







100 MHz, 3CC, High









100 MHz, 4CC, High



Tabular Data of Band Edge

n260 Band Antenna 0 (K patch)

CCs active	BW [MHz]	Frequency	Mode	Channel	Beam Pol	Modulation	Ant. Pol	RB Size/Offset	Result [dBm]	Limit [dBm]	Margin [dB]
	[2]	27025.04		1		160414		1/0	7.240	[abiii]	[00]
		37025.04	SISO Dual	LOW	H+V	16QAM	н	1/0	-7.248	-5	2.2
		37025.04	SISO Dual	LOW	H+V	BPSK	н	1/0	-19.173	-13	6.2
		37025.04	SISO Dual	LOW	H+V	16QAM	н	32/0	-15.357	-5	10.4
1	50	37025.04	SISO Dual	Low	H+V	16QAM	н	32/0	-15.323	-13	2.3
		39975.00	SISO Dual	High	H+V	QPSK	V	1/31	-9.572	-5	4.6
		39975.00	SISO Dual	High	H+V	64QAM	V	1/31	-17.975	-13	5.0
		39975.00	SISO Dual	High	H+V	16QAM	V	32/0	-11.421	-5	6.4
		39975.00	SISO Dual	High	H+V	16QAM	V	32/0	-11.954	-13	-1.0 **1
		37050.00	SISO	Low	Н	QPSK	V	1/0	-10.248	-5	5.2
		37050.00	SISO	Low	V	BPSK	Н	1/0	-22.316	-13	9.3
		37050.00	SISO Dual	Low	H+V	QPSK	Н	64/0	-17.653	-5	12.7
1	100	37050.00	SISO Dual	Low	H+V	QPSK	Н	64/0	-17.615	-13	4.6
T	100	39949.92	SISO Dual	High	H+V	QPSK	V	1/65	-9.624	-5	4.6
		39949.92	SISO Dual	High	H+V	QPSK	V	1/65	-19.225	-13	6.2
		39949.92	SISO Dual	High	H+V	16QAM	V	64/0	-15.645	-5	10.6
		39949.92	SISO Dual	High	H+V	16QAM	V	64/0	-16.504	-13	3.5
		37099.98	SISO Dual	Low	H+V	16QAM	Н	1/0	-12.502	-5	7.5
		37099.98	SISO Dual	Low	H+V	QPSK	Н	1/0	-13.963	-13	1.0 **2
		37099.98	SISO Dual	Low	H+V	QPSK	Н	64/0	-19.718	-5	14.7
2	100	37099.98	SISO Dual	Low	H+V	16QAM	Н	64/0	-15.517	-13	2.5
2	100	39899.94	SISO Dual	High	H+V	64QAM	V	1/65	-19.357	-5	14.4
		39899.94	SISO Dual	High	H+V	BPSK	V	1/65	-15.108	-13	2.1
		39899.94	SISO Dual	High	H+V	QPSK	V	64/0	-17.584	-5	12.6
		39899.94	SISO Dual	High	H+V	BPSK	V	64/0	-16.845	-13	3.8
		37149.96	SISO	Low	Н	BPSK	V	1/0	-20.296	-5	15.3
		37149.96	SISO	Low	Н	QPSK	V	1/0	-16.582	-13	3.6
		37149.96	SISO	Low	Н	QPSK	V	64/0	-21.461	-5	16.5
		37149.96	SISO	Low	Н	16QAM	V	64/0	-21.166	-13	8.2
3	100	39849.96	SISO Dual	High	H+V	QPSK	V	1/65	-17.967	-5	13.0
		39849.96	SISO Dual	High	H+V	64QAM	V	1/65	-15.922	-13	2.9
		39849.96	SISO Dual	High	H+V	QPSK	V	64/0	-17.881	-5	12.9
		39849.96	SISO Dual	High	H+V	QPSK	V	64/0	-16.876	-13	3.9
		37199.94	SISO Dual	Low	H+V	BPSK	Н	1/0	-18.952	-5	14.0
		37199.94	SISO	Low	Н	16QAM	V	1/0	-17.063	-13	4.1
		37199.94	SISO	Low	Н	BPSK	V	64/0	-21.027	-5	16.0
		37199.94	SISO	Low	Н	BPSK	V	64/0	-21.142	-13	8.1
4	100	39799.98	SISO	High	V	16QAM	V	1/65	-17.496	-5	12.5
		39799.98	SISO Dual	High	H+V	16QAM	V	1/65	-16.254	-13	3.3
		39799.98	SISO Dual	High	H+V	BPSK	V	64/0	-19.806	-5	14.8
		39799.98	SISO Dual	High	H+V	64QAM	V	64/0	-18.162	-13	5.2
	1			0			1	,			l

*1 Note. TRP: -22.27 dBm

**2 Note. TRP: -26.11 dBm



Plot data of Band Edge

n260 Band Antenna 0 (K patch)

Reptight Spectrum Analyzer - Swept SA R 8F 35 (2) 000 CORREC SErvice D enter Freq 36.850000000 GHz NFE PNO: Fast Trig: Free Rus	AUGV AUTO (8718/39 9M Mar 26, 2024 Avg Type: RMS TRACE (12 21 44) n Avg[Hold: 100/100 Tvrill	Frequency	Repuight Spectnum Analyzer - Swept SA R NF S0.0 DC Center Freq 36.850000	CORREC SENSE.INT	AUGN 4UTO 06:12:52 PH Mar 26, 2024 Avg Type: RMS TRACE 02:42	Frequency
IFGain:1.ow #Atten: 16 dB	Mkr2 36.993 25 GHz -22.204 dBm	Auto Tune	10 dB/div Ref 43.00 dBm	IFGain:Low #Atten: 16 dB	Mkr2 36.993 40 GHz -19,173 dBm	Auto Tune
Trace 1 Pass		Center Freq 36,85000000 GHz	230 Trace 1 Pass			Center Freq 36.850000000 GHz
		Start Freq 36.60000000 GHz	3 00 -7 00 -17 0			Start Freq 36.60000000 GHz
7 0 Automatica Constitution Frances (2000) 7 0		Stop Freq 37.100000000 GHz	-27.0 -37.0 -47.0		unnungan kalanan kan kan kan kan kan kan kan kan kan	Stop Freq 37.100000000 GHz
tart 36.6000 GHz Res BW 1.0 MHz #VBW 3.0 MHz*	Stop 37.1000 GHz Sweep 1.333 ms (10001 pts)	CF Step 50.000000 MHz Auto Man	Start 36.6000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz*	Stop 37.1000 GHz Sweep 1.333 ms (10001 pts)	CF Step 50.000000 MHz Auto Man
N 1 f 36 999 95 GHz -7 248 dBm N 1 f 36 993 26 GHz -22 204 dBm 8		Freq Offset 0 Hz	MOR MODE THE SLL X 1 N 1 f 36.9 2 N 1 f 36.9 3 4 6 7	99 80 GHz 9.607 dBm 93 40 GHz -19.173 dBm	NUTRINI PRINCIPALINE PRINCIPALINE +	Freq Offset 0 Hz
9		Scale Type	8			Scale Type
0 1		Log Lin				Log Lin
10 11 13 15 16 16 16 16 16 16 16 16 16 16	31747US		9 11 +		STATUS	Log <u>Lin</u>
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	371 AUG ALSON AUTO (87-22146 MMAr 26, 2014 Avg Type: RMS n Avg]Hold: 100100 Troop Ref. (100100	Frequency	9 4 		atatus]	Log Lin
1	3114/108 11 4.000 4/10 (97-23.16 9/H/µ 36, 302) 14 4.00 Type RMS Mice Bits and Anglinde: 100100 mice RMS Mice Bits and Mkr2 36,991 20 GHz -15.323 dBm	Log Lin Frequency Auto Tune	10 11 12 150		atatus .	Log <u>Lin</u>
0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 4100 4000 (022014 8044 50 500) 41 4100 4000 (022014 8044 50 500) 44 44 44 40 1000 (022014 8044 50 500) 44 44 44 40 40 50 50 50 50 50 50 50 50 50 50 50 50 50	Log Lin Frequency Auto Tune Center Freq 35 85000000 GHz	19 + + + + 		STATUS	Log <u>Lin</u>
01	Aug Type, RMS Avg Hede 100100 Million Autor Avg Hede 100100 Mikr2 36,991 20 GHz -15,323 dBm	Log Lin Frequency Auto Tune Center Freq 36 85000000 GHz Start Freq 38 80000000 GHz	10 + + + + + + + + + + + + + + + + + + +		atatva j	Log Lin
10	Augu Auto Augu Auto Auto Auto Auto Auto Augu Auto	Log Lin Frequency Auto Tune Center Freq Start Freq Start Freq Start Freq 36 80000000 GHz Start Freq 37.10000000 GHz	10 + + + + + + + + + + + + + + + + + + +		ITATVS .	
0 1 -	عند المراجع المراج المراجع المراجع م مراجع ملكم المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراحمع المراجع المراجع الم مراجع ا	Log Lin Frequency Auto Tune Center Freq Start Freq Start Freq Start Preq Start Preq 35.8500000 GHz Stop Freq 37.1000000 GHz			ITATUS	
01	NT Alline Auto (#23216 #MMs 26.302 AvgType. RMS Thece DE3316 Thece DE3316 AvgHedd: 100100 Thece DE3316 Thece DE3316 MKr2 36.991 20 GHz -15.323 dEm Control of the second	Log Lin Frequency Auto Tune Center Freq Start Freq Start Freq 38.5000000 GHz Stop Freq 37.10000000 GHz CF Step S0.000000 MHz Auto Man Freq Offset 0 Hz	10 + + + + + - + + - - + + - - + - - - -		JITATVA	





