

Out of band measurement Test Band = GSM/GPRS1900 Test Mode = TM1 Test Channel = MCH

Agilent Spectrum Analyzer - Swept SA					
₩ RF 50 Ω <u>A</u> DC Marker 1 11.961000 kHz		INT REF	ALIGNAUT	0 10:24:38 AM Jun 03, 2014 r TRACE 1 2 3 4 5 6	Peak Search
10 dB/div Ref 0.00 dBm	PNO: Far 😱 IFGain:Low 🕺	l rig: Free Run Atten: 40 dB	Avg Hold:>100/100	Mkr1 11.961 kHz -40.533 dBm	Next Peak
-10.0					Next Pk Right
-20.0				-33.00 dBm	Next Pk Left
-40.0 WWWWWWWWWWWWWWWWWWW					Marker Delta
-60.0	wame and a second	mp. hohn and	ᡐᡄᢪᢆᠶᡏᢦᠯᠬᠯᡐᠮᡢᡀ᠉ᡌᢥᠬᡆᢩᠰᡪᢧ	n mangalingayan sharrya	Mkr→CF
-80.0					Mkr→RefLvl
Start 9.00 kHz #Res BW 1.0 kHz	#VBW 1	0 kHz	Swee	Stop 150.00 kHz 0 130 ms (1001 pts)	More 1 of 2
MSG			STAT		

Agil	ent Spectr	rum Analyz	er - Swept SA								
ixi Ma	rker 1	RF 150.0	50 Ω <u>A</u> DC 00000 kH	Z	Tuin Fue		Avg Type	LIGNAUTO	10:34:17 / TRA	M Jun 03, 2014 E <b>1 2 3 4 5 6</b>	Peak Search
10	dB/div	Ref 0.	00 dBm	PNO: Fast 🗣 IFGain:Low	#Atten: 4	0 dB	Avginoia:	177100	Mkr1 -42.8	150 kHz 36 dBm	Next Peak
-10.											Next Pk Right
-20. -30.										-33.00 dBm	Next Pk Left
-40. -50.	0 <mark>1</mark> 										Marker Delta
-60. -70.	o honord	w <sup>r</sup> Wr <sup>W</sup> Ww	Laboratedita	munulputruru	Yuluna (anti <mark>n</mark> ak	Manakana ng Kalakana ng Ka	Nyutul <sub>ee</sub> yuu <sub>u</sub> un <mark>i</mark>	ylebery/arturiog	yhtyshyl-holygaya	จมานอาการประบุระบุ	Mkr→CF
-80. -90.	o ——										Mkr→RefLvl
Sta #R	art 150 es BW	kHz 10 kHz		#VBM	/ 30 kHz			Sweep	Stop 3 285 ms (	0.00 MHz (1001 pts)	More 1 of 2
MSG								STATUS	3		

Marker 19	RF 50 Ω AC 84.625500000 I	MHz PNO: Fast 🍙 IFGain:Low	INT R Trig: Free Rur #Atten: 40 dB	Avg Ty Avg Ho	ALIGN AUTO ype: Log-Pwr bid: 96/100	08:07:19 PM May 30, 2014 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Peak Search
10 dB/div	tef 30.00 dBm				Mkr	1 984.626 MHz -49.583 dBm	NextPeak
20.0							Next Pk Right
10.0 0.00							Next Pk Left
-10.0						-13.00 dBm	Marker Delta
-30.0							Mkr→CF
-40.0 -50.0	ly, a finisha a san sa	, a jo za poslednji plana i kli i kovel	fur stats held die dat held som	stantaneoust a belg as gitted a det	a shi a kida ta linda tika	diver the form the followed of the other	Mkr→RefLvl
-60.0							More
Start 30.0 M #Res BW 10	Hz 0 kHz	#VBW	300 kHz		Sweep 9	Stop 1.0000 GHz 3.3 ms (40001 pts)	1 of 2

Agilent Spectr	um Analyzer - Swept SA						
IXI	RF 50 Ω AC		INT REF	ALIGN	VAUTO 08:13:35	PM May 30, 2014	Peak Search
Marker 1	1.88012400000	IO GHZ	a: Free Run	Avg Type: Log Avg/Hold: 27/10	<b>3-PWr</b> IRA 00 TV	/PE M WARAWAR	r our oouron
		IFGain:Low #At	ten: 40 dB			DET P N N N N N	
				N	Akr1 1 880 1	124 GH7	Next Peak
40 10/10	Dof 20.00 dBm				23.2	67 dBm	
	Rel 30.00 ubili						
	· · · • · · · · · · · · · · · · · · · ·						
20.0							Next Pk Right
							20
10.0							
10.0							
							Next Pk Left
0.00							
-1.0.0						-13.00 dBm	
							Marker Delta
-20.0							
-30.0							
							Mkr→CF
-40.0							
50.0	and the standard stan	helding	ووالرؤول ووقا وماطعه		يرينونون واللارين		
and the second s	And the second	The second s	and the River of the Internet Street of the second	And Andrew Contractions	a series and the series of the series of the	and and the state of the state	Mkr→RefLvl
in black		A D A A A A A A A A A A A A A A A A A A					
-60.0							
							More
Start 30 N	1Hz				Stop 12	750 GHz	1 of 2
#Res BW	100 kHz	#VBW 300	kHz	SW	veep 1.22 s (4	10001 pts)	
MSC					STATUS		
mou					314105		



Out of band measurement Test Band = GSM/GPRS1900 Test Mode = TM1 Test Channel = HCH

