81				
188	80	94(	)0 <b>3</b> .0		09	4.	29	4.	01				
1907	7.6	953	38	3.	07	4.	13	3.	77				

Freq. (MHz)		Peak-to-Average Ratio (dB)				
	СН	WCDMA	HSDPA	HSUPA		
(IVITIZ)		V	V	V		
826.4	4132	2.98	4.01	3.43		
836.6	4183	3.00	3.55	3.81		
846.6	4233	2.92	3.92	3.66		

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SGS	

			LTE B	and 2			
Char	nnel band	width: 1.4N	1Hz	Cha	nnel band	dwidth: 3MI	Hz
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)
(MHz)	СП	64QAM	Limit	(MHz)	СП	64QAM	Limit
1850.7	18607	6.87	13	1851.5	18615	6.70	13
1880.0	18900	6.97	13	1880.0	18900	6.75	13
1909.3	19193	6.69	13	1908.5	19185	6.73	13
			LTE B	ΔΝΠ 2			
Cha	nnel band	width: 5M			nnel band	width: 10M	Hz
Freq.		PAPR	(dB)	Freq.		PAPR (dB)	
(MHz)	СН	64QAM	Limit	(MHz)	СН	64QAM	Limit
1852.5	18625	6.66	13	1855.0	18650	6.73	13
1880.0	18900	6.77	13	1880.0	18900	6.88	13
1907.5	19175	6.58	13	1905.0	19150	6.63	13
			LTE B	AND 2			
Cha	nnel band	width: 15M	Hz	Cha	nnel band	width: 20M	Hz
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)
(MHz)		64QAM	Limit	(MHz)	UI	64QAM	Limit
1857.5	18675	6.71	13	1860.0	18700	6.73	13
1880.0	18900	6.65	13	1880.0	18900	6.88	13
1902.5	19125	6.73	13	1900.0	19100	6.80	13

	LTE BAND 5											
Char	nnel band	width: 1.4N	1Hz	Cha	innel band	dwidth: 3MI	Hz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)	СП	64QAM	Limit	(MHz)	СП	64QAM	Limit					
824.7	20407	6.82	13	825.5	20415	6.70	13					
836.5	20525	6.90	13	836.5	20525	6.72	13					
848.3	20643	6.76	13	847.5	20635	6.76	13					
			LTE B	AND 5								
Cha	nnel band	dwidth: 5MI	Hz	Cha	nnel band	width: 10M	Hz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)		64QAM	Limit	(MHz)		64QAM	Limit					
826.5	20425	6.73	13	829.0	20450	6.75	13					
836.5	20525	6.74	13	836.5	20525	6.68	13					
846.5	20625	6.63	13	844.0	20600	6.73	13					

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	LTE BAND 7											
Cha	nnel ban	dwidth: 5M	Hz	Char	nnel band	lwidth: 10N	1Hz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)	СП	64QAM	Limit	(MHz)	СП	64QAM	Limit					
2502.5	20775	6.33	13	2505.0	20800	6.38	13					
2535.0	21100	6.53	13	2535.0	21100	6.56	13					
2567.5	21375	6.63	13	2565.0	21350	6.53	13					
			LTE B	and 7								
Char	nel banc	lwidth: 15N	1Hz	Char	nnel band	lwidth: 20N	1Hz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)	CIT	64QAM	Limit	(MHz)	CIT	64QAM	Limit					
2507.5	20825	6.56	13	2510	20850	6.84	13					
2535.0	21100	6.69	13	2535	21100	6.83	13					
2562.5	21375	6.77	13	2560	21350	6.96	13					

	LTE BAND 38												
Cha	nnel band	lwidth: 5MI	Ηz	Cha	nnel band	width: 10M	Hz						
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)						
(MHz)	СП	64QAM	Limit	(MHz)	СП	64QAM	Limit						
2572.5	37775	10.31	13	2575	37800	10.70	13						
2595.0	38000	9.12	13	2595	38000	10.13	13						
2617.5	38225	9.90	13	2615	38200	8.52	13						
			LTE B	and 38									
Cha	nnel band	width: 15M	Hz	Cha	nnel band	width: 20M	Hz						
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)						
(MHz)	СП	64QAM	Limit	(MHz)	СП	64QAM	Limit						
2577.5	37825	8.54	13	2580.0	37850	11.21	13						
2595.0	38000	11.28	13	2595.0	38000	11.02	13						
2612.5	38175	8.86	13	2610.0	38150	10.56	13						

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	LTE BAND 41												
Cha	nnel ban	dwidth: 5M	Hz	Char	nnel band	dwidth: 10N	/IHz						
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)						
(MHz)	CIT	64QAM	Limit	(MHz)	CIT	64QAM	Limit						
2498.5	39675	9.00	13	2501.0	39700	12.35	13						
2593.0	40620	12.74	13	2593.0	40620	12.31	13						
2687.5	41565	11.48	13	2685.0	41540	12.07	13						
			LTE B	and 41									
Char	nel banc	dwidth: 15N	1Hz	Char	nnel band	dwidth: 20N	/IHz						
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)						
(MHz)	CIT	64QAM	Limit	(MHz)	CIT	64QAM	Limit						
2503.5	39725	9.80	13	2506.0	39750	7.31	13						
2593.0	40620	9.61	13	2593.0	40620	10.16	13						
2682.5	41515	11.43	13	2680.0	41490	8.41	13						