50 MHz, 1CC, High





100 MHz, 1CC, High Avg Type: RMS Avg Hold: 100/100 Avg Type: RMS Avg Hold: 100/10 er Freg 40.025 nter Freg 40.02500 00 GHz 00 GHz Trig: Free Ru Trig: Free Run Auto Tu 16 504 Ref 43.00 dBm Ref 43.00 dB Center Fr Center Fr Start Fr Stop Fr Stop Fr Stop 40.2000 G Stop 40.2000 1.333 ms (1000 39.8500 GH CF Ste CF Ste 39.8500 GH 40.000 185 GHz 40.197 305 GHz -9.624 dBn -19.225 dBn 40.002 145 GHz 40.027 625 GHz -16.645 dBr Freq Offse Freq Offse Scale Type Scale Type L. L

F-TP22-03 (Rev. 06)

Page 85 of 163









100 MHz, 2CC, High









100 MHz, 3CC, High





F-TP22-03 (Rev. 06)





100 MHz, 4CC, High



Tabular Data of Band Edge

n261 Band Antenna 0 (K patch)

CCs active	BW [MHz]	Frequency [MHz]	Mode	Channel	Beam Pol	Modulation	Ant. Pol	RB Size/Offset	Result [dBm]	Limit [dBm]	Margin [dB]
		27525.00	SISO Dual	Low	H+V	BPSK	Н	1/0	-8.562	-5	3.6
		27525.00	SISO Dual	Low	H+V	BPSK	Н	1/0	-29.671	-13	16.7
		27525.00	SISO Dual	Low	H+V	16QAM	Н	32/0	-13.443	-5	8.4
		27525.00	SISO Dual	Low	H+V	QPSK	Н	32/0	-13.862	-13	0.9 *1
1	50	28324.92	SISO	High	V	640AM	Н	1/31	-9.08	-5	4.1
		28324.92	SISO	High	v	BPSK	Н	1/31	-28.124	-13	15.1
		28324.92	SISO	High	V	OPSK	Н	32/0	-12.507	-5	7.5
		28324.92	SISO	High	v	OPSK	Н	32/0	-13.229	-13	0.2 *2
		27550.08	SISO Dual	Low	H+V	640AM	Н	1/0	-9.022	-5	4.0
		27550.08	SISO Dual	Low	H+V	640AM	н	1/0	-31.15	-13	18.2
		27550.08	SISO Dual	Low	H+V	OPSK	н	64/0	-14,455	-5	9.5
		27550.08	SISO Dual	Low	H+V	OPSK	Н	64/0	-15.277	-13	2.3
1	100	28299.96	SISO	High	V	OPSK	Н	1/65	-11.393	-5	6.4
		28299.96	SISO Dual	High	H+V	16QAM	H	1/65	-27.198	-13	14.2
		28299.96	SISO Dual	High	H+V	16QAM	Н	64/0	-13.477	-5	8.5
		28299.96	SISO Dual	High	H+V	QPSK	Н	64/0	-15.145	-13	2.1
		27600.06	SISO Dual	Low	H+V	BPSK	Н	1/0	-16.242	-5	11.2
		27600.06	SISO Dual	Low	H+V	QPSK	Н	1/0	-16.8	-13	3.8
		27600.06	SISO Dual	Low	H+V	16QAM	Н	64/0	-15.662	-5	10.7
		27600.06	SISO Dual	Low	H+V	BPSK	Н	64/0	-9.546	-13	-3.5 *3
2	100	28249.98	SISO	High	V	QPSK	Н	1/65	-16.637	-5	11.6
		28249.98	SISO Dual	High	H+V	16QAM	Н	1/65	-17.827	-13	4.8
		28249.98	SISO Dual	High	H+V	16QAM	Н	64/0	-17.757	-5	12.8
		28249.98	SISO Dual	High	H+V	BPSK	Н	64/0	-14.761	-13	1.8 **4
		27650.04	SISO	Low	V	64QAM	Н	1/0	-18.139	-5	13.1
		27650.04	SISO	Low	V	BPSK	Н	1/0	-17.161	-13	4.2
		27650.04	SISO Dual	Low	H+V	QPSK	Н	64/0	-26.886	-5	21.9
-		27650.04	SISO Dual	Low	H+V	QPSK	Н	64/0	-25.91	-13	12.9
3	100	28200.00	SISO Dual	High	H+V	64QAM	Н	1/65	-19.691	-5	14.7
		28200.00	SISO Dual	High	H+V	BPSK	Н	1/65	-18.515	-13	5.5
		28200.00	SISO Dual	High	H+V	QPSK	Н	64/0	-23.364	-5	18.4
		28200.00	SISO Dual	High	H+V	QPSK	Н	64/0	-23.961	-13	11.0
		27700.02	SISO Dual	Low	H+V	16QAM	Н	1/0	-15.366	-5	10.4
		27700.02	SISO Dual	Low	H+V	BPSK	Н	1/0	-15.203	-13	2.2
		27700.02	SISO Dual	Low	H+V	QPSK	Н	64/0	-23.733	-5	18.7
Α	100	27700.02	SISO Dual	Low	H+V	QPSK	Н	64/0	-23.185	-13	10.2
4	100	28150.02	SISO	High	V	16QAM	Н	1/65	-18.595	-5	13.6
		28150.02	SISO Dual	High	H+V	16QAM	Н	1/65	-18.396	-13	5.4
		28150.02	SISO Dual	High	H+V	QPSK	Н	64/0	-23.247	-5	18.2
		28150.02	SISO Dual	High	H+V	BPSK	Н	64/0	-23.274	-13	10.3

*1 Note. TRP: -23.80 dBm

*2 Note. TRP: -32.59 dBm

*3 Note. TRP: -20.99 dBm

*4 Note. TRP: -23.78 dBm

F-TP22-03 (Rev. 06)