							Swept SA	um Analyzer - Sv	gilent Spect
Jun 03, 2014 1 2 3 4 5 6 Peak Search	10:25:11 AM Jun 03, 201 TRACE 1 2 3 4 5	ALIGNAUTO : Log-Pwr	Avg Type	INT REF			) kHz	9.564000	v Marker 1
P N N N N N	DET PNNN	>100/100	Avg Hold	eRun )dB	Trig: Free #Atten: 40	PNO: Far 🖵 FGain:Low			
64 kHz NextPeal 4 dBm	Mkr1 9.564 kH: -38.844 dBn	ſ					dBm	Ref 0.00 d	10 dB/div
Next Pk Righ									-10.0
Next Pk Let									20.0
-33 00 dBm	-33.00 dBr								40.0 1 40.0 1
				n - 40 - 100	᠕ᡊᠼ᠕᠋᠕ᢔᡁᡒ	www.www.	munhuk	white when we	50.0
ฬๅใ <sub>หญษ</sub> ง Mkr→C	Vopurantilly Mari	<sup>to</sup> wnyNf <sub>wer</sub> /V <sup>4</sup>	՟՟ՠ՟ՠ՟ՠֈՠֈֈՠ	are to a flar					70.0
Mkr→RefL									80.0
Mor									0.0
0.00 kHz 1 of 001 pts)	Stop 150.00 kHz 130 ms (1001 pts	Sweep			10 kHz	#VBW		kHz 1.0 kHz	tart 9.00 Res BW
	3	STATUS							SG

Agile	nt Spectru	ım Analyzer	- Swept SA								
Ma	rker 1	RF 150.00	50 Ω <u>Λ</u> DC 0000 kHz	PNO: Fast 🕞	Trig: Fre	INT REF	Avg Type Avg Hold:	ALIGN AUTO : Log-Pwr 27/100	10:34:35/ TRA	AM Jun 03, 2014 CE 123456 PE MWWWWWWW	Peak Search
<u>10 c</u>	IB/div	Ref 0.0	0 dBm	IFGain:Low	#Atten: 4	0 dB			Mkr1 -42.3	150 kHz 44 dBm	Next Peak
-10.0											Next Pk Right
-20.0 -30.0										-33.00 dBm	Next Pk Left
-40.0 -50.0											Marker Delta
-60.0 -70.0	with the start of	n lither way	munn	ununu	nanarana an	mphrolenderater	yhyhisiyyyddary	milandomilin	alphantan	ngulrundurtytt	Mkr→CF
-80.0											Mkr→RefLvl
Sta #Re	rt 150 k es BW 7	(Hz 10 kHz		#VBW	/ 30 kHz			Sweep	Stop 3 285 ms (	0.00 MHz (1001 pts)	More 1 of 2
MSG								STATUS	S .		

Marker 1 997.52650000	INT REF PNO: Fast Trig: Free Run IFGain:Low #Atten: 40 dB	ALIGNAUTO D8:25:17 PM May 30, 2014 Avg Type: Log-Pwr Avg Hold: 11/100 TYPE MARKED DET P NINNIN	Peak Search
10 dB/div Ref 30.00 dBm		Mkr1 997.527 MHz -49.306 dBm	Next Peak
20.0			Next Pk Right
0.00			Next Pk Left
-10.0		-13.00 dBm	Marker Delta
-30.0			Mkr→CF
-40.0	Here was not an estimated in the second and defined in the set is a family	n die state oor gegestelikelikelikelikelikelikelikelikelikelik	Mkr→RefLvl
-60.0	N DE PLAN HER DE LE D NO DE PLAN HER DE LE D	i yang barang pinan dalam kan mana kan pina kan pina kan pina barang barang kan barang barang barang barang bar	More
Start 30.0 MHz #Res BW 100 kHz	#VBW 300 kHz	Stop 1.0000 GHz #Sweep 3.00 s (40001 pts)	1 of 2

Agilent Spectr	rum Analyzer -	Swept SA								
LXI	RF 5	iOΩ AC		1	INT REF		ALIGN AUTO	08:16:12 P	M May 30, 2014	Paula
Marker 1	1.90969	8000000	GHz			Avg Type	: Log-Pwr	TRAC	E 123456	Save
			PNO: Fast 😱	Trig: Free	Run	Avg Hold:	17/100	TYP	P N N N N N	
			IFGain:Low	#Atten: 40	ldB			Dt		
							Miked	1 000 6	00 CU7	State►
and a second second							IVINI	1.303 0	30 GHZ	
10 dB/div	Ref 30.0	0 dBm						23.3	46 aBm	
Log	. 1									N
	· · · • '									Trace
										Tace
20.0										(+ State)
10.0										
10.0										
0.00										
0.00										
-10.0										
10.0									-13.00 dBm	Data
										(Export) ►
-20.0										Trace 1
-30.0										Screen
										Image
-40.0										
Server a		a addition as to Marine		e e booraflèr	Land deal 1				L. H. Mar M.	
-50.0		and a filler	and the second states of the	telle er tra te se de	Inchi an numbre	A DESCRIPTION OF THE R. P.	der ander fingen ander er e	a statistica and a statist	ingen Lander and the second	
and t	And a supplication of the second	Contraction of the local distance	States of the state of the state	Product day with the start	and the second	and distances		a a substance of the second	ALCONT NUMBER	
-60.0										
Start 30 N	/Hz			,	^			Stop 12	.750 GHz	
#Res BIM	100 kHz		#VBM	300 kHz			Sween	1 22 6 /4	0001 nts)	
	100 101/2			000 1012			oweep	1122 3 (4	eeer pro/	
MSG							STATUS			



Band edge measurement Test Band = GSM/GPRS1900 Test Mode = TM1 Test Channel = LCH/HCH