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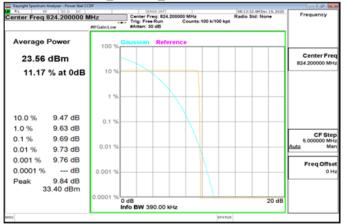
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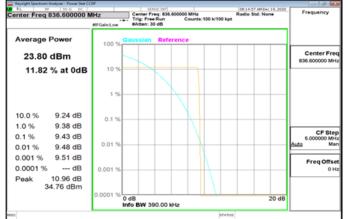


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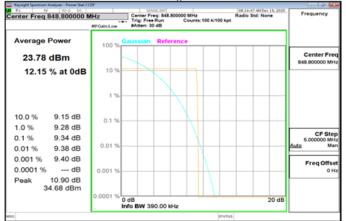
#### GSM\_850MHz\_LowCH128-824.2



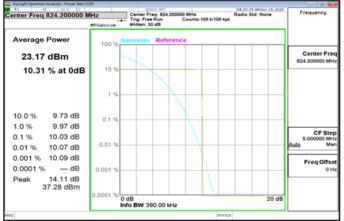
#### GSM\_850MHz\_MidCH190-836.6



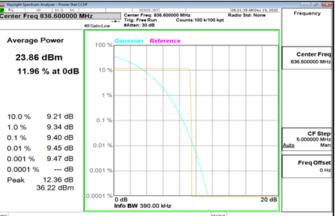
#### GSM 850MHz HighCH251-848.8



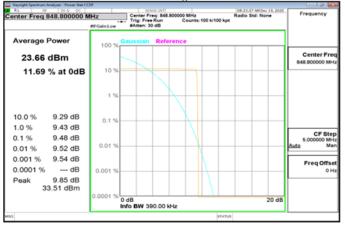
#### GPRS 850MHz LowCH128-824.2



#### GPRS\_850MHz\_\_MidCH190-836.6



#### GPRS 850MHz HighCH251-848.8



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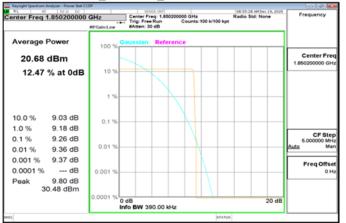
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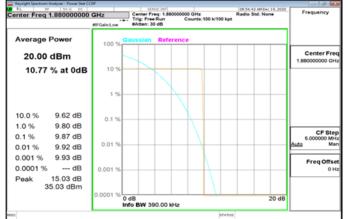


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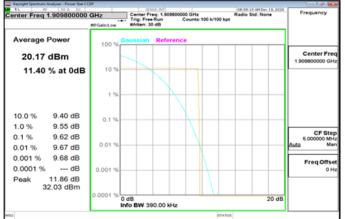
#### GSM 1900MHz LowCH512-1850.2



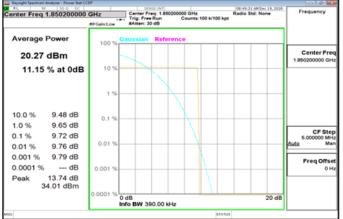
#### GSM\_1900MHz\_MidCH661-1880



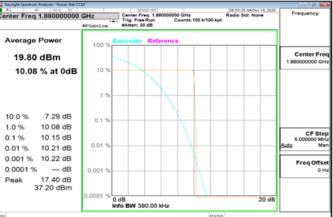
#### GSM 1900MHz HighCH810-1909.8



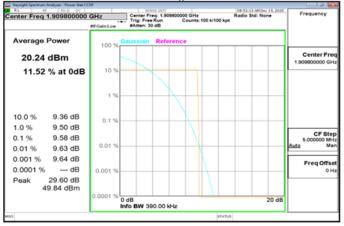
#### GPRS 1900MHz LowCH512-1850.2



#### GPRS\_1900MHz\_MidCH661-1880



#### GPRS\_1900MHz\_HighCH810-1909.8



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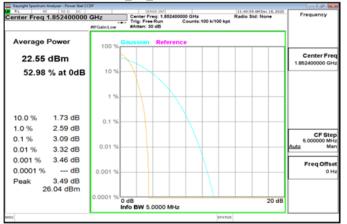
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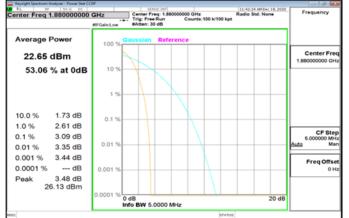