Plot data of Band Edge

n261 Band Antenna 0 (K patch)





enter Fred 28-500	000000 GHz	Avg Type: RMS	TRACE PROFESSION	Frequency
ASS DEEANC	NFE PNO: Fast Trig: Free Run	Avg Hold: 100/100	DET A NUMBER	
PREAMP	Broam:Low Protein: 10 00	Mkr2 2	9 356 90 GHz	Auto Tune
dBidly Ref 43.00	dBm	ININIZ Z	-30.564 dBm	
Trace 1 Pass				
(3.0				Center Freq
21.0				28.50000000 GHz
3.0				
100	1			Start Freq
				28.20000000 GHz
70	2			-
anterin manual	and the more survey and	والمحالية والمحالية والمحالية	and the second second second	Stop Freq
				28.80000000 GHz
tart 28.2000 GHz		S	op 28.8000 GHz	CF Step
Res BW 1.0 MHz	#VBW 3.0 MHz*	Sweep 1.33	3 ms (10001 pts)	60.000000 MHz Auto Mar
KRE MODELTRC: SCL:	X X 28 350 00 CHz - 9 020 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	1000 C
2 N 1 1	28.356 90 GHz -30.564 dBm			Freq Offset
4				0 Hz
5			1	
7				Scale Type
9				
1				Log Lin
ř.				
0		STATUS	· ·	
0 Keysight Spectrum Analyzer - Su	er rege SA - ber 1. er stande stort	STATUS	07.2540.064.06 14.2524	Lo (2 😫
a Keyselt Spectrum Analyzer - 3a 8 10 10 10 10 10 10 enter Freq 28.500	erer SA DC CONVEC SINGLANT D000000 GH2	STATUS ALION AUTO Avg Type: RMS	07.20-50 PH Mar 14, 2024 TRACE DELET	Frequency
s R III Spectrum Analyzer - So R III SO C enter Freq 28.500 ASS PREAMP	NPE 5A DC CORREC SINC DC CORREC SINC DC CORREC SINC DC CORREC SINC SINCE SINC Free Run RFGain dow RFGAINT: 15 dB	ALION AUTO Avg Type: RMS Avg[Hold: 100/100	07-20-50 PM Mar 14, 2024 TRACE 12 L 4 81 TRACE 12 L 4 81 CET ATTRACE	Frequency
G Keyoght Spectrum Analyzer - So R SJ SO C enter Freq 28.500 ASS PREAMP	wert 64 DC Collect School (htt) DODODO GF/Z IF GalacLow RAtten: 16 dB	ALION AUTO Avg Type: RMS Avg[Hold: 100/100 MKr2 2	07:20:50 PMMar 14, 2024 TRACE 12 14 50 PM C 20 14 50 Cert A TRINIT 8,355 52 GHz	Frequency Auto Tune
o Report Sector Andres - Sec enter Freq 28.500 ASS PREAMP	ver SA DC COMPC SAVE IV/ D000000 PGHz IFGainLow Trig: Free Run IFGainLow Atten: 16 dB	status Alian Auto Avg Type: RMS Avg/Hold: 100/100 MKt2 2	67.22.50 РИМи 14.2224 Тичее 10.2.4 4 б тиче Алании сет Алании 8.355 52 GHz -13.229 dBm	Frequency Auto Tune
e Exposit Sector Andres 5 enter Freq 28,500 ASS PREAMP B GB/div Ref 43.00 P Trace 1 Pass	ne 55. State Series Die Google Carlos PGO Faat Trig: Free Run IFGalat.cov Blam	status Align auto Avg Type: RMS Avg[Heid: 100/100 Mkr2 2	9722500 РИНКИ 14.2024 Тамае 10.2 4.5 Тамае 10.5 Тамае 10.5	Prequency Auto Tune
G Copyet Spectrum Rodyner - 30 R SU 300 enter Freq 28.500 ASS PREAMP oBidly Ref 43.00 D Trace 1 Pass	ngt SA COMPOSE 2000000 GF12 In Canada and In C	status Rise arro Avg Type: RMS AvgiHold: 100/100 MKtf2 2	872530 РИНК 14. 2024 Ттоне Л. 2024 Сторе Та Коликии сет а Коликии 8. 355 52 GHz -13.229 dBm	Prequency Auto Tune
o conter Freq 28.500 ASS PREAMP o BIGIV Ref 43.00 Trace 1 Pass	nys få. DC convect Subscription DC convect Trig: Free Run If Calif.Low dBm	Interio Aug Type: KM3 Avg)Hold: 100100 Mkt72 2	8.355 52 GHz -13.229 dBm	Frequency Auto Tune Center Freq 28.50000000 GHz
Construction of the second sec	ner 54 DC Converc DC Converc DC Converc PRO Fast PRO Fast PR	ALTON ANYO ANY TYPE RMS Any Hold: 100-100 Mktr2.2	07.22.50 РИМи 14.2034 Такас () Г.Э. 4.5 Туте станиция 2015 52 С. 6 Н2 -13.229 dBm	Frequency Frequency Auto Tune Center Freq 28.5000000 GHz
etter Freq 28.500 ASS PREAMP delidity Ref 43.00	ner SA DC Compose D000000 GH2 D00000 GH2 Trig Free Run If Cristing on RAtten: 16 dB dBm	Alter and Ang Type RMS Ang Type	0725500 MHz 14, 2021 Trace 10 5 4 50 Trive 2 10 5 4 50 Trive 2 10 5 4 50 Trive 2 10 5 52 GHz -13.229 dBm	Frequency Auto Tune Center Freq 28.5000000 GHz Start Freq
o constant Section Addyse - 56 2010	ang få. DC convect Subsection NC PRO Fast And Brown Stream Convector Stream Conv	ALDIA ANTO ANTO TANA ANTO Anto Tana Kito Anto Anto Tana Kito Anto Mikr2 2	07.3550 PM Mar 14,3221 TRace J Par 4 and the transmission of the transmission to the transmission of the transmission 8.3555 52 GHz -13.229 dBm	Prequency Prequency Auto Tune Center Freq 28.50000000 GHz Start Freq 28.20000000 GHz
or control of the second secon	and SA DC Convect Same Swith DC Convect Same Same Same Same Same Same Same Same	Ang Type RMS Ang Type RMS AngHold: 100/100 MK/2.2	0726500MHar 14,2021 Trace IP Det 43 tree IP Det 43	Frequency Auto Tune Center Freq 28.50000000 GHz Start Freq 28.20000000 GHz
Construction of the second sec	ner 54. DC Conect DOCOMPC Sub Conect DOCOMO CHAR IF Conect Cone IF	jatana Ang Tyu Kita Ang Tyu Kita Mikr2 2	97.355 590 (1.575) Tracia (1.575) ect (1.175) 8.355 52 GHz -13.229 dBm	Prequency Auto Tune Center Freq 28.50000000 GHz Start Freq 28.2000000 GHz Stop Freq
or control of the con	ang få. DC convector NE procinan Pacificant.cm Trig: Free Run State:: 16 dB dBm	ALDAR AND ANT THE RMS Anglede: 100100 MIKE2 2	2/255 (Must 14, 1524) Trace () 15 (1514) Trace () 1	Frequency Frequency Auto Tune Center Freq 28 5000000 GHz 28 20000000 GHz Stop Freq 28 8000000 GHz
enter Freq 28.500 ASS PREAMP BERNP B	and SA DC Convect Same And NC Procision And Procision And Procisio And Procision And Proci	Ang Type RMS Ang Type RMS AngHold: 100/100 MK/2.2	972850 PM (1 + 1001) Track (2) 5 + 1001 Track (2) 5 + 1001 Track (2) 5 + 1001 8 - 355 5 2 GHz -13 - 229 dBm	Frequency Auto Tune Center Freq 28.5000000 GHz Start Freq 28.5000000 GHz Stop Freq 28.5000000 GHz
Construction in the second secon	AND CONCELLENCE IN THE SAME INT INTEL PROFILE INTEL PROFILE INT	ALUR AND AUG AND Augheld: 150/150 MKr2 2	27:25:30 PM Mar 14:3021 Theck [10:3033 Theck [10:3033] The Physical Physica	Auto Tune Center Freq 28.5000000 GHz 28.5000000 GHz 28.5000000 GHz 28.5000000 GHz 28.5000000 GHz 28.5000000 GHz 28.5000000 GHz
Compared Section Markers Section 28, 500 ASS PREAMP Delta Section 28, 500 AS	ang få. Det convect of the second here in the second here in the second here in the second here in the second here is the seco	AUDA ANTO AUTOR SANTO ANTO TARA KINO ANTO MICE 2 MICE 2 Sweep 1.33	272530 Million 14 2023 The car planet of the second term of the second	Center Freq 28.50000000 GHz 28.50000000 GHz 28.20000000 GHz 28.20000000 GHz 28.2000000 GHz 28.2000000 GHz 28.200000 GHz 28.20000 GHZ 28.2000000 GHZ 28.20000 GHZ 28.2000000 GHZ 28.200000 GHZ 28.200000 GHZ 20.20000 GHZ 20.2000 GHZ 20.20000 GHZ 20.2000
Construction index is a construction index of the construction index o	##F4A @C COMPC GAUGE (NC) D00000 GH2 D0000 GH2 Trig: Free Run	Jacobia Ang Type: RMS AvggHold: 100100 Mkr2 2 Sweep 1.33 Sweep 1.33	Constant of the second se	Frequency Frequency Auto Tune Center Freq 28.50000000 GHz 28.50000000 GHz 28.50000000 GHz 28.50000000 GHz 28.50000000 GHz CF Step 60.000000 MHz Auto Mart
Construction of the second sec	AND COORDED STORE TO SALE AND THE SALE AND T	International States and States a	2720 Service 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	Auto Tune Center Freq 28.5000000 GHz Start Freq 28.5000000 GHz Stop Freq 28.8000000 GHz Man Freq Offset
Content Freq 28.500 ASS PREAMP Content Freq 28.500 Content Freq 28.5000 Content Freq 28.50000 Content Freq 28.50000 Content Freq 28.5000000000000000000000000000000000000	ang SA DC COOPEC NE POCTARE NE POCTARE Attack 1967 dBm	AUDA AND AUT Type: RMS Avg/Hold: 100100 MKC2 2 MKC2 2 Sweep 1.33 Sweep 1.33	2725300 Million 14 10 14 1 Million 14 14 14 14 14 14 14 14 14 14 14 14 14	Center Freq 28.5000000 GHz 28.50000000 GHz 28.50000000 GHz 28.5000000 GHz 28.50000000 GHz 28.50000000 GHz 29.50000000 GHz 29.5000000 GHz 20.5000000 GHz 20.5000000 GHz 20.5000000 GHz 20.5000000 GHz 20.5000000 GHz 20.5000000 GHz 20.5000000 GHz 20.50000000 GHz 20.5000000 GHz 20.50000000 GHz 20.50000000 GHz 20.50000000 GHz 20.50000000 GHz 20.50000000 GHz 20.50000000 GHz 20.500000000 GHz 20.50000000000000000 GHz 20.500000000000000000000000000000000000
Control Free Net All Control N	AND COMPANY OF A SAME INFO DOCOMON CHE SAME INFO PERCENT AND THE SAME INFO PERCENT AND THE SAME INFO ADDRESS OF A SAME INFO ADDRESS OF A SAME INFO THE SAME INFO ADDRESS OF A SAME INFO ADDRESS OF ADDRESS OF A SAME INFO ADDRESS OF AD	Intervention	27:25:52 PM was 14, 3923 Theck [p] 5923 Theck [p] 5923 Theck [p] 5923 Theck [p] 5923 Theck [p] 5923 The provided in the	Center Freq 28 5000000 GHz 28 5000000 GHz 28 5000000 GHz 28 3000000 GHz 29 500 GHz 20
Comparison of the second	AND COOPED NE DOLLAR NE POLIAR POLIAR POLIAR POLIAR POLIAR POLIAR POLIAR POLIAR POLIAR TO POR NO ADDR TO	Introduction with the second s	2728-56 PHILUP 14, 5221 Trace () 5 221 Trace	Auto Tune Prequency Auto Tune Center Freq 28.50000000 GHz Start Freq 28.80000000 GHz Stop Freq CF Step 50.00000 MHz Auto Tune CF Step 50.00000 MHz Auto Tune CF Step 50.00000 GHz Scale Tune
Image: sector integer (sector) Registration integer (sector) Registration integer (sector) Registration integer (sector) Reference Ref 43.00 Reference Reference	ner 6A pc Connect DOCOOD GH2 DOCOOD GH2 Trig Free Run Protect.com Trig Free Run Protect.com Trig Free Run EAtten: 16 eB dBm #VEW 3.0 MH2* X X X X X X X X X X X X X	International States and States a	CONTRACTOR OF A CONTRACTO	Frequency Auto Tune Center Freq 28 5000000 GHz 28 5000000 GHz 20 GHZ 2