Out of band measurest Band = EGE	surement			
Test Mode = TM2	7			
Test Channel = I	- CH			
	.011			
Agilent Spectrum Analyzer - Swept SA				
₩ RF 50 Ω ▲ DC	INT	REF ALIGNAUTO Avg Type: Log-Pwr	10:25:32 AM Jun 03, 2014 TRACE 1 2 3 4 5 6	Peak Search
	PNO: Far Trig: Free Ru IFGain:Low #Atten: 40 dE	in Avg Hold: 80/100 3	TYPE MWWWWW DET P N N N N N	
10 dB/div Ref 0.00 dBm			Mkr1 9.000 kHz -39.952 dBm	NextPeak
-10.0				Next Pk Right
-20.0				
				Next Pk Left
-30.0			-33.00 dBm	
-40.0				
500 What have a				Marker Delta
1.0.0	www.m.m.m.m.			
-60.0	1	ᢥᠬᢥᡐ᠋᠕ᡙᠳ᠋ᡬᡀᡀᡘ᠋᠕ᢊᠺᢢᡆ᠕᠋᠁ᡀ᠁	mannumment	Mkr→CF
-70.0				
00.0				
-00.0				Mkr→RefLvl
-90.0				
Stort 0.00 kHz			Stop 150 00 kHz	More
#Res BW 1.0 kHz	#VBW 10 kHz	Sweep	130 ms (1001 pts)	1 01 2
MSG		STATU	3, <sup></sup>	

							Swept SA	rum Analyzer - S	Agilent Spect
Peak Search	10:34:50 AM Jun 03, 2014 TRACE 1 2 3 4 5 6	ALIGNAUTO e: Log-Pwr	Avg Type	INT REF			οΩΟ kHz	RF 50	<mark>/</mark> //arker 1
NextPeak	Mkr1 150 kHz	l: 18/100	Avg Hold	e Run 0 dB	Trig: Free #Atten: 4	PNO: Fast 😱 IFGain:Low	dBm	Pef 0 00	
Next Pk Right									-10.0
Next Pk Left									-20.0
Marker Delta									-40.0
Mkr→CF	mpahartalublamtircaptarti	www.yuwwa	yyuuhintlein	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	luhantuw	<sub>11</sub> /11/14/2014/2014/14/14/14/14/14/14/14/14/14/14/14/14/1	handandada	whithway	-60.0
Mkr→RefLvl									-80.0
More 1 of 2	Stop 30.00 MHz 285 ms (1001 pts)	Sweep			30 kHz	#VBW		kHz 10 kHz	Start 150 #Res BW
		STATUS							MSG

Marker 1 478.40675000	PNO: Fast Trig: Free Run IFGain:Low #Atten: 40 dB	Avg Hold: 5/100		
10 dB/div Ref 30.00 dBm		Mkı	1 478.407 MHz -50.093 dBm	NextPeak
20.0				Next Pk Right
0.00				Next Pk Left
-10.0			-13.00 dBm	Marker Delta
-20.0				
-40.0				Mkr→CF
-50.0 Atalian algoritation and a filled and the statements	in dens an older and any familie of a constructed by the set of a set of the	Buches alle stations and a scholar station and a scholar station and the station of the station of the scholar sta	and analidebooling for always of a distance of a second state of the second state of t	Mkr→RefLvl
Start 30.0 MHz			Stop 1.0000 GHz	More 1 of 2

Agilent Spectru	um Analyzer - Swept SA					
LXI	RF 50 Ω AC		INT REF	ALIGN AUTO	08:11:22 PM May 30, 201	4 Back Secret
Marker 1	1.85023200000	0 GHz	Avg	Type: Log-Pwr	TRACE 1 2 3 4 5	Feak Search
		PNO: Fast C Trig: Fre	e Run Avg	Hold: 27/100	DET P N N N N	
		IFGain:Low #Atten: 4	0 dB		DET	
				Mkr1	1 850 232 GH	Next Peak
					22 002 dDn	
10 dB/div	Ref 30.00 dBm				20.880 UDI	
						A
20.0						Next Pk Right
200 (0.945						
10.0						
0.00						Next Pk Left
0.00						
-10.0						
10.0					-13.00 dB	
						Marker Deita
-20.0						
a canada						
-30.0						
						MIKT-CF
-40.0						
-40.0						
	and the second second	and a second second				1 m
-50.0	and the little state of the little state of the state of	and the second	Alter A alter the state of the second		فالتباديلية وعناليلي ورجافهم	Mkr. Doff vi
	A CONTRACTOR OF	the second s	which man is the state of the surface of the	and the second	the state of the second se	IVIKI → REI LVI
and a state of the						
-60.0						
						More
Start 30 M	Hz			~	Stop 12,750 GH	1 of 2
#Res BW	100 kHz	#VBW 300 kHz		Sweep	1.22 s (40001 pts	
				onreep	in the property of the second	
MSG				STATUS	5	





#VBW 10 kHz

Next Peak

Mkr→CF

Mkr→RefLvl

Stop 150.00 kHz Sweep 130 ms (1001 pts)

More

1 of 2

	10:35:08 AM Jup 03, 2014	ALIGNALITO		INT REE		- Swept SA	um Analyzer -	lent Spectr
Peak Search	TRACE 1 2 3 4 5 6 TYPE MWWWW	Type: Log-Pwr Hold: 15/100	Avg Avg	Trig: Free Run	PNO: East	0000 kHz	150.000	arker 1
NextPeak	Mkr1 150 kHz -42.764 dBm			¥Atten: 40 dB	FGain:Low	ı dBm	Ref 0.00	dB/div
Next Pk Right								g .0
Next Pk Left	-33.00 dBm							.0
Marker Delta								.0
Mkr→CF	Modernethrodulaspilanoven	แลมหน้านี้จะกำหน่าง	mand	helphallandadhara	e-horana da ana ana ana ana ana ana ana ana a	fellinadembagadem	whitehau	.0
Mkr→RefLvl								.0
More 1 of 2	Stop 30.00 MHz	Sween		0 kHz	#\/B)A( 3		kHz 10 kHz	art 150