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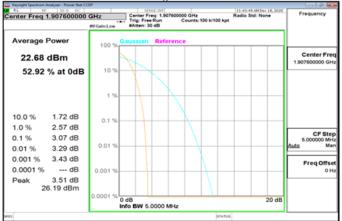
#### WCDMA\_B2\_LowCH9262-1852.4



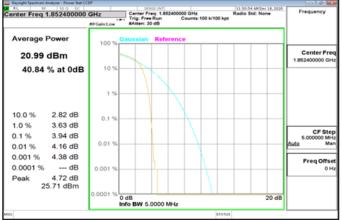
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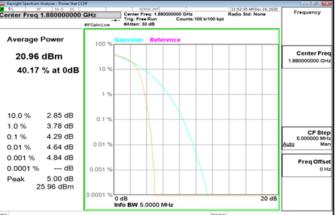
#### WCDMA B2 HighCH9538-1907.6



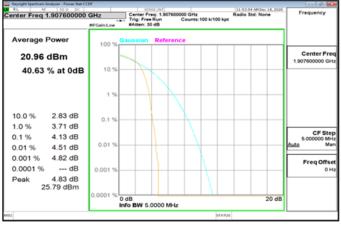
#### HSDPA B2 LowCH9262-1852.4



#### HSDPA\_B2\_MidCH9400-1880



#### HSDPA\_B2\_HighCH9538-1907.6



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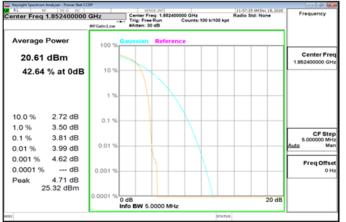
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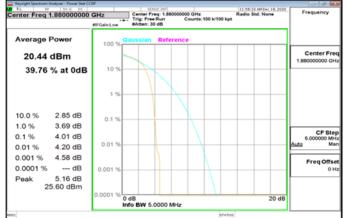


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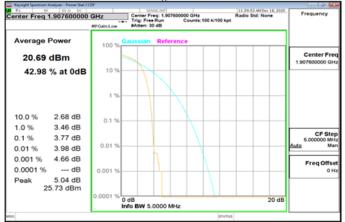
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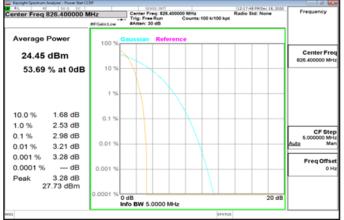
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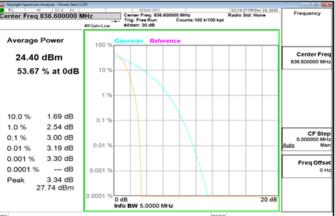
#### HSUPA B2 HighCH9538-1907.6



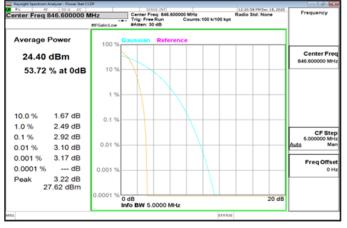
#### WCDMA B5 LowCH4132-826.4



#### WCDMA\_B5\_MidCH4183-836.6



#### WCDMA B5 HighCH4233-846.6



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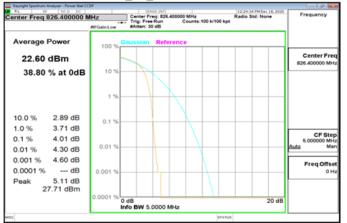
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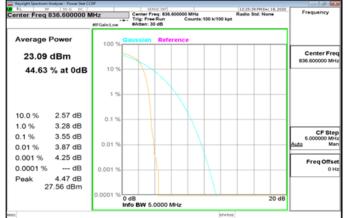


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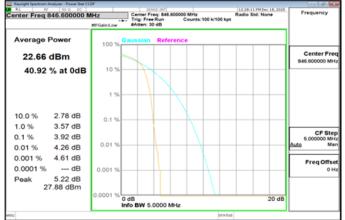
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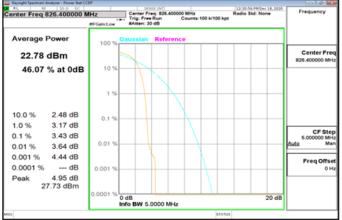
#### HSDPA\_B5\_MidCH4183-836.6



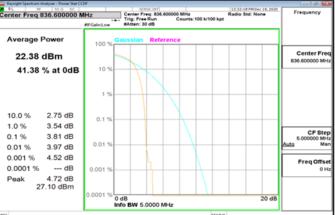
#### HSDPA B5 HighCH4233-846.6



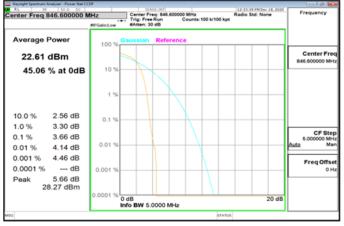
#### HSUPA B5 LowCH4132-826.4



#### HSUPA\_B5\_MidCH4183-836.6



#### HSUPA B5 HighCH4233-846.6



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