50 MHz, 1CC, High

ASS PREAMP	NFE PNO: Fast IFGain:Los	Trig: Free Run #Atten: 16 dB	Avg Type: RMS Avg Hold: 100/100	TYPE A WWWWWW DET A NN NN N	Prequency
o dBidiv Ref 43.00	dBm		Mkr2	28,499 28 GHz -28,124 dBm	Auto Tune
330 Trace 1 Pass 230					Center Freq 28.500000000 GHz
1 00 7 00 17 0	1	.2			Start Freq 28.200000000 GHz
0.0		•			
17 0 17 0	erten Madademikang	interinential and importion	م مدین استان می خرد اندا اند اند اندا اندا ا	ميافقه وملاف ومنته وحرواتي	Stop Freq 28.80000000 GHz
tart 28.2000 GHz Res BW 1.0 MHz	when the second se	/BW 3.0 MHz*	Sweep 1.3	Stop 28.8000 GHz 33 ms (10001 pts) Function value	Stop Freq 28.80000000 GHz CF Step 60.000000 MHz <u>Auto</u> Man
tart 28.2000 GHz Res BW 1.0 MHz R(MODE THC: SCL) 2 N 1 f 3 J 5	#V 28.350 18 GHz 28.499 28 GHz	BW 3.0 MHz*	Sweep 1.3	Stop 28.8000 GHz 33 ms (10001 pts) FUNCTION VALUE	Stop Freq 28.80000000 GHz 60.000000 MHz Auto Man Freq Offset 0 Hz



P I I I I I I I I I I I I I I I I I I I		0 0	🚆 Keysylt Spectrum Analyzer - Swept SA
Inter Freq 27.350000000 GHz	Avg Type: RMS TRACE 12:14 3	Frequency	Center Freq 27.350000000 GHz PASS Declaration Mr Phot Fail
ADJEST Pat 43.00 dBm	Mkr2 27.421 54 GHz -31.150 dBm	Auto Tune	Mkr2 27,482 09 GHz
Trace 1 Pass		Center Freq 27.35000000 GHz	200 27 20 27 20 27 27 20 27 27 20 27 27 20 27 27 20 27 27 20 27 27 20 27 27 20 27 27 20 27 27 20 27 27 20 20 20 27 27 20 20 20 20 20 20 20 20 20 20 20 20 20
	61	Start Freq 27.00000000 GHz	130 300 720 720 720 720 720 720 720 7
т 2 <mark>ман улт б^{ан}т та социально социальн</mark>	and the second	Stop Freq 27.700000000 GHz	570 Stop Fr 270 27.70000000 G
art 27.0000 GHz	Stop 27.7000 GHz Sweep 1.333 ms (10001 pts)	CF Step 70.000000 MHz Auto Man	Start 27.0000 GHz Stop 27.7000 GHz Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.333 ms (10001 pts)
Res BW 1.0 MHz #VBW 3.0 MHz*		and the second se	MRR MODE TRC: SCL. X Y FUNCTION FUNCTION VIDTH FUNCTION VILLE +
X 1 f 27.499 87.06Hz Y N 1 f 27.499 87.06Hz -9.022 08m N 1 f 27.421 64.GHz -31.160 08m	FUNCTION POINT FUNCTION VALUE -	Freq Offset 0 Hz	1 N 1 F 27,482.33 GHz -14,455.dBm 1 N 1 F 27,482.09 GHz -15,277.dBm 2 - - - - - Freq Offs 2 - - - - - 0 -