Start 9.00 kHz #Res BW 1.0 kHz

Marker 1 37.008250000 Ι	MHz PNO: Fast IFGain:Low #Atten: 40 dB	ALIGNAUTO D8:26:23 PM May 30, 2014 Avg Type: Log-Pwr TRACE 22:45 Avg Hold: 8/100 TYPE DET PINNINN	Peak Search
10 dB/div Ref 30.00 dBm		Mkr1 37.008 MHz -46.706 dBm	Next Peak
20.0			Next Pk Right
0.00			Next Pk Left
-10.0		-13.00 dBm	Marker Delta
-30.0			Mkr→CF
-40.0	e <mark>( her k og at there het sky ble et bet te k</mark> tør sterellerer ble <b>å all ble s</b> terette program	na here gill alfeden system sond for der och bestedet i verbrigt i der beiter sonstellet i der	Mkr→RefLvi
-60.0			More
Start 30.0 MHz #Res BW 100 kHz	#VBW 300 kHz	Stop 1.0000 GHz #Sweep 3.00 s (40001 pts)	1 of 2

Agilent Spect	rum Analyzer - Swept SA					
LXI	RF 50 Ω AC		INT REF	ALIGNAUTO	08:15:16 PM May 30, 2014	Dook Search
Marker 1	1.8801240000	00 GHz	Av	g Type: Log-Pwr	TRACE 1 2 3 4 5 6	Feak Search
		PNO: Fast 🖵 Trig: Fre	e Run Av	g Hold: 29/100	DET P N N N N N	
		IFGain:Low #Atten: 4	0 dB		DET	
				Mkr1	1.880 124 GHz	NextPeak
40.151.1	D.6.00.00 dD				22 576 dBm	
	Ref 30.00 dBm				22.070 0011	
	<u>_1</u>					
						Next Dk Dight
20.0						Next PK Right
10.0						
10.0						
						Nevt Dk Left
0.00						NCALL K ECH
-10.0					-13 00 dBm	
						Marker Delta
20.01						
-20.0						
-30.0						
						Mkr→CF
						receiptor repre-
-40.0						
-50.0	الكرية والتكافيل والراب ومراديات والمراج	القائمة واجتر بعائد والجريبا وراجي والمتعاق	with the first sector ( and ).		ومعاوينا بالمقدون والمرجع والمساور والمعادي	
. Judition	State of the second	and the second se	u ha that the life before the states of a	a subfit of hims should show the	and a set the set best in the set	Mkr→Ref Lvi
- ALABAMIC	allo, d	and the second se		A Latin man a statistical data in the		
-60.0						
						Software -
						More
Start 30 M	VIHz			~	Stop 12,750 GHz	1 of 2
#Res BW	100 kHz	#VBW 300 kHz		Sween	1 22 s (40001 nts)	
MSG				STATUS		





Mar	ker 1 150.000000 kHz			Type: Log-Pwr	10:35:25 AM Jun 03, 2014 TRACE 1 2 3 4 5 6	Peak Search
10 d	Bidiy Ref 0.00 dBm	PNO: Fast 🖵 Trig: Free IFGain:Low #Atten: 40	⊧Run Avg )dB	Hold: 16/100	Mkr1 150 kHz -42.229 dBm	NextPeak
-10.0						Next Pk Right
-20.0 -30.0					-33.00 dBm	Next Pk Left
-40.0 -50.0						Marker Delta
-60.0 -70.0	Hugenan Mitchigen Land and Mary An	dwyWarynalwryddHunHymlandu	handalalangaaraan	nd locul and shall	hapula-shadilmuk,dhanradiryt-shah	Mkr→CF
-80.0						Mkr→RefLvl
Stai #Re	rt 150 kHz s BW 10 kHz	#VBW 30 kHz		Sweep	Stop 30.00 MHz 285 ms (1001 pts)	More 1 of 2
MSG				STATUS	; 	

Marker 1 896.8405000	PNO: Fast FRO: Fast IFGain:Low #Atten: 40 dB	Avg Type: Log-Pwr Avg Hold: 6/100	08:26:36 PM May 30, 2014 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Peak Search
10 dB/div Ref 30.00 dBn	1	Mkr	1 896.841 MHz -49.766 dBm	NextPeak
20.0				Next Pk Right
				Next Pk Left
-10.0			-13.00 dBm	Marker Date
-20.0				Marker Deita
-30.0				Mkr→CF
-50.0	richt weinen zie ein wie einferfeligt einfere hat die beitere liefere in die state zu	l laite anna dean te cann dillacte féinn thichte		Mkr→RefLvl
-60.0	n na provinske pri na procession de pri kan de senten en e	y na	a farar (a h i gana) a na darih ji na jina jina .	More
Start 30.0 MHz #Res BW 100 kHz	#VBW 300 kHz	#Sweep	Stop 1.0000 GHz 3.00 s (40001 pts)	1 of 2

Agilen	t Spectri	ım Analyze	r - Swept S	4							
L)XI		RF	50 Ω AC			INT REF		ALIGN AUTO	08:16:51 P	M May 30, 2014	Back Secret
Mar	ker 1	1.9096	5980000	000 GHz			Avg Type	: Log-Pwr	TRAC	E 123456	Feak Search
				PNO: Fast 🕞	Trig: Free	Run	Avg Hold:	17/100	TY	P N N N N N	
				IFGain:Low	#Atten: 40	D dB			Di		
								Mkr1	1 909 6	98 GH7	NextPeak
								INTER 1	02.0	14 dBm	
10 dE	3/div	Ref 30	.00 dBm						20.0	14 ubm	
LOG			1								
20.0											Next Pk Right
											223
10.0		_									
											Next Pk Left
0.00											
-10.0											
10.0										-13.00 dBm	
											Marker Delta
-20.0											
-30.0											NU. 05
											MKr→CF
40.0											
-40.0											ři – – – – – – – – – – – – – – – – – – –
				ata se la com							
-50.0	1 14	dis. address	and the second second	All and the second second second		Alighter a distant for	and at the later of the	Leta a like a stall	al a barren a barren a a ta	and a state of the	Mkr . Dofl vi
	deline and a		and the second second	and the second second	and the second strength of the second strengt	and a second	in dealer .		A Lost 1. market in	and a second second second	WIKI→KEI LVI
	and the set	il in the second se		Marrie and And			and the second second	A Statement of the	Les al la serie de la serie		
-60.0											
											More
Star	t 30 M	Hz		^					Stop 12	.750 GHz	1 of 2
#Res	BW	100 kHz		#VBW	300 kHz			Sween	1.22 \$ (4	0001 pts)	
										of the broad	
MSG								STATUS			
	_										



