





L RF 50 Ω DC		SENSE:INT	ALIGN AUTO		10:54:23 4	M Oct 25, 2018
Display Line -16.00 dBm	PNO: Fast	Trig: Free Run #Atten: 22 dB	Avg Type: R Avg Hold:>1	MS 00/100	TRA TH D	CE 1 2 3 4 5 6 PE A WWWW ET A NNNN
Ref Offset 41.8 dB					Mkr1 73 38.2	6.9 MHz 42 dBm
39.8 <b>1</b>						
29.8						
19.8						
.80						
20						
0.2						DL1 -16.00 dBr
0.2		$\sim\sim\sim\sim$			~~~	~~~~
0.2						
10.2						
tart 30 MHz Res BW 1.0 MHz	#VB	W 3.0 MHz*		Sweep	Stop 9 15.33 ms (1	0.000 GHz 10000 pts)
sg			STATUS			

Figure 8.3-61: Conducted spurious emissions for 10 MHz low channel with IoT, with 60 W configuration at Port A



Figure 8.3-60: Conducted spurious emissions for 10 MHz high channel with IoT, with 40 W configuration at Port D



Figure 8.3-62: Conducted spurious emissions for 10 MHz low channel with IoT, with 60 W configuration at Port C







Keysight Spectrum Analyzer - Swept SA				- 7
L RF 50 Ω DC	9	ENSE:INT	ALIGN AUTO	11:06:17 AM Oct 25, 2018
Display Line -16.00 dBm	PNO: Fast	Trig: Free Run #Atten: 22 dB	Avg Hold:>100/100	DET A NNNNN
Ref Offset 41.8 dB 10 dB/div Ref 49.80 dBm				Mkr1 742.3 MHz 37.767 dBm
39.8 <b>•</b> <sup>1</sup>				
29.8				
19.8				
9.80				
0.20				
10.2				DL1 -16.00 dBn
20.2		$\sim$		
30.2				
40.2				
Start 30 MHz #Res BW 1.0 MHz	#VB	V 3.0 MHz*	Sweep	Stop 9.000 GHz 15.33 ms (10000 pts)
rsg			STATUS	

Figure 8.3-65: Conducted spurious emissions for 10 MHz high channel with IoT, with 60 W configuration at Port A



Figure 8.3-64: Conducted spurious emissions for 10 MHz mid channel with IoT, with 60 W configuration at Port C



Figure 8.3-66: Conducted spurious emissions for 10 MHz high channel with IoT, with 60 W configuration at Port C



Keysight Spi	ectrum Analyzer - Channel Po	wer							- 6 ×
Span 20.	RF 50 Ω DC		5	Center Freq:	729.00000	ALIGN AUTO		Radio Std:	8 PM Oct 24, 2018 None
00000		#FGain:Lo	Low #Atten: 28 dB			100/100	Radio Device: BTS		
10 dB/div	Ref 39.80 dB	m							
29.8									
19.8									
9.80						and the second sector	· · · · · · · · · · · · · · · · · · ·		
-0.20					<u> </u>				
-10.2				/					
-20.2				/					1
-30.2				1					
-40.2									-
-50.2									
Center 7	29 MHz				200 kl			S	pan 20 MHz
#Res BW	10 KHZ			#VBW	300 KP	12		Swee	p 237.0 ms
Chan	nel Power			Power S	pectra	al Density			
-2	28.25 dBm	/ 100 kHz		-7	8.25	dBm /н	z		
wsg 🗼 File ·	<lbe 10="" ant<="" lp="" mhz="" td=""><td>B.png&gt; saved</td><td></td><td></td><td></td><td>STATUS</td><td></td><td></td><td></td></lbe>	B.png> saved				STATUS			

an 20.000 M	IHz		Center F	req: 729.00000	0 MHz	100/100	Radio Std: 1	None	
		#FGain:Low	#Atten: 28 dB				Radio Device: BTS		
	6 00 00 dB								
arian Ke	er 39.80 dBm			-					
8		_		+					
8				(m		· ··· · · ···			
,				/					
				1					
2									
2									
nter 720 MH	7						Sr	an 20 M	
es BW 10 kH	iz		#\		Sweep 237.6				
Channel P	ower		Powe	er Spectr	al Density	,			
				70.00	-				
-28.3	-28.38 dBm / 100 kHz			-/8.38	z				
File <lbe 10<="" p=""></lbe>	MHz LP Ant C.png	saved			STATUS				

Figure 8.3-67: Conducted band edge emission at 729 MHz, 5 MHz channel with 40 W configuration at Port A

	Analyzer - Channel Powe								
L RF	50 Ω DC		_	SENSE:INT	700 00000	ALIGN AUTO		02:20:3	13 PM Oct 24, 2
an 20.000	MHz			Center Fr	ed: 129.00000	UMHZ	00/400	Radio Std:	None
		and the	. <b>P</b>	#Atten: 2	dB	Avg Hold:>	100/100	Padio Davis	A BTS
		#IFGair	h:Low	#Atten: 20	db			Radio Device: B1 S	
anaa. I	Bof 20 00 dBm								
	Kel 39.80 dBill								
8									
- -									
8							·		
n									
					1				
									-
2					/				
					1				
2					1				
2					1				
					1				
2									
1									
								S	oan 20 M
nter 729 M	IHz								
nter 729 M	iHz kHz			#V	300 ki	łz		Swee	p 237.6
nter 729 M es BW 10 I	IHz kHz			#V	300 ki	łz		Swee	p 237.6
nter 729 M es BW 10 I	IHz kHz			#V	300 ki	łz		Swee	p 237.6
nter 729 M es BW 10 I Channel	Hz kHz Power			#V	BW 300 ki	lz al Density		Swee	p 237.6
nter 729 M es BW 10 I Channel	Hz kHz Power			#V	BW 300 ki	iz al Density		Swee	p 237.6
nter 729 M es BW 101 Channel	Hz kHz Power			#V Powe	SW 300 ki	iz al Density		Swee	p 237.6
nter 729 M es BW 101 Channel	Power	100 kHz		#V	300 ki r Spectra 78.56	iz al Density dBm /н	z	Swee	p 237.6
nter 729 M es BW 10 I Channel -28.	Power 56 dBm /	100 kHz		#V Powe	300 ki r Spectra 78.56	<del>iz</del> al Density dBm /н	z	Swee	p 237.6
nter 729 M es BW 10 Channel -28.	Hz kHz Power 56 dBm /	100 kHz		#v	300 ki r Spectra 78.56	iz al Density dBm /H	z	Swee	p 237.6
nter 729 M es BW 101 Channel -28.	Hz kHz Power 56 dBm /	100 kHz		#V Powe	300 ki r Spectra 78.56	iz al Density dBm /H	z	Swee	p 237.6
nter 729 M es BW 10 Channel -28.	Power 56 dBm /	100 kHz		#V	300 ki r Spectra 78.56	<del>iz</del> al Density dBm /н	z	Swee	p 237.6
nter 729 M es BW 10 Channel -28.	Power 56 dBm /	100 kHz		#V	300 ki r Spectra 78.56	<del>iz</del> al Density dBm /H	z	Swee	p 237.6
nter 729 M es BW 10 Channel -28.	Power 56 dBm /	100 kHz		#V	300 ki r Spectra 78.56	łz al Density dBm /H	z	Swee	p 237.6
nter 729 M es BW 10 Channel -28.	Hz kHz Power 56 dBm /	100 kHz		#V	300 ki r Spectra 78.56	<sup>ız</sup> al Density dBm /н	z	Swee	p 237.6

Figure 8.3-69: Conducted band edge emission at 729 MHz, 5 MHz channel with 40 W configuration at Port C

Figure 8.3-68: Conducted band edge emission at 729 MHz, 5 MHz channel with 40 W configuration at Port B

Keysight Sp	ectrum Analyzer - Channe	I Power							- 6
Span 20.	.000 MHz	C		Center Fre	eq: 729.00000	MHz		Radio Std: 1	OPM Oct 24, 2018
			#IFGain:Low	Trig: Free Run Avg Hold:>100/100 #Atten: 28 dB				Radio Device: BTS	
10 dB/div	Ref 39.80 c	iBm							
29.8									
19.8									
9.80							1		
-0.20									$\left  \right $
-10.2		-			/				
-20.2			-		/			-	
-30.2					1				
-40.2					1				
-50.2									
Center 7 #Res BW	29 MHz 10 kHz			#VE	300 kH	z		Sp Swee	an 20 MH: 237.6 m
Chan	nel Power			Powe	r Spectra	I Density	,		
-2	28.62 dBr	n / 100	kHz	-	78.62	dBm /ŀ	lz		
rsg						STATUS			

Figure 8.3-70: Conducted band edge emission at 729 MHz, 5 MHz channel with 40 W configuration at Port D



Keysight Spectrum Analyzer - Channel P	ower			- 6	
Dan 20.000 MHz		Center Freq: 729.000000 MH		03:06:26 PM Oct 24, 20 Radio Std: None	
	#FGain:Low	Trig: Free Run / #Atten: 28 dB	Radio Device: BTS		
dB/div Ref 39.80 dE	3m				
18					
.8					
0					
2		/			
2					
2					
2					
nter 729 MHz es BW 10 kHz		#VBW 300 kHz		Span 20 M Sweep 237.6 i	
Channel Power		Power Spectral [	Density		
-25.73 dBm	/ 100 kHz	-75.73 di	Зт /Hz		
			STATUS		