100 MHz, 1CC, High









100 MHz, 2CC, High







	000.011-	ALIGN AUTO	05:48:05 PM Mar 21, 2024	Frequency
ASS PREAMP	PNO: Fast Trig: Free Run IFGain:Low #Atten: 16 dB	Avg/Hold: 100/100	TIPE A MONTHAN	
o aBialy Ref 43.00 dBr	n	Mkr2 2	8.446 675 GHz -18.948 dBm	Auto Tune
Trace 1 Pass				Center Fred
30				28.35000000 GHz
100				Start Freq
7 0		2		27.975000000 GH
70	استبيتها استنبسا است	mulanaparla		Stop Free
7.0				28.72500000 GH
tart 27.9750 GHz Res BW 1.0 MHz	#VBW 3.0 MHz*	Sweep 1.3	top 28.7250 GHz 33 ms (10001 pts)	CF Step 75.00000 MHz
KR MODE TRC SCL	x y 350 150 GHz -19.691 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	
2 N 1 f 28 3 4 5	.446 675 GHz -18.948 dBm			Freq Offset 0 Ha
6 7 8				Scale Type
				.og Lir
	. N		1000	
6		STATUS	1	
Keyzight Spectrum Analyzer - Swept SA	Ye			
K NF 150 D D0	CONVEC	ALIGN AUTO	05:38:30 PM Mar 21, 2024	101.01
enter Freq 28.350000	COMPEC SUBSECTION DNO: Fast Trig: Free Run IFGeincl.ow RAtten: 16 dB	Avg Type: RMS Avg[Hold: 100/100	05:38:30 PM Mar 21, 2024 TRACE 1 2 1 4 5 TYPE A MONINE DET A DIDUNE	Frequency
ASS PREAMP	CONVEC SINGLENT ODU GH2 PN0: Fast IFGaintLow Atten: 16 dB	Avg Type: RMS Avg[Hold: 100/100 Mkr2 2	105:38:30 РИМаг 21, 2024 ТРАСЕ 12:34 В ТРИЕ ост Анклич 406 325 GHz -23 961 dBm	Frequency Auto Tune
NO 150 D NI enter Freq 28.350000 NI NI NI ASS PREAMP NI NI NI 0 dB/dty Ref 43.00 dBn NI NI NI PI Trace 1 Pass NI NI NI NI	CONSC SUME NOT DOD GHZ PNC: Fast IFGein:Low RAtten: 15 dB	Alten Auto Avg Type: RMS Avg/Hold: 109/100 MKr2 2	05.38-30 PM Mar 21, 3034 THACE 02 14 T TYPE A MINISTRATE OCT A MINISTRATE 3.406 325 GHz -23.961 dBm	Frequency Auto Tune
NP 1502 00 enter Freq 28,350000 NE NE ASS PREAMP NE 0 dB/dlv Ref 43,00 dBn NE 02 Trace 1 Pass NE	000 GHZ PRO: Fast Trig: Free Run If GalicLow Attent: 16 dB	Aug Type: RMS Avg Type: RMS Avg Hold: 100/100 Mkr2 2	05-31-30 PM Mar 21, 3024 THACE 0 2 1 4 34 DET A 10 M Mar 21, 3024 S.406 325 GHz -23.961 dBm	Frequency Auto Tune Center Frec 28.35000000 GH3
AF AF SSO BI enter Freq 28.350000 ASS PREAMP NE pBIdBy Ref 43.00 dBn NE 0 dBIdBy Ref 43.00 dBn NE 10 30 30 30 30	1 Connect I Stands and 1 Connect I Stands and 1 Figure 1 Connect	Aug Type: RMS Avg Hold: 100/100 Mkr2 2	1932-30 РИН Наг 21, 2034 ТЧИСС [12:1:4:5 ТЧИСС [12:1:4:5] ТЧИСС [12:1:4:5] ТЧИСС [12:1:4:5] ТЧИСС [12:1:4:5] ТЧИС [12:1:4:5] ТЧИС [12:1:4:5	Frequency Auto Tune Center Freq 28.35000000 GHz
enter Freg 28.350000 ASS PREAMP NE 0 dBidly Ref 43.00 dBn 77ace 1 Pass 10 10 10 10 10 10 10 10 10 10 10 10 10	Consection of Subscription DOD CH22 PRO: Fast	ALIAN AUTO Avg Type: RMS Avg)Hold: 100100 MKr2 20	05.3H.30 PM Har 21, 2024 TRACE DP 4 4 10 Three control of the second second control of the second se	Frequency Auto Tune Center Frec 28.35000000 GHz Start Frec
enter Freq 28.350000 ASS PERAMP NEC Deficiency Ref 43.00 dBn of Trace 1 Pass	Converting C	Ano Type Ano	05.3H.30 PM Mar 21, 2034 TRACE DE 4 4 Three control and the second cert & Markett -23,961 dBm	Frequency Auto Tune Center Freq 28.35000000 GHz Start Freq 27.975000000 GHz
enter Freq 28.350000 ASS PREAMP Net Didlow Ref 43.00 dBn Trace 1 Poss 10 10 Didlow Ref 43.00 dBn	I COMPLETE IN SUPERIOR INFO	Ang Type: RMS Ang Type: RMS AngpHole: 500100 MKr2 21	(0.34.30 Millio 21, 2034 Trace 0.27 4 Trace 0.27 4 Trac	Frequency Auto Tune Center Frec 28.35000000 GHJ Start Frec 27.97500000 GHJ
enter Freq 28.350000 ASS PREAMP NE 0 dBlow Ref 43.00 dBn 0 dBn 0 dBlow Ref 43.00 dBn 0 dBn 0 dBlow Ref 43.00 dBn 0 dBn	Conserved Server and Server	Ang Type RMS Avg/Hold: 100100 Mkr2.21	(3) 3) 2 Mar (1) 2) 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	Frequency Auto Tunc Center Frec 28.35000000 GH2 Start Frec 27.975000000 GH2 Stop Frec 28.725000000 GH2
enter Freq 28.350000 ASS parameters Net parameters Parameters Net parameters Net par	average and a second and a seco	Arey Type RIS Avg/Hold: 100/100 Mkr2 2/ WWW.mithum.com	1933 Johnson 1, 2034 Head Data Head Data	Frequency Auto Tune Center Frec 28.3500000 GH Start Frec 27.97500000 GH Stop Frec 28.72500000 GH
Inter Freq 28.350000 ASS PREAMP NE 0 dilativ Ref 43.00 dBrt 10 Trace 1 Pass 1 11 Trace 1 Pass 1 12 Trace 1 Pass 1 13 Trace 1 Pass 1 14 Trace 1 Pass 1 15 Trace 1 Pass 1 16 Trace 1 Pass 1 17 Trace 1 Pass 1 18 Trace 1 Pass 1 19 Trace 1 Pass 1 10 Trace 1 Pass 1 17 Trace 1 Pass 1 18 Trace 1 Pass 1 19 Trace 1 Pass 1 10 Trace 1 Pass 1 11 Trace 1 Pass 1 12 Trace 1 Pass 1	Constant of Sector of	Avg Type RNS Avg/Hold: 100100 Mkr2 21	19 35 24 145 71 325 Tel Diversion 1925 Tel Diversion 1925 1946 1925 1945 1946 1925 1945 1946 1945 1945 1946	Frequency Auto Turne Center Frec 28.35000000 GHz Start Frec 28.7500000 GHz Stop Frec 28.72500000 GHz CF Step 75.000000 MHz Marc
enter Freq 28.350000 ASS PREAMP NE DEBUGN Ref 43.00 dBr 10 10 10 10 10 10 10 10 10 10	COMPL Seven (m) P(C), Fail Trig: Free Run If Genet.cov Trig: Free Run If Genet.cov Trig: Free Run WDW 3.0 MHz* Trig: Free Run #VEW 3.0 MHz* Trig: Free Run #VEW 3.0 MHz* Trig: Free Run #VEW 3.0 MHz* Trig: Free Run	Any Type RMS Avg/Hold: 100100 Mkr2 21 Sweep 1.3 Sweep 1.3	10 32 PARLET - 212 Tech D 22 - 212 Tech D 22 - 212 Tech D 22 - 212 Cet A visual 3.406 325 GHz -23.961 dBm -23.961 dBm -23.961 dBm -23.961 dBm -23.961 dBm	Center Free Biological Center Free 28 35000000 GHz Start Free 25 73700000 GHz Start Free 28 7260000 GHz 75 00000 GHz 75 00000 GHz 75 00000 GHz 76 0000 GHZ 76 00000 GHZ 76 0000 GHZ 76 00000 GHZ 76 00
enter Freq 28.350000 ASS PREAMP NE Odditeir Ref 43.00 dBr Odditeir Ref 1.00 dBr Odditeir Ref 28 Odditeir 1.00 dBr 28 Oditeir 1.00 dBr 28 Oditeir 1.00 dBr 28	Several and Severa	Any Type RMS Avg/Hold: 100100 MKr2 27 Avg/Hold: 100100 Sweep 1.3 Sweep 1.3	10 33 24 44 45 11 21 21 12 12 12 12 12 12 12 12 12 12	CF Stephensy Auto Tune Center Freq 28 35000000 GHz Start Freq 28 72600000 GHz Stop Freq 28 72600000 GHz Stop Freq CF Step 75 500000 MHz GHz CF Step 75 00000 MHz CF Step 70 0000 MHZ CF STEP 70 00000 MHZ CF STEP 70 0000 MHZ CF STEP 70 0000 MHZ CF STEP 7
enter Freq 28.350000 ASS PREAMP NEL 90 0 dBlow Ref 43.00 dBr 120 120 120 120 120 120 120 120	Conserved and a served and	Any Type RNS Avg/Hold: 100100 MKr2 27	19 33 24 44 24 11 21 24 11 24 24 12 24 24 24 24 24 24 24 24 24 24 24 24 24	Center Frequency Auto Tune Center Frequency Start Freq Start Freq Start Freq F5.500000 GHz F75.00000 GHz F75.00000 HHz F75.00000 HHz Start Freq GHz Start FreqUency