Band edge measurement Test Band = EGPRS1900 Test Mode = TM2 Test Channel = LCH/HCH





Out of band measurement Test Band = WCDMA1900 Test Mode = TM3 Test Channel = LCH

Agilent Spectr	rum Analyzer - Swept SA								
Marker 1	RF 50 Ω <u>A</u> DC		I	NT REF	Avg Type	ALIGNAUTO	10:27:07 A TRAC	M Jun 03, 2014	Peak Search
		PNO: Far 😱 IFGain:Low	Trig: Free #Atten: 40	Run dB	Avg Hold:	>100/100	TYP DE		Nevt Peak
10 dB/div	Ref 0.00 dBm					I	41.1′′′′′′	282 kHz 16 dBm	NEXTFEAK
-10.0									Next PK Right
-20.0									
-30.0								-33.00 dBm	Next Pk Left
40.0									
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Mond								Marker Delta
-50.0	" " " " " " " " " " " " " " " " " " "	Mul marth	1 n						
-60.0		- ••• ••• •••	way to take	ᠰᠾᢛᡗᢩ᠕ᡔ᠉ᡯ	ฬนาตาญกาษท	marynahu	www.www.	www.	Mkr→CF
-70.0							· ·		
-80.0									Mkr. Doff vi
									wiki → Rei Lvi
-90.0									More
Start 9.00	) kHz						Stop 15	0.00 kHz	1 of 2
#Res BW	1.0 kHz	#VBW	10 kHz			Sweep	130 ms (	1001 pts)	
MSG						STATUS			

Agilent S	Spectrum	Analyzer - S	wept SA								-
ixi Marke	er 1 1	RF 50	Ω <u>∧</u> ⊡⊂ 000 kHz			INT REF	Avg Type	ALIGNAUTO : Log-Pwr	10:35:38/ TRA	AM Jun 03, 2014 CE <mark>1 2 3 4 5 6</mark>	Peak Search
				PNO: Fast 😱 IFGain:Low	Trig: Fre #Atten: 4	e Run 0 dB	Avg Hold	: 18/100	۳۲ Mkr1	150 kHz	Next Peak
-10.0	div								42.2		Next Pk Right
-20.0										-33.00 dBm	Next Pk Left
-40.0	-										Marker Delta
-60.0	Milhund M	11 Johnson	willighthybridge	un handar af man	a Innshipsof	helen an the states of the sta	<b>e</b> hertheannthur	huhuganahugan	-port of the	ntr <b>ajaj</b> hijiharinaj	Mkr→CF
-80.0 -											Mkr→RefLvl
Start #Res	150 kH BW 10	lz ) kHz		#VBW	/ 30 kHz			Sweep	Stop 3 285 ms	0.00 MHz (1001 pts)	More 1 of 2

Marker 1	911.75425	59090 M	HZ PNO: Fast 🖵 Gain:Low	Trig: Free #Atten: 40	Run dB	Avg Type Avg Hold:	: Log-Pwr > 100/100	11:49:277 TRA TY D	M JUNU3, 2014 CE 1 2 3 4 5 6 PE M WWWWWW ET P N N N N N	Peak Search
10 dB/div	Ref 30.00	dBm					Mkr	1 911.7 -49.5	66 dBm	NextPe
20.0										Next Pk Rig
0.00										Next Pk L
-10.0									-13.00 dBm	Marker De
-30.0										Mkr→
-40.0 -50.0	land the set of the set of the	an table in the	ian diakti a ythiotoria	en polyna (Mitel Myler	el Magor Juri	an a				Mkr→Refl
-60.0	king an an an ing ing a line on Antipa an	de la Constitución de la Const	openities, en principalité fiéle			n presidente de la constante d				Mc

Agilen	it Spectru	ım Ana	lyzer - Swe	ept SA								
LXI		RF	50 Ω	AC			INT REF	Aug Type	ALIGNAUTO	11:50:07 A	M Jun 03, 2014	Peak Search
Mar	ker 1	1.83	03931Z	50000	GHZ PNO: Fast 🕞	Trig: Free	Run	Avg Hold:	9/100	TY		
				I	FGain:Low	#Atten: 40	) dB					Next Peak
									MKĽ	1 1.853	93 GHZ	Next1 cur
10 dE Log <sub>l</sub>	3/div	Ref	30.00 d	IBm	_					9.0	oa nem	
20.0												Next Pk Right
	, I	1										
10.0	<u> </u>											
												Next Pk Left
0.00												
10.0												
-10.0											-13.00 dBm	Marker Delta
-20.0												Marker Bela
-30.0												
												Mkr→CF
-40.0												
					Lu.							
-50.0	land also	databela	addition of the sec	a state of the second	A Strategic Strategics	interfective and inter-	all what days	and the states of the states o	NATURAL DISC MANAGEMENT	<mark>in the state of the s</mark>	fan heider fillik i he	Mkr→RefLvl
	Institution and	Line and the state	and the second secon	and the states	and the second		alla di di di di seconda di second	And the particular of the local division of	as been being an the Baseline	distanta Republication	ing a fait half a start of the second se	
-6U.U												
												More
Star	t 1.000	GH	z							Stop 12	.750 GHz	1 of 2
#Re	s BW ′	100 k	HZ		#VBW	300 kHz			Sweep	1.13 s (4	0001 pts)	
MSG									STATUS			