Figure 8.3-71: Conducted band edge emission at 729 MHz, 5 MHz channel
with 60 W configuration at Port A

Keysight Spectrum Analyze	er - Channel Power		raure tare			02.21			
an 10 000 MH:	30 12 DC		Center Fre	eg: 745.000	ALIGN AUTO	Radio Std:	None		
arr 10.000 mm	2		Trig: Free	Run	Avg Hold:>100/1	00			
	#19	Gain:Low	#Atten: 28	8 dB		Radio Devi	Radio Device: BTS		
dB/div Ref 3	39.80 dBm								
				1					
, <u> </u>									
*			7						
/									
/									
				Human					
					and and the spectrum terrestory of a second s		hand		
nter 745 MHz						S	oan 10 M		
es BW 10 kHz			#VE	BW 300 I	kHz	Swee	p 118.8		
Channel Pov	ver		Power	r Spect	ral Density				
					•				
-22 96	dBm / 100 kl	47		72 96	dBm /Hz				
22.00		-							
Intel < UBE 5 MH	IZ LP Ant B.png> save	0			STATUS				

Figure 8.3-73: Conducted band edge emission at 745 MHz, 5 MHz channel with 40 W configuration at Port A

Keysight Spectrum Analyzer - Channel I	Power				
L RF 50 Ω DC		SENSE:INT Center Freq: 729.000	ALIGN AUTO	03:05:41 PM Oct 24, 20 Radio Std: None	
5an 20.000 min2	#IFGain:Low	<ul> <li>Trig: Free Run #Atten: 28 dB</li> </ul>	Radio Device: BTS		
dB/div Ref 39.80 dB	Bm				
3.8					
.8					
80					
10					
2					
2		/			
2					
2		warman and an and and			
2					
enter 729 MHz				Span 20 M	
les BW 10 kHz		#VBW 300	KHZ	Sweep 237.6	
Channel Power		Power Spec	tral Density		
-26.14 dBm	) / 100 kHz	-76.1	4 dBm /Hz		
			STATUS		

Figure 8.3-72: Conducted band edge emission at 729 MHz, 5 MHz channel with 60 W configuration at Port C

eysight Spectrum Analyzer - Char L RF 50 Ω	nnel Power DC		SENSE:INT		ALIGN AUTO	03:21:		
an 10.000 MHz			Center Fre	q: 745.000	000 MHz AvaiHold:>100/100	Radio Std:	None	
	#IFGain:Lo		#Atten: 28	Radio Devi	Radio Device: BTS			
Bidiv Ref 39.80	) dBm			m				
	_							
	_			-			-	
2				-				
	_						-	
2				1				
2				hermon				
2	_							
nter 745 MHz				11		S	pan 10 M	
es BW 10 kHz			#VE	300 W	kHz	Swee	Sweep 118.8	
			_	_				
Channel Power			Powe	r Spect	ral Density			
-22 95 dE	m / 100 ku	-		72 94	dBm /uz			
-22.00 uL		2	-	72.00				
Ello <ude d<="" e="" i="" mus="" td=""><td>Ant D ppg&gt; saved</td><td></td><td></td><td></td><td>OT A THE</td><td></td><td></td></ude>	Ant D ppg> saved				OT A THE			

Figure 8.3-74: Conducted band edge emission at 745 MHz, 5 MHz channel with 40 W configuration at Port B



Keysight Spectrum Analyze	er - Channel Power							-	
an 10.000 MH:	50 Ω DC   Z		Center Freq:	745.000000	MHz		Radio Std:	9 PM Oct 24, 2 None	
	#FGain:		Trig: Free Run Avg Hold:>100/100 ow #Atten: 28 dB				Radio Device: BTS		
dB/div Ref	39.80 dBm								
в									
3	·····								
/									
/			V						
							_		
						******			
nter 745 MHz es BW 10 kHz			#VBW	V 300 kHz	:		Si Swee	oan 10 M o 118.8	
Channel Pov	ver		Power S	Spectral	Density				
-23.23	dBm / 100 /	/ <b>L</b> l=	-7	3 23 0	IBm /u·				
-20.20			-73.23 UBIII /Hz						

Figure 8.3-75: Conducted band edge emission at 745 MHz, 5 MHz channel
with 40 W configuration at Port C

eysight Spectrum Analyze	r - Channel Power		SENSE-INT		IGN AUTO		03:13:1		
an 10.000 MHz	30 12 DC		Center Fre	q: 745.000000	MHz		Radio Std:	None	
		#IFGain:Low	#Atten: 28	Run dB	Avg Hold:>1	00/100	Radio Device: BTS		
B/div Ref 3	9.80 dBm								
,									
			and a strength of the second						
								-	
/			1						
1		_	Ĭ				_		
			ľ	harmon	-	-			
nter 745 MHz es BW 10 kHz			#VE	W 300 KH	z		S Swee	pan 10 M p 118.8 i	
Channel Pov	ver		Power	Spectra	I Density				
24.44	d Dura i ca			74 4 4	- -				
-21.14	авт / 10	0 KHZ	-	/1.14 (	авт /н	z			

Figure 8.3-77: Conducted band edge emission at 745 MHz, 5 MHz channel with 60 W configuration at Port A

Keysight Spectru	m Analyzer - Channel P	ower								
an 10.00	RF   50 Ω DC Ο MHz			SENSE:INT	req: 745.00	ALIGN AUTO		03:21:2 Radio Std:	1 PM Oct 24, 2 None	
		#	IFGain:Low	#Atten: 2	e Run 8 dB	Avg Hol	d:>100/100	Radio Device: BTS		
dB/div	Ref 39.80 dE	m								
g					1					
n		1								
2										
2					VII.					
2					1					
2					Human	warmen and the state of the state				
2								and the second sec		
nter 745 es BW 10	MHZ ) kHz			#V	BW 300	) kHz		Swee	pan 10 Ⅳ n 118.8	
					2 000			0		
Channe	l Power			Powe	r Spec	tral Densi	ty			
-23	.00 dBm	/ 100 k	Hz		-73.0	0 dBm	/Hz			
						STATUS				

Figure 8.3-76: Conducted band edge emission at 745 MHz, 5 MHz channel with 40 W configuration at Port D

Keysight Spectrum Analyzer - Char L RF 50 Q	DC		SENSE:INT		ALIGN AUTO		03:13:2	6 PM Oct 24, 2
an 10.000 MHz			Center Fr Trig: Free	eq: 745.000 Run	000 MHz Avg Hold:>	100/100	Radio Std:	None
dRidly Rof 30 90	#i	FGain:Low	Radio Devic	e: BTS				
19 18								
8								
0								
2								
2				hanner	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
2								
nter 745 MHz es BW 10 kHz	-		#V	BW 300 I	kHz		SI Swee	oan 10 № p 118.8
Channel Power			Powe	r Spect	ral Density			
-21.35 dB	Sm / 100 к	Hz		-71.35	б dBm /н	Iz		
					STATUS			
					STATUS			

Figure 8.3-78: Conducted band edge emission at 745 MHz, 5 MHz channel with 60 W configuration at Port C



Keysight Spi	ectrum Analyzer - Channel Po	wer							- 6 ×
Span 20.	RF 50 Ω DC		5	Center Freq:	729.00000	ALIGN AUTO		Radio Std:	8 PM Oct 24, 2018 None
00000		#FGain:Lo	" <b>~</b>	Trig: Free Ru #Atten: 28 dB	n	Avg Hold:>	100/100	Radio Devi	e: BTS
10 dB/div	Ref 39.80 dB	m							
29.8									
19.8									
9.80					(	and the second second	· · · · · · · · · · · · · · · · · · ·		
-0.20					<u> </u>				
-10.2				/					
-20.2				/					1
-30.2				1					
-40.2									-
-50.2									
Center 7	29 MHz				200 kl			S	pan 20 MHz
#Res BW	10 KHZ			#VBW	300 KP	12		Swee	p 237.0 ms
Chan	nel Power			Power S	pectra	al Density			
-2	28.25 dBm	/ 100 kHz		-7	8.25	dBm /н	z		
wsg 🗼 File ·	<lbe 10="" ant<="" lp="" mhz="" td=""><td>B.png&gt; saved</td><td></td><td></td><td></td><td>STATUS</td><td></td><td></td><td></td></lbe>	B.png> saved				STATUS			

an 20.000 MHz			Center Freq: 72 Trig: Free Run	0.000000 MHz AvgiHolo	:>100/100	Radio Std:	None	
	1	IFGain:Low	#Atten: 28 dB			Radio Device: BTS		
Bidiv Ref 39	.80 dBm							
			~		···· T			
			/			_		
			/			_		
ter 729 MHz						s	pan 20 N	
es BW 10 kHz			#VBW 3	IOO KHZ		Swee	p 237.6	
hannel Powe	er		Power Sp	ectral Densi	ty			
-28.38 d	IBm / 100 P	Hz	-78	.38 dBm	/Hz			