100 MHz, 3CC, High

Center F	PREAMP	NFE PNO: Fast IFGain:Low	Trig: Free Run #Atten: 16 dB	Avg Type: RMS Avg Hold: 100/100	TRACE 12 14 5 0 TYPE A WWWWWW DET A NN NN N	Frequency
10 dB/div	Ref 43.00) dBm		Mkr2 2	8.446 225 GHz -18.515 dBm	Auto Tune
33.0 Trac 22.0	e 1 Pass					Center Freq 28.350000000 GHz
3 00 7.00 .17 0				¢ ²		Start Freq 27.975000000 GHz
37.0 37.0 47.0		السمسالس	⁸	malana		Stop Freq 28.725000000 GHz
Start 27. Res BW	750 GHz 1.0 MHz	#VI	SW 3.0 MHz*	Sweep 1.3 FUNCTION FUNCTION WOTH	Stop 28.7250 GHz 33 ms (10001 pts) FUNCTION VALUE	CF Step 75.000000 MHz Auto Man
1 2 3 4 5		28.351 425 GHz 28.445 225 GHz	-29.509 dBm -18.515 dBm			Freq Offset 0 Hz
7 8 9						Scale Type









100 MHz, 4CC, High



5.4. RADIATED SPURIOUS EMISSIONS

Test Overview

The test frequency range is from 9 kHz to 200GHz. All out of band emissions are measured in a radiated test setup while the EUT is operating at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The conductive power or total radiated power of any emissions outside a licensee's frequency block shall be - 13dBm/1MHz.

FCC Rules

Test Requirements:

§ 30.203 Emission limits.

(a) The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be -13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.

(b)(1) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.

(2) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges as the design permits.

(3) The measurements of emission power can be expressed in peak or average values.

EIRP Test Procedures:

The measurement is performed in accordance with Section 5.7.4 of ANSI C63.26.

5.7.4 Spurious unwanted emission measurements

a) Set the spectrum analyzer start frequency to the lowest frequency generated by the EUT, without going below 9 kHz, and the stop frequency to the lower frequency covered by the measurements previously performed in 5.7.3. As an alternative, the stop frequency can be set to the value specified in 5.1.1, depending on the EUT operating range, if the resulting plot can clearly demonstrate compliance for all frequencies not addressed by the out-of-band emissions measurements performed as per 5.7.3.

b) When using an average power (rms) detector, ensure that the number of points in the sweep $\geq 2 \times$ (span / RBW). This may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the spectrum analyzer capabilities. This requirement does not apply to peak-detected power



measurements. When average power is specified by the applicable regulation, a peak-detector can be utilized for preliminary measurements to accommodate wider frequency spans. Any emissions found in the preliminary measurement to exceed the applicable limit(s) shall be further examined using a power averaging (rms) detector with the minimum number of measurement points as defined above.

c) The sweep time should be set to auto-couple for performing peak-detector measurements. For measurements that use a power averaging (rms) detector, the sweep time shall be set as described for out-of-band emissions measurements in item d) of 5.7.3.

d) Identify and measure the highest spurious emission levels in each frequency range. It is not necessary to remeasure the out-of-band emissions as a part of this test. Record the frequencies and amplitudes corresponding to the measured emissions and capture the data plots.

e) Repeat step b) through step d) for the upper spurious emission frequency range if not already captured by a wide span measurement performed as per the alternative provided in step a). The upper frequency for this measurement is defined in 5.1.1 as a function of the EUT operating range.

f) Compare the results with the corresponding limit in the applicable regulation.

g) The test report shall include the data plots of the measuring instrument display and the measured data.

TRP Test Procedures:

The measurement is performed in accordance with Section 4.4.3.3.2 of KDB 842590 v01r02 (2021-04).

- a) Align the EUT with a chosen xy-plane and the xz-plane of the antenna measurement coordinate system.
 NOTE 1 For harmonics and spurious emission frequencies which are beamforming as identified in exploratory scan, it may be required to align the orthogonal cuts to include the peak based on exploratory scans.
- b) Measure the EUT dimensions, i.e., depth (d), width (w), and height (h); see Figure A.1 in Appendix A.
- c) Calculate the spherical and cylindrical diameters (D and Dcyl) using Equations (A.1) and (A.2) (see Appendix A).
- d) For the highest frequency (smallest wavelength) of the frequency band measured, calculate the reference angular steps $\Delta\theta$ ref and $\Delta\phi$ ref using Equations (A.3) and (A.4).
- e) Set the grid spatial sampling step $\Delta \theta \leq \Delta \theta$ ref for the vertical angle and $\Delta \phi \leq \Delta \phi$ ref for the horizontal cut.
- f) For each emission frequency, measure the EIRP (as a sum of two orthogonal polarizations) at each spatial sampling step on the selected grid.
- g) For each emission frequency, calculate the average EIRP for both the cuts separately, and then take the average of these two average values.
- h) Add 2 dB as a correction factor to the averaged value computed in step g).
- i) If the TRP limit is exceeded, a third orthogonal cut in the yz-plane and using the Δθ angular step, can be added.
 Now, calculate the average values in all three cuts separately, and then take the average value of these three average values.
- j) Add 1.5 dB as a correction factor to the averaged value computed in step i).
- k) Evaluate the pass/fail decision by comparing TRP from step h) or step j) against the applicable TRP limit.



Note:

1. Spurious emission test is performed up to 200 GHz(up to 100 GHz for n258, n261) frequency according to section 5.1.1 of ANSI C63.26 -2015.