Out of band measurement Test Band = WCDMA1900 Test Mode = TM3 Test Channel = MCH

Agilent Spectr	rum Analyzer - Swept SA								
<mark>x</mark> Marker 1	RF 50 Ω <u>Λ</u> DC 10.974000 kHz			INT REF	Avg Type	ALIGNAUTO	10:27:50 A TRAC	M Jun 03, 2014 E <mark>1 2 3 4 5 6</mark>	Peak Search
10 dB/div	Ref 0.00 dBm	PNO: Far 🖵 IFGain:Low	Trig: Free #Atten: 40	e Run ) dB	Avg Hold:	76/100 M	kr1 10.9	974 kHz 05 dBm	Next Peak
-10.0									Next Pk Right
-20.0								-33.00 dBm	Next Pk Lef
-40.0	mhypeller welling and								Marker Delta
-60.0		man Hangmann	ᡣᢇᠬᡙᠰ	&www.ham	vhutan.c	ᡃᢑᠬᢦᡊᡎᢇ᠕ᡀ	MMMM	work hat made	Mkr→CF
-80.0									Mkr→RefLv
Start 9.00 #Res BW	) kHz 1.0 kHz	#VBW	10 kHz			Sweep	Stop 15 130 ms (	0.00 kHz 1001 pts)	More 1 of 2
MSG						STATUS			

Agilen	it Spectr	um Analyze	er - Swept SA								-
<mark>w</mark> Mar	ker 1	RF 150.00	50 Ω <u>∧</u> DC 00000 kH:	z		INT REF	Avg Typ	ALIGNAUTO	10:35:53 / TRA	AM Jun 03, 2014 CE <mark>1 2 3 4 5 6</mark>	Peak Search
10 dE	3/div	Ref 0.	00 dBm	PNO: Fast 🖵 IFGain:Low	Trig: Fre #Atten: 4	e Run 0 dB	Avg Hold	d: 25/100	Mkr1 -40.9	150 kHz 23 dBm	Next Peak
-10.0											Next Pk Right
-20.0 -30.0										-33.00 dBm	Next Pk Left
-40.0 -50.0											Marker Delta
-60.0 -70.0	h Muh <mark>n</mark> jua	1/h/1/h44/s	hardblackturidy	<sup>ถุป</sup> ุปปลับ <sup>เ</sup> อร์เกาะสัปปรุป	Numero	nent Welgereuth	ել <mark>արկ</mark> չությել	loolingtual program	n/1444.a.444.p.hr	myd <mark>flanad</mark>	Mkr→CF
-80.0 -90.0											Mkr→RefLv
Star #Re:	t 150 s BW	kHz 10 kHz		#VBW	/ 30 kHz			Sweep	Stop 3 285 ms (	0.00 MHz (1001 pts)	More 1 of 2
MSG								STATU	S		

		1	FGain:Low	#Atten: 4	DdB		C	ET P N N N N N	Next Peal
10 dB/div	Ref 30.00	dBm				Mkr1	12.710 -46.7	64 GHz 52 dBm	Nextrear
20.0									Next Pk Right
10.0									
									Next Pk Left
-10.0									
-20.0								-13.00 dBm	Marker Delta
30.0									
-40.0									Mkr→CF
.50.0				a falla af a la sea da se	, terbulat March 1				
	and the second	Liferite Albino	An an An All Street and All	<sup>11</sup> Boold Balling and a strategy of the	, i litta kiliksi, ditetting, bila		TATA A A A A A A A A A A A A A A A A A	(	Mkr→RefLvl
-30.0									More

Agilent Sp	ectrum Analyzer - Swe	pt SA						
LXI	RF 50 Ω	AC	INT REF		ALIGNAUTO	11:36:23 A	M Jun 03, 2014	Peak Search
Marker	r 1 837.08850	0000 MHz	Tain: End & Dum	Avg Type	: Log-Pwr	TRAC	E 1 2 3 4 5 6	Feak Search
		PNO: Fast 🕞	#Atten: 40 dB	Avginoid.	- 100/100	DE	PNNNN	
		II Gam.cow			N Aller	4 007 0	00.0411-	Next Peak
					IVIKE	1 837.0	89 WIHZ	
10 dB/di	v Ref 30.00 d	Bm				11.2	82 aBm	
								Next Pk Right
20.0						4		nox r k rugh
						· ♦'		
10.0						_		
								Nevt Dk Left
0.00								
10.0								
- 10.0							-13.00 dBm	Markey Dalta
								Marker Deita
-20.0								
						J.		
-30.0								
								Mkr→CF
-40.0								
						- A - 1		
50.0								
-50.0	And a location of the state of	also all a stipling of a strange of a still been	n n <mark>e stanovih stereta da stal</mark> pr	Hanseled a last titled priorilit	and and the life of the	a <mark>l Uni</mark> ted	and the second second	Mkr→RefLvl
at the participation of the pa	estate endelse des anticet des al anti	A feature of the second states and the second	in a stage of the desire in a second	Construction of the second	and a set of the set of	مغالة ومريحة المر	intelliging a public street	
-60.0								
								More
Otort 20						Oton 4 (		1 of 2
Start 3		#\/B\A	200 647		Swoon 0'	Stop 1.0	0000 GHZ	1 01 2
#Res D		#VDV	-300 KH2		sweep a	.5 III5 (4	ooo i pisj	
MSG					STATUS			



Out of band measurement Test Band = WCDMA1900 Test Mode = TM3 Test Channel = HCH

Agilent Spectrum Analyzer - Swe	ept SA				
Marker 1 9.000000 Ι	KHz	INT REF	ALIGN AUTO Avg Type: Log-Pwr	10:28:44 AM Jun 03, 2014 TRACE 1 2 3 4 5 6	Peak Search
	PNO: Far 😱 IFGain:Low	Trig: Free Run #Atten: 40 dB	Avg Hold>100/100	DET PNNNN	
10 dB/div Ref 0.00 dE	Зm			Vkr1 9.000 kHz -40.597 dBm	Next Peak
-10.0					Next Pk Right
-20.0				-33.00 dBm	Next Pk Left
-40.0					Marker Delta
-60.0	and marging and more a	mmunythanne	han and have a start and and a	have may prove may be and a	Mkr→CF
-70.0					Mkr→RefLvl
Start 9.00 kHz				Stop 150.00 kHz	More 1 of 2
#Res BW 1.0 kHz	#VBW	10 kHz	Sweep	130 ms (1001 pts)	
MSG			STATUS		