Figure 8.3-79: Conducted band edge emission at 729 MHz, 10 MHz channel with 40 W configuration at Port A

Keysight Spec	trum Analyzer - Channe	I Power							- 0 ×	
Span 20.0	RF   50 Ω C	C		Center Fr	eq: 729.00000	LIGN AUTO		02:20:3 Radio Std:	I3 PM Oct 24, 2018 None	
00000	]		#IFGain:Low	#Atten: 28	Run 3 dB	Avg Hold:>	100/100	Radio Device: BTS		
10 dB/div	Ref 39.80 d	IBm								
29.8										
19.8					Carlo mathematic					
9.80										
-0.20									$\left  \right $	
-10.2					/				+ +	
-20.2					1					
-30.2					1					
-40.2					1					
-50.2			-							
Center 72	9 MHz					-		s	pan 20 MHz	
#Res BW	10 KHZ			#V	DW JUU KH	IZ		Swee	p 237.0 ms	
Chann	el Power			Powe	r Spectra	I Density	,			
-2	8.56 dBr	n / 100	kHz		78.56	dBm /ŀ	łz			
MSG 🔱 File <	LBE 10 MHz LP A	Ant D.png> s	aved			STATUS				

Figure 8.3-81: Conducted band edge emission at 729 MHz, 10 MHz channel with 40 W configuration at Port C

Figure 8.3-80: Conducted band edge emission at 729 MHz, 10 MHz channel with 40 W configuration at Port B

Keysight Spectrum	F 50 Ω DC	ower		SENSE:INT	A	LIGN AUTO		02:20:2	0 PM Oct 24.
an 20.000	MHz		· _ ·	Center Fr	eq: 729.000000	MHz		Radio Std:	None
			EGain:Low	Trig: Free #Atten: 2	e Run 8 dB	Avg Hold:>1	00/100	Radio Devic	e: BTS
			IF Galli.LOW	written. 2				itudio Derio	
dB/div	Ref 39.80 dE	3m							
.8									
8					L				
							T		
0									
					1				
2					1/				
2					1				
2	-				1				<u> </u>
2					4				
2					-				
enter 729 I	/IHZ			#1/	BW 200 KU	-		S	Dan 20 IV
IS DW TO	KIIZ			#V	DAA 200 KU	2		Swee	p 237.0
<b>O</b> h	<b>B</b>								
Channel	Power			Powe	r Spectra	Density			
					70.00				
-28.	62 dBm	1 / 100 k	Hz		-78.62	abm /Hz	2		
						STATUS			

Figure 8.3-82: Conducted band edge emission at 729 MHz, 10 MHz channel with 40 W configuration at Port D



Keysight Spectrum Analyzer - Channel P	ower	CENCE INT		02:05:35 DM 0:# 34	
an 20.000 MHz		Center Freq: 729.000000 MHz	· · ·	Radio Std: None	
	#IFGain:Low	#Atten: 28 dB	dB		
dB/div Ref 39.80 dE	ŝm				
8					
1					
		/			
·					
nter 729 MHz		(B) (B) (J) (B) (J) (J)		Span 20 N	
S BW 10 KHZ		#VBW 300 KHz		Sweep 237.6	
Channel Power		Power Spectral Den	sity		
			-		
-25.73 dBm	/ 100 kHz	-75.73 dBn	ו /Hz		
		STAT	rus		

L	RF 50 Ω DC		S	ENSE:INT		ALIGN AUTO		03:05:	41 PM Oct 24, 20
pan 20.0	00 MHz			Center Fre	rq: 729.0000 Run	00 MHz AvaiHold:>	100/100	Radio Std:	None
		#IFG	ain:Low	#Atten: 28	dB	Angli Iold.	100/100	Radio Devi	ce: BTS
	D-6 00 00 dD								
a dBigin	Ref 39.80 dB	m							
3.8									
30									
0								-	
2					/				
2					/				
-					V				
-									
2	****		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
2					-			-	
enter 729	9 IVIHZ			#1/5	200 L			5	pan 20 M
Ces BW	IU KHZ			#VE	544 JUU K	нz		Swee	p 237.01
Chann	el Power			Power	r Specti	ral Density			
-20	6.14 dBm	/ 100 kH	7	-	76.14	dBm /	7		
_		/	-				-		
						STATUS			

Figure 8.3-83: Conducted band edge emission at 729 MHz, 10 MHz channel with 60 W configuration at Port A

Keysight Spectrue	m Analyzer - Channe	Power							
L 20.00	RF 50Ω D	C		SENSE:INT	ALIO	GN AUTO		03:26: Radio Std:	19 PM Oct 24, 20: None
Jan 20.00				Trig: Free Ru	n	Avg Hold:>1	00/100		
		\$	IFGain:Low	#Atten: 28 dB				Radio Devi	ce: BTS
) dB/div	Ref 39.80 d	Bm							
)g									
18									
.8								-	
30								_	
0	_								
2/									
				)					
2				ţ					
2				1					
2									
2									
nter 745	MHz							S	pan 20 M
es BW 10	) kHz			#VBW	300 kHz			Swee	p 237.6 n
Channe	l Power			Power S	pectral	Density			
-28	94 dBr	n / 100 k		-7	8 94 d	Bm /H			
-20	.04 001	1 / 100 /			0.04 u		-		
	le <ube 10="" ant="" b.png="" lp="" mhz=""> saved</ube>								

Figure 8.3-85: Conducted band edge emission at 745 MHz, 10 MHz channel with 40 W configuration at Port A

Figure 8.3-84: Conducted band edge emission at 729 MHz, 10 MHz channel with 60 W configuration at Port C

Ceysight Spectrum Analyzer - Char L RF 50 Ω	DC DC		SENSE:INT	A	LIGN AUTO		03:26:1	4 PM Oct 24, 2	
an 20.000 MHz			Center Free	: 745.000000	MHz AvailHold:>10	0/100	Radio Std:	None	
	#IFC	iain:Low 🖵	#Atten: 28 c	iB	Avginoid:>10	0/100	Radio Device: BTS		
dB/div Ref 39.80	dBm								
3	_								
	_								
2	_								
/							_		
	_		-		and the property lines				
· · · · · · · · · · · · · · · · · · ·									
ter 745 MHz							S	nan 20 M	
es BW 10 kHz			#VB	N 300 kH	z		Swee	p 237.6	
Channel Power			Power	Spectra	I Density				
-29.17 dB	m / 100 kH	z	-7	79.17	dBm /нz				
AZEDBSCUBE 10 MHZ I K	Ant G.ond> save				STATUS				

Figure 8.3-86: Conducted band edge emission at 745 MHz, 10 MHz channel with 40 W configuration at Port B



Keysight Spectrum Analyzer - Channe	l Power					- 🖉 🔜
Span 20.000 MHz	ic	51	Center Freq: 745.00	0000 MHz	Radio Std: None	OCT 24, 2018
	#IFG	ain:Low	Trig: Free Run #Atten: 28 dB	Avg Hold:>100/100	Radio Device: B	TS
10 dB/div Ref 39.80 d	1Bm					
29.8						
19.8						
9.80						
10.20						
-10.2						
30.2						
40.2						
-50.2						
Center 745 MHz #Res BW 10 kHz			#VBW 300	) kHz	Span Sweep 2	20 MHz 37.6 ms
Channel Power			Power Spec	tral Density	· · · ·	
-29.08 dBr	n / 100 kH	z	-79.0			
🕫 🤳 File <ube 10="" lp<="" mhz="" td=""><td>Ant D.png&gt; saved</td><td>1</td><td></td><td>STATUS</td><td></td><td></td></ube>	Ant D.png> saved	1		STATUS		

L RF 50 Ω	DC	SENSE:INT	ALIGN AUTO	03:25:52 PM Oct 24, 201	
pan 20.000 MHz		Center Freq: 745.000	AvaiHold:>100/100	Radio Std: None	
	#FGain:Low	#Atten: 28 dB		Radio Device: BTS	
dBidle Dof 30.9	0 dBm				
a Rei Ja.o	o abiii				
.8					
.0					
0					
2 /					
2					
2		1			
2			Canada and a state of the second state of the		
2					
enter 745 MHz				Span 20 M	
es BW 10 kHz		#VBW 3001	Sweep 237.6		
Channel Power		Power Spect	ral Density		
-28 80 dF	3m / 100 kHz	-78 80	) dBm /Hz		
20.00 42		10.00			
			STATUS		

Figure 8.3-87: Conducted band edge emission at 745 MHz, 10 MHz channel with 40 W configuration at Port C

Keysight Spec	trum Analyzer - Chann	el Power		SENSE-INT	AL	IGN NITO		03:08:1	
nter En	eg 745.0000	00 MHz	<u> </u>	Center Fre	q: 745.000000	MHz		Radio Std:	None
net i i	-	00 11112	•	Trig: Free	Run	Avg Hold:>	100/100		
		#	IFGain:Low	#Atten: 28	dB			Radio Devi	ce: BTS
	Ref 39.80	dBm							
2									
nter 74	5 MHz							S	pan 20 M
es BW	10 kHz			#VE	300 kH	z		Swee	p 237.6 r
Chann	hannel Power			Power	Spectra	I Density			
-2	6.85 dB	m / 100 k	Hz	-	76.85 (	dBm /н	z		