2. Measurement distance is applied far field condition on page 17.

3. All RSE's were measured with 1CC. It was determined that adding more CC's causes the overall amplitude of just 1CC to decrease, therefore, 1CC is the worst case for the purposes of spurious emissions measurements.

4. All RSE's were investigated in EN-DC/NR-DC mode and with 802.11 chipset active. It was determined that there is no new emission introduced by EN-DC/NR-DC mode, or the 802.11 chipset.

5. For EN-DC mode, n261 uses LTE B2, B4, B5, B12, B13, B48 and B66, n260 uses LTE B2, B5, B12, B13, B14, B30, B48 and B66, n258 uses LTE B2, B5, B12, B66 and B71 as anchor bands. For NR-DC mode, n261 uses NR n2, n5, n25, n41, n48, n66, and n77, n260 uses n2, n5, n12, n25, n30, n41, n48, n66 and n77, n258 band uses NR n2, n12, n25, n41, n66 and n77 as anchor bands.

6. LTE and FR1 anchor bands support default configuration and Tx hopping configuration. Both of which have been investigated. LTE B2 and NR n2 were used as a representative anchor bands for EN-DC and NR-DC investigations. There was no discernible difference in the spurious emission levels when using different LTE and NR FR1 anchor bands.

7. All factors except spectrum analyzer level are applied as correction factor each band in the analyzer and calculated in tabular data.

In this test, AFCL factor consists of antenna factor, cable loss, mixer loss, amplifier gain and duty correction. Emissions value is first converted by distance factor as follow.

Converted value (dBm) = Measured Value (dBuV) + 20 LOG(D)-104.77 Final spurious emissions result is calculated as follows. Spurious Emissions = Converted Value (dBm) + AFCL

8. Measurement RBW correction factor(Reference RBW : 1 MHz) The measured value in table is included the RBW correction factor.

10log(Reference RBW/Measured RBW) In case of 1 kHz RBW, correction factor is 30 dB. In case of 10 kHz RBW, correction factor is 20 dB. In case of 100 kHz RBW, correction factor is 10 dB.



9. Calculations

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses.

10. In case of 9 kHz to 30 MHz, the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.

11. All modes of operation were investigated and the worst case configuration results are reported.

- Mode : Stand alone, Simultaneous transmission scenarios
- Worst case : Stand alone



10. Corrction Factor

30 MHz	- 1 GHz	1 GHz ·	- 3 GHz	3 GHz -	18 GHz	18 GHz -	40 GHz	40 GHz -	200 GHz
Freq.	AFCL	Freq.	AFCL	Freq.	AFCL	Freq.	AFCL	Freq.	AFCL
(MHz)	(dB)	(MHz)	(dB)	(MHz)	(dB)	(GHz)	(dB)	(GHz)	(dB)
30	-13.52	1000	-5.61	3000	-9.26	18	-1.16	40	57.50
40	-12.79	1200	-4.86	4000	-7.02	18.5	-0.36	45	55.08
50	-12.27	1400	-4.17	5000	-4.28	19	-0.38	50	57.40
60	-12.94	1600	-4.47	6000	-3.60	19.5	-0.37	55	58.81
70	-14.68	1800	-4.38	7000	-2.10	20	-0.06	60	61.84
80	-17.12	2000	-3.16	8000	0.82	20.5	0.28	60	57.97
90	-18.16	2200	-1.04	9000	1.37	21	0.75	65	59.10
100	-16.95	2400	-1.47	10000	3.59	21.5	1.38	70	59.57
150	-12.28	2600	-1.35	11000	5.35	22	1.62	75	57.63
200	-15.37	2800	0.05	12000	4.96	22.5	2.12	80	60.02
250	-13.59	3000	0.74	13000	5.07	23	2.59	85	59.29
300	-12.08	-	-	14000	4.91	23.5	2.91	90	60.99
350	-11.13	-	-	15000	2.99	24	3.19	90	59.79
400	-9.77	-	-	16000	-0.43	24.5	3.94	95	61.82
450	-8.41	-	-	17000	5.19	25	4.03	100	61.24
500	-7.63	-	-	18000	15.40	25.5	3.84	105	61.72
550	-6.95	-	-	-	-	26	3.32	110	63.02
600	-5.41	-	-	-	-	26.5	3.67	115	62.24
650	-5.07	-	-	-	-	27	3.68	120	62.81
700	-4.05	-	-	-	-	27.5	3.31	125	63.47
750	-3.36	-	-	-	-	28	3.27	130	63.54
800	-2.67	-	-	-	-	28.5	3.51	135	64.61
850	-2.13	-	-	-	-	29	4.10	140	64.75
900	-1.22	-	-	-	-	29.5	4.24	140	67.62
950	-0.09	-	-	-	-	30	4.54	145	65.02
1000	0.82	-	-	-	-	30.5	4.78	150	66.39
-	-	-	-	-	-	31	5.11	155	64.28
-	-	-	-	-	-	31.5	5.34	160	64.68
-	-	-	-	-	-	32	5.26	165	65.08
	-	-	-	-	-	32.5	6.15	170	67.99
	-	-	-	-	-	33	6.38	175	65.92
-	-	-	-	-	-	33.5	7.07	180	65.55
	-	-	-	-	-	34	7.25	185	67.44
	-	_	_	_	-	34.5	6.33	190	66.83
-	-	-	-	-	-	35	6.87	195	65.87



30 MHz	- 1 GHz	1 GHz ·	- 3 GHz	3 GHz -	18 GHz	18 GHz	- 40 GHz	40 GHz -	200 GHz
Freq. (MHz)	AFCL (dB)	Freq. (MHz)	AFCL (dB)	Freq. (MHz)	AFCL (dB)	Freq. (GHz)	AFCL (dB)	Freq. (GHz)	AFCL (dB)
-	-	-	-	-	-	35.5	7.46	200	67.01
-	-	-	-	-	-	36	7.71	-	-
-	-	-	-	-	-	36.5	8.79	-	-
-	-	-	-	-	-	37	9.71	-	-
-	-	-	-	-	-	37.5	10.67	-	-
-	-	-	-	-	-	38	11.17	-	-
-	-	-	-	-	-	38.5	12.22	-	-
-	-	-	-	-	-	39	14.60	-	-
-	-	-	-	-	-	39.5	15.82	-	-
-	-	-	-	-	-	40	16.22	-	-

*Correction Factor= Antenna Factor + Cable Loss - Amp. Gain + (Harmonic Mixer Conversion Loss)





Test Results: Tabular Data of Radiated Spurious Emissions DFT-s OFDM (SISO or SISO Dual)

1. n258a

					30	MHz ~ 1 GH	Iz				
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
		50	24275.04	Low	H+V	Closed	BPSK	V	37.35	3	-57.88
(K)	1	50	24350.04	Mid	H+V	Closed	BPSK	V	36.73	3	-58.50
(14)		50	24424.92	High	H+V	Closed	BPSK	V	32.76	3	-62.46

					1	GHz ~ 3 GH	z				
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
_		50	24275.04	Low	H+V	Closed	BPSK	V	68.99	3	-26.24
(K)	1	50	24350.04	Mid	H+V	Closed	BPSK	V	67.99	3	-27.23
(11)		50	24424.92	High	H+V	Closed	BPSK	V	67.86	3	-27.36

	3 GHz ~ 18 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
_		50	24275.04	Low	H+V	Closed	BPSK	Н	51.73	3	-43.49			
0 (K)	1	50	24350.04	Mid	H+V	Closed	BPSK	Н	54.93	3	-40.29			
(13)		50	24424.92	High	H+V	Closed	BPSK	Н	53.59	3	-41.64			

	18 GHz ~ 23.75 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
_		50	24275.04	Low	H+V	Closed	BPSK	V	66.58	3	-28.65			
(K) 0	1	50	24350.04	Mid	H+V	Closed	BPSK	Н	64.94	3	-30.29			
(14)		50	24424.92	High	H+V	Closed	BPSK	V	63.10	3	-32.13			