Agilent Spectrum Analyzer - Swept S					-
🗶 RF 50 Ω 🧥 D	c   I	INT REF	ALIGNAUTO Avg Type: Log-Pwr	10:36:05 AM Jun 03, 2014 TRACE 1 2 3 4 5 6	Trace/Det
	PNO: Fast 🧊 IFGain:Low	Trig: Free Run #Atten: 40 dB	Avg Hold: 12/100		Select Trace
10 dB/div Ref 0.00 dBm				-43.689 dBm	Trace 1
-10.0					Clear Write
-20.0					
20.0					Trace Average
				-33.00 dBm	
-40.0					May Hold
-50.0					Max Hold
en n					
-2000 Whathahahahahahahahahahahahahahahahahaha	Aufrinand apralation	hophappungrytaylfrahasha	hardan waan ang manakaran ang ang ang ang ang ang ang ang ang a	uninin mulan nappinani	Min Hold
10.0					
-80.0					View/Blank Trace On
-90.0					
					More
Start 150 kHz #Res BW 10 kHz	#VBW	30 kHz	Sweep	Stop 30.00 MHz 285 ms (1001 pts)	1 of 3
MSG			STATU	s	

Marker 1 806.751750000	INT REF PNO: Fast IFGain:Low HAtten: 40 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold:>100/100	11:52:19 AM Jun 03, 2014 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Peak Search
10 dB/div Ref 30.00 dBm		Mkr1	806.752 MHz -49.354 dBm	NextPeak
20.0				Next Pk Right
10.0				Next Pk Left
-10.0			10.00 (De	
-20.0			-13.00 080	Marker Delta
-30.0				Mkr→CF
-40.0		1		Mkr. Doff ul
-60.0				WKI→KEI LVI
Start 30.0 MHz #Res BW 100 kHz	#VBW 300 kHz	Sween 93 3	top 1.0000 GHz	More 1 of 2

Agilent Spect	rum Analyzer - Swep	ot SA				
IXI	RF 50 Ω	AC	INT REF	ALIGN AUTO	11:52:56 AM Jun 03, 2014	Deak Search
Marker 1	1.90621875	0000 GHz		Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Feak Search
		PNO: Fast 😱	Trig: Free Run	Avg Hold: 8/100	DET P N N N N N	
		IFGain:Low	#Atten: 40 dB		DEI	
				Mki	1 1 906 22 GHz	NextPeak
		_			7 971 dBm	
10 dB/div	Ref 30.00 di	3m			7.871 UDIII	
20.0						Next Pk Right
	<b>▲1</b>					
10.0	+					
0.00						Νέχτ Ρκ μέπ
0.00						
-10.0						
					-13.00 dBm	Marker Delta
						warker Della
-20.0					<u> </u>	
20.0						
-30.0						Mkr. CE
						IVINI→CF
-40 n						
		ي ان	titu i			
-50.0	and the state of the second state of the secon	a tild at a the state of the st	all a line of the second second second	The state of the s	a have a firm that a data basis in the state of the	Mkr⊸Refivi
	والأطفر بعقولين والا	Inenia Landa Landa Landa Landa Landa	ومحرور وملورات بالأحماء العقراوي والكاف تتعطيهم	provident de la companya de la company	and a second	
and Millian	are an	and the second		الترابية المتشاكر الأحداري ومشتقر الالتك	a contraction of the second	
-60.0						
						Mara
						wore
Start 1.00	00 GHz				Stop 12.750 GHz	1 of 2
#Res BW	100 kHz	#VBW	300 kHz	Sweep	1.13 s (40001 pts)	
NCO				CTATU		
mou				STATU	3	



Band edge measurement Test Band = WCDMA1900 Test Mode = TM3 Test Channel = LCH/HCH





#### 5.5. Spurious Emissions Radiated

#### 5.5.1.Test Standard

FCC: CFR Part 2.1053, CFR Part 22.917, CFR Part 24.238

#### 5.5.2.Test Limit

Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission.

#### 5.5.3 Limits:

(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.

For all power levels +30dBm to 0dBm, this becomes a constant specification of -13dBm.

5.5.3.1 FCC 22.917 Emission limitations for cellular equipment.

The rules in this section govern the spectral characteristics of emissions in the Cellular

Radiotelephone Service.

(b) Measurement procedure. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1MHz 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 the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz of 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.

5.5.3.2 FCC 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(b) Measurement procedure. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz of 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.

#### 5.5.3.Test Procedure

1. Connect the equipment as shown in the above diagram with the EUT's antenna in a horizontal orientation.

2. Adjust the settings of the Universal Radio Communication Tester (CMU) to set the EUT to its maximum power at the required channel.

3. Set the spectrum analyzer to measure peak hold with the required settings.

4. Place the measurement antenna in a horizontal orientation. Rotate the EUT 360.

Raise the measurement antenna up to 4 meters in 0.5 meters increments and rotate the EUT 360 at each height to maximize all emissions. Measure and record all spurious emissions (LVL) up to the tenth harmonic of the carrier frequency.

5. Replace the EUT with a horizontally polarized half wave dipole or known gain antenna. The center of the antenna should be at the same location as the center of the EUT's antenna.

6. Connect the antenna to a signal generator with known output power and record the path loss in dB (LOSS). LOSS = Generator Output Power (dBm) – Analyzer reading (dBm).