Figure 8.3-89: Conducted band edge emission at 745 MHz, 10 MHz channel with 60 W configuration at Port A **Figure 8.3-88:** Conducted band edge emission at 745 MHz, 10 MHz channel with 40 W configuration at Port D

eysight Spectrum Analyzer - Char L RF 50 Ω	nnel Power		SENSE:INT	A	LIGN AUTO		03:08:18	- @ PM Oct 24, 20
nter Freq 745.000	000 MHz		Center Fre	q: 745.000000	MHz	0/100	Radio Std: N	one
	#IFC	Gain:Low	#Atten: 28	dB	Anglinoid. Pio	0/100	Radio Device: BTS	
B/div Ref 39.80	) dBm			_				
3								
	'							
/								
	_							
				-	and the state of the second			
nter 745 MHz			#VE	W 300 kH	17		Sween	an 20 M 237.6
							-	20110
Channel Power			Power	Spectra	al Density			
-26.92 dE	3 <b>m</b> / 100 кн	z	-76.92 dBm /Hz					

Figure 8.3-90: Conducted band edge emission at 745 MHz, 10 MHz channel with 60 W configuration at Port C

Keysight Spectrum Analyzer - Cha



a X

Keysight Spectrum Analyzer - Channel Pow	æ	cruce and			02.05.00.0	- 0
pan 20.000 MHz		Center Freq: 729.00000	DO MHZ		Radio Std: Nor	10tt 24, 2 1e
	#FGain:Low	<ul> <li>Trig: Free Run #Atten: 28 dB</li> </ul>	Avg Hold:>100	/100	Radio Device: I	BTS
dB/div Ref 39.80 dBn	n					
9.8						
18						~~~~~
80		1		111		
0		1				
2				11		
2				Y		
2				-		
2						
nter 729 MHz tes BW 10 kHz		#VBW 300 k		Span 20 M Sweep 237.6		
Channel Power		Power Spectr	al Density			
-24.68 dBm	/ 100 kHz	-74.68				
			STATUS			

L RF	50 Ω DC			SENSE:INT	A	LIGN AUTO		02:35:3	6 PM Oct 24, 20
pan 20.000	MHz			Center Fre	q: 729.000000	MHz		Radio Std: N	lone
			•	Trig: Free	Run	Avg Hold:>	100/100		
		#15	FGain:Low	#Atten: 28	dB			Radio Devid	e: BTS
	Dof 20.90 dB	-							
	Kel 39.80 dE	m							
9.8									
9.8									
80					1			· ·	
20									
					1				
.2					1				
0.2					1		1 11	-	
1.2					[		L V		
					J				
0.2					-				
								-	00.00
enter 729 W	IHZ							sp	an 20 M
Kes BW 101	KHZ		#VBW 300 kHz					Sweep 237.6	
Channel	Power			Power	Spectra	Density	,		
onanner					opeour	a Denong			
~ ~ ~									
-24.	56 dBm	/ 100 kl	Hz	-	74.56	dBm /ŀ	lz		
1000 million 10000 million 1000 million 10000 million 1000000000000000000000000000000000000									
I Eile < RE	MC 5 and 5 Mi	Hz LP Ant A.r	ong> saved			STATUS			

**Figure 8.3-91:** Conducted band edge emission at 729 MHz, MC 2×5 MHz channel with 40 W configuration at Port A

Keysight Spectrum Analyzer - Channel Power		SENSE:INT		LIGN AUTO		02:36:0	9 PM Oct 24, 20
an 20.000 MHz	'	Center Free	1: 729.000000	MHz		Radio Std: I	None
	#FGain:Low	Trig: Free F #Atten: 28 o	tun JB	Avg Hold:>	100/100	Radio Devic	e: BTS
dB/db Bof 20 90 dBm							
g							
8							
8							
D			1			· ·	
			1		$\left  \right $		
2					+ V		
2		-			<u> </u>		
2		-					
2							
2							
ntor 730 MHz							200 20 M
es BW 10 kHz		#VB	W 300 KH	z		Swee	p 237.6 r
Channel Power		Power	Spectra	I Density	,		
-24.99 dBm / 1	00 kHz	-74.99 dBm /Hz					
				STATUS			

Figure 8.3-93: Conducted band edge emission at 729 MHz, MC 2×5 MHz channel with 40 W configuration at Port C

Figure 8.3-92: Conducted band edge emission at 729 MHz, MC 2×5 MHz channel with 40 W configuration at Port B

L RF 50 Ω DC		SENSE:INT Center Freg: 729.000	ALIGN AUTO		02:36:23 Radio Std; N	PM Oct 24, 2
	#IFGain:Low	Trig: Free Run #Atten: 28 dB	Trig: Free Run Avg Hold:>100/100 #Atten: 28 dB			
dB/div Ref 39.80 dl	3m					
ii						
3		[······			· · · · · · · · · · · · · · · · · · ·	
		1				
		-		V		
2				Ŭ.		
	1					
2						
nter 729 MHz es BW 10 kHz		#VBW 300	kHz		Spa Sweep	an 20 M 237.6
Channel Power		Power Spect				
-24.91 dBn	1 / 100 kHz	-74.9	1 dBm /н	z		
Eile <  BE MC E and E M	Hall B Ant C page cauge		STATUS			

Figure 8.3-94: Conducted band edge emission at 729 MHz, MC 2×5 MHz channel with 40 W configuration at Port D



02:31:28 PM Oct 24, 2018

Keysight Spectrum Analyzer - Channel	Power				- 9
ban 20.000 MHz		Center Freq: 729.00	ALIGN AUTO		02:32:40 PM Oct 24, 2 Radio Std: None
	#IFGain:Low	Trig: Free Run #Atten: 28 dB	Avg Hold:>	100/100	Radio Device: BTS
0 dB/div Ref 39.80 d	Bm				
29.0					
9.8					
.80				+	
20		1		+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	
0.2					
0.2				1 1	
0.2					
0.2	to to the state of				
0.2					
enter 729 MHz Res BW 10 kHz		#VBW 300	kHz		Span 20 N Sweep 237.6
Channel Power		Power Spec	tral Density	,	
-22.82 dBn	n / 100 kHz	-72.8	łz		
a			STATUS		

<b>dB/div R</b> 8 8 0 0 2 2	ef 39.80 dBm	#IFGain:Low	#Atten: 28 dB			Radio Device	BTS
dB/div R 8 8 0 0 2 2	ef 39.80 dBm						
dB/div R/ 8 8 0 2 2	ef 39.80 dBm						1
2 2 2				·····			
8 0 2 2							1
0 0 2 2							
2							
2			1		+ + + -		
2					- V		
		_	1		- V		
2					V V		
2			mener				
2							
	-					0.00	- 20.14
es BW 10 kl	Hz		#VBW 30	0 kHz		Sweep	237.6
Channel P	ower		Power Spee	ctral Densit	y		
~ ~ ~			70.0				
-22.9	5 dBm / 100	kHz	-72.9	<b>15 dBm</b> /	Hz		

ALIGN AL

Figure 8.3-95: Conducted band edge emission at 729 MHz, MC 2×5 MHz channel with 60 W configuration at Port A

Keysight Spectrum	n Analyzer - Channel Power						
20.000	RF   50 Ω DC		Center Freq: 72	ALIGN AUTO	02:39:01 PM Oct 24, 20 Radio Std: None		
ban 30.000			Trig: Free Run	Avg Hold:>100/100	Radio Sta. None		
		#IFGain:Low	#Atten: 28 dB		Radio Device: BTS		
dDidiu	Bof 30 90 dBm						
g	Rei 39.80 ubiii						
8							
8							
			·				
0							
0							
2							
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-				Ų.			
2		and the second s	and a second second second				
2							
nter 729 I	MHz				Span 30 Mi		
es BW 10	KHZ		#VBW	300 KHZ	Sweep 356.3 r		
Channel	Power		Power Sp	pectral Density			
				-			
-23	37 dBm /	100 647	-73	37 dBm /4-			
-20			-75				
Eile <i b<="" td=""><td>E MC 5 and 10 MHz</td><td>P Ant B nng&gt; saved</td><td></td><td>STATUS</td><td></td></i>	E MC 5 and 10 MHz	P Ant B nng> saved		STATUS			
4		a					

**Figure 8.3-97:** Conducted band edge emission at 729 MHz, MC 5 and 10 MHz channel with 40 W configuration at Port A

Figure 8.3-96: Conducted band edge emission at 729 MHz, MC 2×5 MHz channel with 60 W configuration at Port C

Keysight Spectrum Analyzer - Channel P	Power	THET. THE		
an 30.000 MHz		Center Freq: 729.00000	0 MHz	Radio Std: None
	#FGain:Low	Trig: Free Run #Atten: 28 dB	Avg Hold:>100/100	Radio Device: BTS
and an and an an an				
		-		
3				
		-		
			V V	
		- Andrew Construction	¥	
es BW 10 kHz		#VBW 300 ki	łz	Sweep 356.3
Channel Daman				
Loannel Power		Power Spectra	al Density	
-23.34 dBm	) / 100 kHz	-73.34	dBm /Hz	
File <  PE MC E and 10 h	Alle I D Ast C spect second			