	24.90 GHz ~ 40 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
•		50	24275.04	Low	H+V	Closed	BPSK	Н	68.64	3	-26.59			
0 (K)	1	50	24350.04	Mid	H+V	Closed	BPSK	Н	68.03	3	-27.20			
(1)		50	24424.92	High	H+V	Closed	BPSK	Н	68.69	3	-26.54			

40 GHz ~ 60 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)		
		50	24275.04	Low	H+V	Closed	BPSK	V	79.49	1.5	-21.76		
0 (K)	1	50	24350.04	Mid	H+V	Closed	BPSK	V	78.49	1.5	-22.76		
(17)		50	24424.92	High	H+V	Closed	BPSK	V	78.48	1.5	-22.77		

	60 GHz ~ 90 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
		50	24275.04	Low	H+V	Closed	BPSK	V	71.92	1	-32.85			
0 (K)	1	50	24350.04	Mid	H+V	Closed	BPSK	V	72.14	1	-32.63			
(11)		50	24424.92	High	H+V	Closed	BPSK	Н	72.12	1	-32.65			

	90 GHz ~ 100 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
		50	24275.04	Low	H+V	Closed	BPSK	Н	75.01	1	-29.76			
(K) 0	1	50	24350.04	Mid	H+V	Closed	BPSK	V	74.78	1	-29.99			
(14)		50	24424.92	High	H+V	Closed	BPSK	V	74.82	1	-29.95			



DFT-s OFDM (SISO or SISO Dual) Plot data of Radiated Spurious Emissions

















Test Results: Tabular Data of Radiated Spurious Emissions DFT-s OFDM (SISO or SISO Dual)

2. n258b

	30 MHz ~ 1 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
		50	24775.08	Low	H+V	Half-folded	BPSK	V	38.70	3	-56.53			
(K) 0	1	50	24999.96	Mid	V	Open	QPSK	V	34.33	3	-60.90			
(14)		50	25224.96	High	V	Open	BPSK	V	35.09	3	-60.14			

	1 GHz ~ 3 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
		50	24775.08	Low	H+V	Half-folded	BPSK	V	67.84	3	-27.39			
(K) 0	1	50	24999.96	Mid	V	Open	QPSK	V	68.25	3	-26.98			
(14)		50	25224.96	High	V	Open	BPSK	V	68.82	3	-26.41			

	3 GHz ~ 18 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
_		50	24775.08	Low	H+V	Half-folded	BPSK	н	59.36	3	-35.87			
(K) 0	1	50	24999.96	Mid	V	Open	QPSK	Н	59.97	3	-35.26			
(14)		50	25224.96	High	V	Open	BPSK	V	59.56	3	-35.67			

Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
		50	24775.08	Low	H+V	Half-folded	BPSK	V	59.23	3	-36.00
(K) 0	1	50	24999.96	Mid	V	Open	QPSK	V	57.86	3	-37.36
(14)		50	25224.96	High	V	Open	BPSK	V	59.72	3	-35.50



	25.70 GHz ~ 40 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
_		50	24775.08	Low	H+V	Half-folded	BPSK	Н	68.15	3	-27.08			
0 (K)	1	50	24999.96	Mid	V	Open	QPSK	Н	69.36	3	-25.86			
(14)		50	25224.96	High	V	Open	BPSK	V	65.06	3	-30.17			

	40 GHz ~ 60 GHz													
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
•		50	24775.08	Low	H+V	Half-folded	BPSK	V	80.83	1.5	-20.42			
(K)	1	50	24999.96	Mid	V	Open	QPSK	V	73.29	1.5	-27.96			
(11)		50	25224.96	High	V	Open	BPSK	V	72.00	1.5	-29.25			

	60 GHz ~ 90 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		50	24775.08	Low	H+V	Half-folded	BPSK	V	72.47	1	-32.30				
(K) 0	1	50	24999.96	Mid	V	Open	QPSK	Н	72.20	1	-32.57				
(13)		50	25224.96	High	V	Open	BPSK	V	71.84	1	-32.93				

	90 GHz ~ 100 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		50	24775.08	Low	H+V	Half-folded	BPSK	н	75.11	1	-29.66				
(K) 0	1	50	24999.96	Mid	V	Open	QPSK	Н	77.62	1	-27.15				
(14)		50	25224.96	High	V	Open	BPSK	V	74.59	1	-30.18				





DFT-s OFDM (SISO or SISO Dual) Plot data of Radiated Spurious Emissions















F-TP22-03 (Rev. 06)



Test Results: Tabular Data of Radiated Spurious Emissions DFT-s OFDM (SISO or SISO Dual)

3. n260

	30 MHz ~ 1 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		100	37050	Low	H+V	Closed	16QAM	V	36.85	3	-58.38				
0 (K)	1	50	38499.96	Mid	H+V	Closed	BPSK	V	34.95	3	-60.28				
(14)		50	39975.00	High	H+V	Open	BPSK	V	32.83	3	-62.40				

	1 GHz ~ 3 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		100	37050	Low	H+V	Closed	16QAM	Н	67.95	3	-27.28				
(K)	1	50	38499.96	Mid	H+V	Closed	BPSK	V	68.24	3	-26.99				
(11)		50	39975.00	High	H+V	Open	BPSK	V	68.10	3	-27.13				

	3 GHz ~ 18 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		100	37050	Low	H+V	Closed	16QAM	Н	51.43	3	-43.80				
(K)	1	50	38499.96	Mid	H+V	Closed	BPSK	Н	54.16	3	-41.07				
(11)		50	39975.00	High	H+V	Open	BPSK	Н	58.39	3	-36.84				

	18 GHz ~ 36.6 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		100	37050	Low	H+V	Closed	16QAM	Н	61.57	3	-33.66				
(K) 0	1	50	38499.96	Mid	H+V	Closed	BPSK	V	61.38	3	-33.85				
(14)		50	39975.00	High	H+V	Open	BPSK	Н	61.30	3	-33.93				



	40 GHz ~ 60 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		100	37050	Low	H+V	Closed	16QAM	V	72.32	1.5	-28.93				
0 (K)	1	50	38499.96	Mid	H+V	Closed	BPSK	Н	72.28	1.5	-28.97				
(13)		50	39975.00	High	H+V	Open	BPSK	Н	76.13	1.5	-25.12				

60 GHz ~ 90 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
_		100	37050	Low	H+V	Closed	16QAM	V	72.38	1	-32.39			
0 (K)	1	50	38499.96	Mid	H+V	Closed	BPSK	V	72.23	1	-32.54			
(17)		50	39975.00	High	H+V	Open	BPSK	V	72.48	1	-32.29			

90 GHz ~ 140 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)			
_		100	37050	Low	H+V	Closed	16QAM	Н	79.21	1	-25.56			
0 (K)	1	50	38499.96	Mid	H+V	Closed	BPSK	V	86.17	1	-18.60			
		50	39975.00	High	H+V	Open	BPSK	Н	77.54	1	-27.23			

	140 GHz ~ 170 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
_		100	37050	Low	H+V	Closed	16QAM	V	80.29	0.5	-30.50				
(K)	1	50	38499.96	Mid	H+V	Closed	BPSK	V	80.85	0.5	-29.94				
(14)		50	39975.00	High	H+V	Open	BPSK	V	79.96	0.5	-30.83				

	170 GHz ~ 200 GHz														
Ant. (Patch)	CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	EUT Position	Modulation	Ant. Pol. [H/V]	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)				
		100	37050	Low	H+V	Closed	16QAM	V	80.47	0.5	-30.32				
(K) 0	1	50	38499.96	Mid	H+V	Closed	BPSK	V	80.53	0.5	-30.26				
(11)		50	39975.00	High	H+V	Open	BPSK	Н	79.78	0.5	-31.01				





DFT-s OFDM (SISO or SISO Dual) Plot data of Radiated Spurious Emissions