Figure 8.3-98: Conducted band edge emission at 729 MHz, MC 5 and 10 MHz channel with 40 W configuration at Port B



Keysight Spectrum Analyzer - Chan	nel Power							
L RF 50 Ω	DC	SENSE:INT	ALIG	N AUTO		02:38:51	PM Oct 24, 2018	
Span 30.000 MHz		Trig: Free R	un	Avg Hold:>	100/100	Radio Sta. N	one	
	#IFGain:Low	#Atten: 28 d	в			Radio Device	E: BTS	
10 dBidiy Ref 39.80	dBm							
Log								
29.8								
19.8								
9.80		1						
0.20				11			1	
0.20		ſ						
-10.2		ľ		1/			1	
-20.2						-		
-30.2				¥				
40.2				1				
-50.2								
Center 729 MHz						Sp	an 30 MHz	
#Res BW 10 kHz		#VBV	N 300 kHz			Sweep 356.3 ms		
Channel Power		Power	Spectral	Densitv				
22.26 dB	m / 400 kll=	7	2 26 d	Bm //	-			
-23.30 ub	11 / 100 KHZ	-/	3.36 u		z			
rsg 🕕 File <lbe 1<="" 5="" and="" mc="" td=""><td>0 MHz LP Ant D.png&gt; saved</td><td></td><td></td><td>STATUS</td><td></td><td></td><td></td></lbe>	0 MHz LP Ant D.png> saved			STATUS				
1.1								

**Figure 8.3-99:** Conducted band edge emission at 729 MHz, MC 5 and 10 MHz channel with 40 W configuration at Port C

Keysight Spectrum Analyze	r - Channel Power	SENSE-INT	AL 161	AUTO	02-29-55 PM Oct 24, 201
Span 30.000 MHz		Center F	req: 729.000000 MI	Hz Avrilledus 100/100	Radio Std: None
	#IFGa	in:Low #Atten: 2	28 dB	Avginoid.>100/100	Radio Device: BTS
10 dB/div Ref 3	9 80 dBm				
_og					
19.8					
9.80					
0.20			U.		
10.2			1		
20.2					
30.2					
40.2			~1		
50.2					
Center 729 MHz Res BW 10 kHz		#\	/BW 300 kHz		Span 30 MH Sweep 356.3 m
Channel Pov	Channel Power		er Spectral I	Density	
-21.53	dBm / 100 кна	2	-71.53 dl	Bm /Hz	
sa l				STATUS	

Figure 8.3-101: Conducted band edge emission at 729 MHz, MC 5 and 10 MHz channel with 60 W configuration at Port A

Keysight Spectrum Analyzer - Channel Po	wer			- 6
ap 30 000 MHz		SENSE:INT Center Freg: 729.00	ALIGN AUTO	02:38:36 PM Oct 24, 20 Radio Std: None
	#IFGain:Low	Trig: Free Run #Atten: 28 dB	Avg Hold:>100/100	Radio Device: BTS
dB/div Ref 39.80 dBr	n			
8				
8				
0				
2				
2				
2		- marine marine	ų	
2	· ······			
nter 729 MHz es BW 10 kHz		#VBW 300	kHz	Span 30 M Sweep 356.3
		# <b>1211</b> 000		
Channel Power		Power Spec	tral Density	
-23.29 dBm	/ 100 kHz	-73.2		
			STATUS	

Figure 8.3-100: Conducted band edge emission at 729 MHz, MC 5 and 10 MHz channel with 40 W configuration at Port D

Keysight Spectrum Analyzer - Channel Pow	er	CENCE INT		02/20/12 04/04/24 2
an 30.000 MHz		Center Freq: 729.000	000 MHz	Radio Std: None
	#IFGain:Low	Trig: Free Run #Atten: 28 dB	Avg Hold:>100/100	Radio Device: BTS
dB/div Ref 39.80 dBn	1			
8				
8				
0				
2		1	1/	
2			1/	
2				
			Ÿ	
nter 729 MHz es BW 10 kHz		#VBW 3001	kHz	Span 30 M Sweep 356.3
Channel Power		Power Spect	ral Density	
-21.49 dBm	/ 100 kHz	-71.49	dBm /Hz	
Ello <  PE MC E and 10 MH	T UD Ant A nno> course	4	OT A THE	

Figure 8.3-102: Conducted band edge emission at 729 MHz, MC 5 and 10 MHz channel with 60 W configuration at Port C



Keysight Spectrum Analyzer - Chan	inel Power		- 6
oan 20.000 MHz	DC	SENSE:INT ALIGN AUTO	03:23:32 PM Oct 24, Radio Std: None
	#IFGain:Low	Trig: Free Run Avg Hold: #Atten: 28 dB	>100/100 Radio Device: BTS
dDidiu Dof 30 90	dBm		
g Rei 39.80	ubiii		
B			
· ·····			
	V		
	8		
2			
2			
nter 745 MHz		40/BW 200 kHz	Span 20 I
ES DW 10 KHZ		#VBW 300 KH2	Sweep 237.6
Channel Power		Power Spectral Density	<b>y</b>
-26.12 dB	m / 100 kHz	-76.12 dBm //	Hz
		STATUS	

L RF	50 Ω	DC	_	SENSE:INT ALIGN AUTO				03:23:4	5 PM Oct 24, 2
an 20.000	IN 20.000 MHZ #FGain:Low		Gain:Low	Trig: Free Run Avg Hold:>100/100 #Atten: 28 dB				Radio Std: None Radio Device: BTS	
Bidiv F	Ref 39.80	dBm							
9									
8									
· · · · · · · · · · · · · · · · · · ·									
	+ .								
1				1					
1		- V							
		V			1				
					l I				
2					Part			+ ~ · · · · · · · · · · · · · · · · · ·	
nter 745 M es BW 10 I	Hz kHz			#VI		z		Swee	an 20 N 237.6
Channel	Channel Power			Powe	r Spectra				
-25.81 dBm / 100 kHz		Iz	-75 81 dBm /Hz						
Eile <ube< td=""><td>MC 5 MHz</td><td>P Ant A nng&gt; si</td><td>wed</td><td></td><td></td><td>STATUS</td><td></td><td></td><td></td></ube<>	MC 5 MHz	P Ant A nng> si	wed			STATUS			

Figure 8.3-103: Conducted band edge emission at 745 MHz, MC 2×5 MHz channel with 40 W configuration at Port A

Keysight Spectrum Analyzer - Chan	nel Power						
L RF 50 Ω	DC	SEN	SE:INT	ALIGN AUTO		03:23: Radio Std:	50 PM Oct 24, 20
an 20.000 MHz			Trig: Free Run	Avg	Hold:>100/100	Radio sta.	Tione
	#FGair	Low	#Atten: 28 dB			Radio Devi	ce: BTS
Bof 20 90	dBm						
abidiv Rei 39.80	иып						
)							
						-	
	- $        -$		1			_	
			1				
	1						
	¥		1				
2							
2							
nter 745 MHz						S	pan 20 M
es BW 10 kHz			#VBW 3	Sweep 237.6 m			
Channel Power			Power Sp	ectral Den	sitv		
					,		
			75				
-25.84 aB	m / 100 kHz		-/ 5	.84 авп	1 /Hz		
	I D A H D H H H H	4		ALC: NOT A 12	ER AUTO 1		

Figure 8.3-105: Conducted band edge emission at 745 MHz, MC 2×5 MHz channel with 40 W configuration at Port C

Figure 8.3-104: Conducted band edge emission at 745 MHz, MC 2×5 MHz channel with 40 W configuration at Port B

leysight Spectrum	n Analyzer - Channe	el Power							0	
L 20.000	10 <sup>μ</sup>   50 Ω [ <b>) MH</b> 7	20		Center Fre	A 45.00000	MHz		03:24:2 Radio Std: 1	Z PM Oct 24, : None	
11 20.000				Trig: Free	Run	Avg Hold:>1	00/100			
		#1	FGain:Low	w #Atten: 28 dB				Radio Devic	e: BTS	
B/div	Ref 39.80 (	1Bm								
·					-					
Charlen and the										
		/								
1				1						
		1								
-	-	V						-		
		- ¥								
ter 745 I	MHz							Sp	an 20 M	
s BW 10	kHz			#VBW 300 kHz					Sweep 237.6	
hannel	Power			Power	Spectra	I Density				
25	12 dB	m / 400 k			75 12	dBm u	_			
-20	. 12 UDI	II / 100 K	HZ	-	15.12		z			
						STATUS				

Figure 8.3-106: Conducted band edge emission at 745 MHz, MC 2×5 MHz channel with 40 W configuration at Port D



Keysight Spectrum Analyzer - Cha	nnel Power					
L RF 50 Ω	DC	SENSE:INT	Freg: 745.0000	ALIGN AUTO	F	03:16:13 PM Oct 24, 2018 tadio Std: None
	#IFGain:	Gain:Low #Atten: 28 dB				adio Device: BTS
0 dB/div Ref 39.8	0 dBm					
29.8						
19.8			-			
9.80		· ·	1			
.20			1			
0.2	- V -					
10.2	V		-			
0.2	¥		1			
0.2						
60.2			-			
enter 745 MHz Res BW 10 kHz		#	VBW 300 k	Hz		Span 20 MH Sweep 237.6 m
Channel Power		Pow				
-23.59 dE	3m / 100 kHz		-73.59	dBm /Hz		
G iFile <ube 5="" and<="" mc="" td=""><td>5 MHz HP Ant C nng&gt;</td><td>cound</td><td></td><td>07.470.40</td><td></td><td></td></ube>	5 MHz HP Ant C nng>	cound		07.470.40		

Figure 8.3-107: Conducted band edge emission at 745 MHz, MC 2×5 MHz channel with 60 W configuration at Port A

Keysight Spectrum Analyzer - Chan	nel Power	CENELINT		02-29-29 PM 04 24, 2018
Span 30.000 MHz		Center Freq: 745.00	0000 MHz	Radio Std: None
	#IFGain:Low	#Atten: 28 dB	Avginoid.>100/100	Radio Device: BTS
10 dB/div Ref 39.80	dBm			
29.8				
9.80				
0.20				
-10.2				
-20.2				
-30.2	1	h		
-40.2				
#Res BW 10 kHz		#VBW 300	Span 30 MH2 Sweep 356.3 ms	
Channel Power		Power Spec	tral Density	
-24.19 dB	m / 100 kHz	-74.1	9 dBm /Hz	
			STATUS	
			arrive a	

Figure 8.3-109: Conducted band edge emission at 745 MHz, MC 10 and 5 MHz channel with 40 W configuration at Port A

Keysight Spectro	um Analyzer - Chann	iel Power							- 6
L 20.00	RF 50 Ω	DC		Center Fre	eq: 745.0000	ALIGN AUTO		03:15:5 Radio Std:	i0 PM Oct 24, 2 None
		#IF	Gain:Low	#Atten: 28	Run dB	Avg Hold:>1	00/100	Radio Devi	e: BTS
dB/div	Ref 39.80	dBm							
8									
8									
				·····					
0									
2									
2		l l							
2					h				
2									
2									
nter 745	MHz							S	pan 20 M
es BW 1	0 KHZ			#VE	3W 300 K	Hz		Swee	p 237.6
Channe	el Power			Powe	r Spectr	al Density			
-23.76 dBm / 100 kHz		łz	-73.76 dBm /Hz						
						STATUS			

Figure 8.3-108: Conducted band edge emission at 745 MHz, MC 2×5 MHz channel with 60 W configuration at Port C

Keysight Spectrum Analyzer - Channel Pow	R.				
an 30.000 MHz	SE	Center Freq: 745.00	ALIGN AUTO	03:38:42 PM O Radio Std: None	t 24, 20
	#FGain:Low	Trig: Free Run #Atten: 28 dB	Avg Hold:>100/100	Radio Device: BT	s
dB/div Ref 39.80 dBm					
1.8					
(8	photo-company				
80					
20					
2					
2		- 1			
2					
2					
2					
enter 745 MHz tes BW 10 kHz		#VBW 300	Span 30 MH Sweep 356.3 m		
Channel Power		Power Spec	· · · · ·		
-24.20 dBm	/ 100 kHz	-74.2			

Figure 8.3-110: Conducted band edge emission at 745 MHz, MC 10 and 5 MHz channel with 40 W configuration at Port B



Keysight Spectrum Analyzer - Channel Pov	er						
L RF 50 Ω DC	S	ENSE:INT	ALIGN AUTO	03:38:47 PM Oct 24, 201			
pan 30.000 MHz		Trig: Free Run	Avg Hold:>100/100	Radio Std. None			
	#FGain:Low	Low #Atten: 28 dB Radio Device: B					
dB/div Ref 30 80 dBn	0						
9.8							
9.8							
80							
20							
1.2							
	V I						
1.2							
1.2							
1.2							
enter 745 MHz				Span 30 MH			
Res BW 10 kHz		#VBW 3001	kHz	Sweep 356.3 m			
Channel Power		Power Spect	ral Density				
04.05		74.05	d Decension				
-24.25 aBm	/ 100 kHz	-/4.25	o abm /Hz				

Bit Collector         Trig: Free Run         Avg Hold>100/100           #EGaleLow         #Atten: 28 dB         Avg Hold>100/100           #         #Atten: 28 dB         #Vg Hold>100/100           #         #         #           #         #<	Ref 39.80 dBm     Program     Avg/Hold>100/100     Radio Device: BTS       Ref 39.80 dBm     Image: State of the	an 30.000 MH	30 32 DC		Center Fre	q: 745.00000	0 MHz		Radio Std: N	lone
ABUGIV         Ref 39.80 dBm           Image: Constraint of the second	Ref 39.80 dBm			#IFGain:Low	Trig: Free #Atten: 28	dB	Avg Hold:>	100/100	Radio Devic	e: BTS
deader deade	All 39.80 dom All 39.80 dom All 45 MHz / 10 KHz #VBW 300 KHz Span 30 M Sweep 356.3 Inel Power Power Spectral Density 24.26 dBm / 100 KHz -74.26 dBm /Hz	Def	00.00 dB							
nter 745 MHz es BW 10 kHz thannel Power Channel Power	745 MHz / 10 kHz     #VBW 300 kHz     Span 30 M       745 MHz / 10 kHz     #VBW 300 kHz     Span 30 M       90 kHz     #VBW 300 kHz     Sweep 356.3       10 kHz     -74.26 dBm /Hz	g Ret	39.80 GBM							
Ther 745 MHz #VBW 300 kHz BW 10 kHz #VBW 300 kHz Channel Power Power Spectral Density	ZASE     ZASE       745 MHz     #VBW 300 kHz       745 MHz     \$\$pan 30 M       10 kHz     #VBW 300 kHz       Span 30 M       Sweep 356.3       Inel Power       Power Spectral Density       24.26 dBm / 100 kHz     -74.26 dBm /Hz	B								
Ther 745 MHz es BW 10 kHz #VBW 300 kHz Channel Power Power Spectral Density	As MHz     Span 30 M       10 kHz     #VBW 300 kHz       Sweep 356.3       Inel Power       Power Spectral Density       24.26 dBm / 100 kHz       -74.26 dBm /Hz	3								
hter 745 MHz es BW 10 kHz #VBW 300 kHz Channel Power Power Spectral Density	745 MHz     #VBW 300 kHz     Span 30 N       1 10 kHz     #VBW 300 kHz     Sweep 356.3       unel Power     Power Spectral Density       24.26 dBm / 100 kHz     -74.26 dBm /Hz									
hter 745 MHz es BW 10 kHz #VBW 300 kHz Channel Power Power Spectral Density	745 MHz / 10 kHz #VBW 300 kHz \$pan 30 M / 10 kHz #VBW 300 kHz \$span 30 M sweep 356.3 inel Power 24.26 dBm / 100 kHz -74.26 dBm /Hz									
hter 745 MHz es BW 10 kHz #VBW 300 kHz Channel Power Power Spectral Density	745 MHz     #VBW 300 kHz     Span 30 h       10 kHz     #VBW 300 kHz     Sweep 356.3       inel Power     Power Spectral Density       24.26 dBm / 100 kHz     -74.26 dBm /Hz			N N						
Image: With the set of the	Viscource     Span 30 k       745 MHz     #VBW 300 kHz     Span 30 k       10 kHz     #VBW 300 kHz     Sweep 356.3       inel Power     Power Spectral Density       24.26 dBm / 100 kHz     -74.26 dBm /Hz									
hter 745 MHz es BW 10 kHz #VBW 300 kHz Channel Power Power Spectral Density	745 MHz     #VBW 300 kHz     Span 30 h       / 10 kHz     #VBW 300 kHz     \$Sweep 356.3       inel Power     Power Spectral Density       24.26 dBm / 100 kHz     -74.26 dBm /Hz			V		L				
nter 745 MHz es BW 10 kHz #VBW 300 kHz Channel Power Power Spectral Density	745 MHz         Span 30 k           # 10 kHz         #VBW 300 kHz         Sweep 356.3           inel Power         Power Spectral Density           24.26 dBm / 100 kHz         -74.26 dBm /Hz	2					the second			
rter 745 MHz #VBW 300 kHz es BW 10 kHz Power Power Spectral Density	(10 kHz     #VBW 300 kHz     Span 30 h       (10 kHz     #VBW 300 kHz     Sweep 356.3       Innel Power     Power Spectral Density       24.26 dBm / 100 kHz     -74.26 dBm /Hz									
Channel Power Spectral Density	24.26 dBm / 100 kHz -74.26 dBm /Hz	nter 745 MHz es BW 10 kHz			#VE	300 kH	łz		Sp Sweep	an 30 N 356.3
	24.26 dBm / 100 kHz -74.26 dBm /Hz	Channel Pov	wer		Power	Spectra	al Density			
	24.26 dBm / 100 kHz -/4.26 dBm /Hz									
-24.26 dBm / 100 kHz -74.26 dBm /Hz		-24.26	dBm / 1	00 kHz	-	/4.26	dBm /H	z		
		File <ube mc<="" p=""></ube>	10 and 5 MHz L	P Ant C.png> save	d		STATUS			

Figure 8.3-111: Conducted band edge emission at 745 MHz, MC 10 and 5 MHz channel with 40 W configuration at Port C

Keysight Spectrum Analyzer - Channel Power		CENCE INT		02:18:50 DM Oct 24, 20
pan 30.000 MHz		Center Freq: 745.	000000 MHz	Radio Std: None
	#IFGain:Low	#Atten: 28 dB	Avg Hold:>100/100	Radio Device: BTS
0 dB/div Ref 39.80 dBm				
9.8				
9.8				
.80				
20				
0.2		1		
0.2		- 1		
0.2	V			
0.2				
0.2				
enter 745 MHz		#\/B\// 2	00 kHz	Span 30 MH
Kes BW 10 KHZ		#VBW 3	UU KHZ	Sweep 356.3 m
Channel Power		Power Spe	ectral Density	
-22.05 dBm /	100 kHz	-72.	05 dBm /нz	
3			STATUS	

Figure 8.3-113: Conducted band edge emission at 745 MHz, MC 10 and 5 MHz channel with 60 W configuration at Port A

Figure 8.3-112: Conducted band edge emission at 745 MHz, MC 10 and 5 MHz channel with 40 W configuration at Port D

Power	crust tur		
	Center Freq: 745.0	00000 MHz	Radio Std: None
#FGain:Low	#Atten: 28 dB	Radio Device: BTS	
Bm			
	1		
V V			
		and the second sec	
			Span 30 M
	#VBW 30	0 kHz	Sweep 356.3 r
	Power Spe	ctral Density	
1 / 100 kHz	-72.1		
	BrGalnLow BFGalnLow	Store and Store and	State         State <th< td=""></th<>

Figure 8.3-114: Conducted band edge emission at 745 MHz, MC 10 and 5 MHz channel with 60 W configuration at Port C

leysight Spec

Span 20.000 MHz

Ref 39.80 dBm



02:46:03 PM Oct 24, 2018 Radio Std: None

Radio Device: BTS

Keysight Spectrum Analyzer - Channel P	ower					
Span 20.000 MHz		Center Freq: 729	.000000 MHz		Radio Std: N	Ione
	#IFGain:Low	Trig: Free Run #Atten: 28 dB	>100/100	Radio Devic	₽: BTS	
0 dB/div Ref 39.80 dE	m					
29.8						
19.8		1				
9.80						
0.20		1				
10.2		1				,
20.2		1				
30.2						
40.2						
0.2						
≎enter 729 MHz #Res BW 10 kHz		#VBW 3	00 kHz		Sp Sweep	an 20 MH 237.6 m
Channel Power		Power Sp	ectral Densit	y		
-22.83 dBm	/ 100 kHz	-72.	83 dBm /	Hz		
ia.			STATUS			

enter 729 MHz					Spa	n 20 MH
Res BW 10 kHz		#VBW	300 kHz		Sweep	237.6 m
Channel Power		Power S				
-22.71 dBm / 10	0 kHz	-7				

#IFGain:Lov

 SENSE:INT
 ALIGN AUTO

 Center Freq: 729.000000 MHz
 Trig: Free Run

 Trig: Free Run
 Avg|Hold:>100/100

 #Atten: 28 dB
 Avg

Figure 8.3-115: Conducted band edge emission at 729 MHz, 10 MHz and IoT channel with 40 W configuration at Port A

Keysight Spectrum Analyz	er - Channel Power		CENCE INT				02:46:20	
pan 20.000 MH	Z		Center Fre	q: 729.000000	) MHz		Radio Std: N	one
		#IFGain:Low	#Atten: 28	Run dB	0/100	Radio Device	e: BTS	
dB/div Ref	39.80 dBm							
ig 1.8								
				-				
80				Lan marine				
20								
2				1				
2				1				
2								
2								
2								
es BW 10 kHz			#VE	W 300 KH	Iz		Sp Sweep	an 20 Mi 237.6 n
Channel Po	wer		Power	Spectra	I Density			
-23.84	dBm / 10	0 kHz	_	73.84				
		t P ppp> saved			OT A THE			
WHICK LEE TO N	nnz anu iot LP Al	it b.png> saved			annius			

**Figure 8.3-117:** Conducted band edge emission at 729 MHz, 10 MHz and IoT channel with 40 W configuration at Port C

Figure 8.3-116: Conducted band edge emission at 729 MHz, 10 MHz and IoT channel with 40 W configuration at Port B

Keysight Spectrum Analyzer - Chi L RF 50.0	nnel Power		SENSE:INT	4	IGN AUTO		02:47:2	4 PM Oct 24
an 20.000 MHz		<u> </u>	Center Fre	eq: 729.000000	MHz		Radio Std: 1	None
		Ģ	Trig: Free	Run	Avg Hold:>1	00/100		
	*	IFGain:Low	#Atten: 28	dB			Radio Devid	e: B15
dB/div Ref 39.8	0 dBm							
9								
B				-				
8		+		1				
0						- 1		
				1				
				1				
2				1				
2				1				
2							-	
2				1				
2								
nter 729 MHz							Sp	oan 20 N
es BW 10 kHz			#VE		Sweep 237.6			
Channel Power			Powe					
22 02 de			_					
-22.02 ut	HZ	-	12.02		z			
					STATUS			

Figure 8.3-118: Conducted band edge emission at 729 MHz, 10 MHz and IoT channel with 40 W configuration at Port D



03:04:20 PM Oct 24, 2018

Keysight Spectrum Analyzer - Channel Po	wer		41701 4170	_	02-02-10	- 6
pan 20.000 MHz		Center Freq:	729.000000 MHz		Radio Std: No	ne 000 24, 20
	#FGain:Low	Trig: Free Ru #Atten: 28 dB	n Avg Ho	ld:>100/100	Radio Device:	BTS
dB/div Ref 39.80 dB	m					
1.8						
.8			Lucore and a second			
0				· ·		
0		1				
2		1				
2						
2						
2						
nter 729 MHz es BW 10 kHz		#VBW	300 kHz		Spa Sweep	n 20 M 237.6
Channel Power		Power S				
-20.95 dBm	/ 100 kHz	-7				
			STATU	5		

L RF 50 Ω DC	ver	SENSE:INT	ALI	GN AUTO		03:04:20	PM Oct 24, 20
an 20.000 MHz		Center Freq:	729.000000	AHz	100/100	Radio Std: N	lone
	#IFGain:Low	#Atten: 28 di	3	Avginoid.2	100/100	Radio Devic	e: BTS
dB/div Ref 39.80 dBr	n						
8							
			n				
			Concernance				
		1					1
2							
2							
2							
2	and the second s						
2							
nter 729 MHz						Sp	an 20 MH
es BW 10 kHz		#VB¥	V 300 kHz			Sweep	237.6 m
Channel Power		Power	,				
-20.81 dBm	/ 100 kHz	-7	-70.81 dBm /Hz				
				STATUS			

Figure 8.3-119: Conducted band edge emission at 729 MHz, 10 MHz and IoT channel with 60 W configuration at Port A

Keysight Spectrum Analyzer - Channel Power			- 6			
RF 50Ω DC	SENSE:INT	ALIGN AUTO	09:25:48 AM Oct 31, 20: Padio Std: None			
T Value 38.44 dBm	Trig: Free Ru	n AvaiHold: 100/100	Radio Std. None			
#16	Gain:Low #Atten: 20 dB		Radio Device: BTS			
Ref Offset 51.1 dB dB/div Ref 38.44 dBm						
4						
4 manufacture manufacture	•					
4						
6						
6						
6	~					
6						
nter 745 MHz			Snan 20 Mi			
es BW 10 kHz	#VBW	#VBW 300 kHz				
Channel Power	Power S	Power Spectral Density -73.65 dBm /Hz				
-23.65 dBm / 100 ki	-7					
		STATUS				

Figure 8.3-121: Conducted band edge emission at 745 MHz, 10 MHz and IoT channel with 40 W configuration at Port A



🔤 Key	sight Spec	trum An	alyzer - Char	inel Power									- 6 X
Ref	Value	38 4	50 Ω 4 dBm	DC				Center Fre	AL	IGN AUTO		09:27:13 Radio Std: N	AM Oct 31, 2018
	• uiue	]	4 abiii				Trig: Free Run Avg Hold:>100/100						DIE
					#1	FGain:Low		#Atten: 20	dD		Radio Devic	e: D13	
		Re	of Offset 5	1.1 dB									
Log	5/017	R	er 38.44	asm		-	_					1	
28.4							-						
18.4	puna												
8.44							_						
-1.56	1						-						
-11.6	/						_						
-21.6							_						
-31.6	(					-	_		-				
-41.6							_		muna				
-51.6							_						
													on 20 Mila
#Re	s BW	3 IVIE 10 ki	iz Hz					#VE	300 kH	z		Sweer	237.6 ms
										-			
С	hann	el P	ower					Power	Spectra	I Density			
	-2	3.3	9 dB	m /	100 k	Hz			73.39	7			
	-20.00 abiti / 100 kHz										-		
MSG										STATUS			
_													

Figure 8.3-122: Conducted band edge emission at 745 MHz, 10 MHz and IoT channel with 40 W configuration at Port B



🔤 Keysight	Spectrum Analyzer - Channel P	ower							- 6 ×
	RF 50 Ω DC			SENSE:INT	A	LIGN AUTO		09:28:3	AM Oct 31, 2018
Rei vai	ue 38.44 ubm		•	Trig: Free	Run	Avg Hold:>	100/100		
		ήi F	FGain:Low	#Atten: 20	dB			Radio Devic	e: BTS
	Ref Offset 51.1	dB							
10 dB/div	Ref 38.44 dE	m							
28.4									
18.4									
	****								
0.44									
-1.50				1					
-11.6				1					
-21.6									
-31.6					1				
-41.6									
-51.6								-	
Center	745 MHz							Sr	an 20 MHz
#Res B	W 10 kHz			#VE	300 kH	z		Sweep	237.6 ms
Cha	nnel Power			Power	Spectra	I Density			
	23 69 dBm	1 100 14	u.,	_	73 69	dBm /u	-		
· ·	-25.05 ubii	/ 100 K	ΠZ		13.03		Z		
MSO						STATUS			
						STATUS			

Figure 8.3-123: Conducted band edge emission at 745 MHz, 10 MHz and IoT
channel with 40 W configuration at Port C

L	autor production of the second	annet Power		and the second		ICH AUTO		02-10-4	
	KP 50 Ω	DC		SENSE:INT	A	LIGN AUTO		03:10:4	0 PM Oct 24, 2
nter Fr	eq 745.000	JUUU MHz		Center Fre	Pup	Availled	100/100	Radio Std: I	vone
	1		<b>_</b>	Trig: Free	Run	Avginoid:>	100/100		
		#	FGain:Low	#Atten: 28	dВ			Radio Devic	e: B15
B/div	Ref 39.8	0 dBm							
		L							
				1					
1				1					
/									
/								_	
ľ									
					1				
					Torrestant	and the second sec			
nter 74 es BW	5 MHz 10 kHz			#VE	3W 300 kH	z		S Swee	p 237.6
				Power	Spectra	I Density	,		
hann	el Power								
Chann -2	el Power	3m / 100 k	Hz	-	71.31	dBm /⊦	İz		
Chann -2	1.31 dE	3m / 100 k	Hz	-	71.31	dBm /⊦	lz		
Chann -2	el Power	3m / 100 k	Hz	-	71.31	dBm /⊦	Iz		
Chann -2	1.31 dE	3m / 100 k	Hz	-	71.31	dBm /⊦	Iz		
hanr -2	1.31 dE	3m / 100 k	Hz	-	71.31	dBm /⊦	lz		
Chanr -2	1.31 dE	3m / 100 k	Hz	-	71.31	dBm /⊦	Iz		

**Figure 8.3-125:** Conducted band edge emission at 745 MHz, 10 MHz and IoT channel with 60 W configuration at Port A

a					STATUS			
-23.11	dBm / 10	0 kHz	-7	′3.11 o	dBm /⊦	lz		
Res BW 10 kHz	Iter         745 MHz         Span 20 M           25 BW 10 kHz         #VBW 300 kHz         Sweep 237.6           Channel Power         Power Spectral Density							an 20 MHz 237.6 ms
1.6				*******				
8.4 1.44 1.66		truckinger (or fragmen on a differ	1					
Ref Of dB/div Ref 3	fset 51.1 dB 8.44 dBm		Í					
ef Value 38.44 d	Bm	#IFGain:Low	Center Freq Trig: Free R #Atten: 20 d	: 745.000000 un B	MHz Avg Hold:>	100/100	Radio Std: M Radio Devic	lone e: BTS
RF	50 Ω DC		SENSE:INT	AL	IGN AUTO		09:29:3	5 AM Oct 31, 2018

Figure 8.3-124: Conducted band edge emission at 745 MHz, 10 MHz and IoT channel with 40 W configuration at Port D

rsight Spectrum Analyzer - Char	DC 000 MHz	SENSE	INT nter Freq: 745.000	ALIGN AUTO	03:09:31 PM Oct 24 Radio Std: None
	#FGa	in:Low	g: Free Run tten: 28 dB	Avg Hold:>100/100	Radio Device: BTS
Bidiy Ref 39.80	dBm				
	- ' -				
1					
ter 745 MHz s BW 10 kHz			#VBW 300	kHz	Span 20 Sweep 237.
		_			
nannel Power		P	ower Spec	trai Density	
-21.61 dE	3m / 100 kHz		-71.6	1 dBm /Hz	
				STATUS	

Figure 8.3-126: Conducted band edge emission at 745 MHz, 10 MHz and IoT channel with 60 W configuration at Port C



# 8.4 FCC 22.917(a) and RSS-132 5.5 Spurious emissions at RF antenna connector (B5)

## 8.4.1 Definitions and limits

### FCC:

(a) 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a reference bandwidth as follows:

(1) In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided that the measured power is integrated over the full required reference bandwidth (i.e., 100 kHz or 1 percent of emission bandwidth, as specified). 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.

(2) In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz.

(c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

#### ISED:

Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

- 1. In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log<sub>10</sub>p (watts).
- 2. After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log<sub>10</sub> p (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

#### 8.4.2 Test summary

Test date October 24, 2018

# 8.4.3 Observations, settings and special notes

The spectrum was searched from 30 MHz to the 10<sup>th</sup> harmonic.

All measurements were performed using a RMS detector.

For compensation of 40 W MIMO 4×4 application limit lines were adjusted by 6 dB1 to –19 dBm

For compensation of 60 W MIMO 2×2 application limit lines were adjusted by 3 dB<sup>2</sup> to –16 dBm

 $^{1}10 \times Log_{10}(4) = -6 dB$ 

<sup>2</sup>10 × Log<sub>10</sub>(2) = −3 dB



# 8.4.4 Test data



Figure 8.4-1: Conducted spurious emissions for 5 MHz low channel with 40 W configuration at Port A



Figure 8.4-3: Conducted spurious emissions for 5 MHz low channel with 40 W configuration at Port C







Figure 8.4-4: Conducted spurious emissions for 5 MHz low channel with 40 W configuration at Port D





Figure 8.4-5: Conducted spurious emissions for 5 MHz mid channel with 40 W configuration at Port A



Figure 8.4-7: Conducted spurious emissions for 5 MHz mid channel with 40 W configuration at Port C



Figure 8.4-6: Conducted spurious emissions for 5 MHz mid channel with 40 W configuration at Port B



Figure 8.4-8: Conducted spurious emissions for 5 MHz mid channel with 40 W configuration at Port D









Figure 8.4-11: Conducted spurious emissions for 5 MHz high channel with 40 W configuration at Port C



Figure 8.4-10: Conducted spurious emissions for 5 MHz high channel with 40 W configuration at Port B



Figure 8.4-12: Conducted spurious emissions for 5 MHz high channel with 40 W configuration at Port D







Keysight Spectrum Analyzer - Swept SA					- 6 🛃
L RF S0Ω DC isplay Line -16.00 dBm	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 22 dB	ALIGN AUTO Avg Type: R Avg Hold:>10	MS 00/100	09:43:05 AM Oct 25, 201 TRACE 1 2 3 4 5 TYPE A WWWW DET A NNNN
Ref Offset 41.8 dB dB/div Ref 51.80 dBm					Mkr1 883.1 MH 40.845 dBr
1					
1.8					
1.8					
1.8					
80			_		
20					
.2					DL1 -16.00 dB
12		$\sim$	$\sim$	~~~~	~~~~~
3.2					
art 30 MHz tes BW 1.0 MHz	#VBV	V 3.0 MHz*		Sweep	Stop 9.000 GH 15.33 ms (10000 pts
S File <cse 5="" ant="" c<="" hp="" mhz="" mid="" td=""><td>C.png&gt; saved</td><td></td><td>STATUS</td><td></td><td></td></cse>	C.png> saved		STATUS		

Figure 8.4-15: Conducted spurious emissions for 5 MHz mid channel with 60 W configuration at Port A



Figure 8.4-14: Conducted spurious emissions for 5 MHz low channel with 60 W configuration at Port C



Figure 8.4-16: Conducted spurious emissions for 5 MHz mid channel with 60 W configuration at Port C









**Figure 8.4-19:** Conducted spurious emissions for 10 MHz low channel with 40 W configuration at Port C







**Figure 8.4-20:** Conducted spurious emissions for 10 MHz low channel with 40 W configuration at Port D









Figure 8.4-23: Conducted spurious emissions for 10 MHz mid channel with 40 W configuration at Port C







Figure 8.4-24: Conducted spurious emissions for 10 MHz mid channel with 40 W configuration at Port D









**Figure 8.4-27:** Conducted spurious emissions for 10 MHz high channel with 40 W configuration at Port C



Figure 8.4-26: Conducted spurious emissions for 10 MHz high channel with 40 W configuration at Port B



**Figure 8.4-28:** Conducted spurious emissions for 10 MHz high channel with 40 W configuration at Port D