7. Determine the level of spurious emissions using the following equation: Spurious (dBm) = LVL (dBm) + LOSS (dB):

8. Repeat steps 4, 5 and 6 with all antennas vertically polarized.

9. Determine the level of spurious emissions using the following equation:

Spurious (dBm) = LVL (dBm) + LOSS (dB):

10. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band.

(Note: Steps 5 and 6 above are performed prior to testing and LOSS is recorded by test software. Steps 3, 4 and 7 above are performed with test software.)

Spectrum analyzer settings: RBW=VBW=1MHz



Test Channel = I CH

1001.01							
Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]
					[dBm]		
1648.4	-6.05	0.9	6.77	40.6	-40.78		-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM/GPRS850 Test Mode = TM1 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]
					[dBm]		
1673.2	-5.9	0.9	6.77	40.6	-40.63		-13

Test B Test M Test C	Test Band = GSM/GPRS850 Test Mode = TM1 Test Channel = HCH								
Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit		
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]		
					[dBm]				
1697.6	-4.91	0.9	6.77	40.6	-39.64		-13		

Test Band = EGPRS850 Test Mode = TM2 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]
					[dBm]		
1648.4	-7.19	0.9	6.77	40.6	-41.92		-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = EGPRS850 Test Mode = TM2 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]
					[dBm]		
1673.2	-7.01	0.9	6.77	40.6	-41.74		-13

Test B Test M Test C	Test Band = EGPRS850 Test Mode = TM2 Test Channel = HCH									
Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit			
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]			
					[dBm]					
1697.6	-5.54	0.9	6.77	40.6	-40.27		-13			

Test Band = WCDMA850 Test Mode = TM3 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]
					[dBm]		
1652.8	-10.65	0.9	6.77	40.6	-45.38		-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA850 Test Mode = TM3

Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]
					[dBm]		
1672.8	-10.04	0.9	6.77	40.6	-44.77		-13

Test B Test M Test C	and = WC lode = TM channel = I	DMA850 3 HCH					
Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP)	Verti cal	[dBm]
					[dBm]		
1693.2	-9.59	0.9	6.77	40.6	-44.32		-13

Test Band = GSM/GPRS1900 Test Mode = TM1 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]
					[dBm]		
3700.4	-9.19	4.6	9.53	39	-43.26		-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]
					[dBm]		
3760	-8.87	4.6	9.53	39	-42.94		-13

Test Band = GSM/GPRS1900 Test Mode = TM1

Test B Test M Test C	Test Band = GSM/GPRS1900 Test Mode = TM1 Test Channel = HCH										
Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit				
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]				
					[dBm]						
3819.6	-8.31	4.6	9.53	39	-42.38		-13				

Test Band = EGPRS1900 Test Mode = TM2 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]
					[dBm]		
3700.4	-10.01	4.6	9.53	39	-44.08		-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]
					[dBm]		
3760	-10.19	4.6	9.53	39	-44.26		-13

Test Band = EGPRS1900 Test Mode = TM2

Test Ba Test M Test C	and = EGF lode = TM hannel = F	PRS1900 2 HCH									
Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit				
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]				
					[dBm]						
3819.6	-9.65	4.6	9.53	39	-43.72		-13				

Test Band = WCDMA1900 Test Mode = TM3 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]
					[dBm]		
3704.8	-11.89	4.6	9.53	39	-45.96		-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA1900 Test Mode = TM3

Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	Polari zation	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]
					[dBm]		
3760	-11.94	4.6	9.53	39	-46.01		-13

Test B Test M Test C	and = WC lode = TM hannel = I	DMA1900 3 HCH							
Freq.SG. LevelCable LossAntenna GainPreampSubstitutionPolari zationLimit									
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP)	Verti cal	[dBm]		
					[dBm]				
3815.2	-11.65	4.6	9.53	39	-45.72		-13		

#### 5.6. Frequency Stability

#### 5.6.1.Test Standard

CFR 47 (FCC) part 2.1055, 22.355 and 24.235

5.6.2.Test Limit

According to part 22.355, from 821MHz to 896MHz, for mobile device, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances 2.5ppm.

#### 5.6.3.Test Procedure

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMU 200 Universal Radio Communication Tester. 1. Measure the carrier frequency at room temperature.

2. Subject the EUT to overnight soak at -30 C.

3. With the EUT, powered via nominal voltage, connected to the CMU 200 and in a simulated call on mid channel (190 for GSM 850 & 4183 for FDD5 & 661 for PCS1900 & 9400 for FDD2), measure the carrier frequency. These measurements should be made within 2 minutes of powering up the EUT, to prevent significant self-warming.

4. Repeat the above measurements at 10 C increments from -30 C to +50 C. Allow at least 1 1/2 hours at each temperature, un-powered, before making measurements.

5. Re-measure carrier frequency at room temperature with nominal voltage.
Re-measure carrier frequency at low and high voltage. Pause at nominal voltage for 1
1/2 hours un-powered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50 C.

7. With the EUT, powered via nominal voltage, connected to the CMU 200 and in a simulated call on mid channel (190 for GSM 850 & 4183 for FDD5 & 661 for PCS1900 & 9400 for FDD2), measure the carrier frequency. These measurements should be made within 2 minutes of powering up the EUT, to prevent significant self-warming. 8. Repeat the above measurements at 10 C increments from +50 C to -30 C. Allow at

least 1 1/2 hours at each temperature, un-powered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5 C during the measurement procedure.

#### 5.6.4.Test Setup

Connect the EUT to the Wireless Communication test set CMU200 via the connector. Then measure the frequency error by the Wireless Communication test set CMU200. The EUT's output is matched with a 50  $\Omega$  load.

5.6.5.Test Data			
Measurement Results vs. Variation of Temperature—GSM/GPRS850:TM1			
Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	836.6	10	Pass
-20 °C	836.6	-22	Pass
-10 °C	836.6	16	Pass
<b>3</b> ° 0	836.6	1	Pass
+10 °C	836.6	24	Pass
+20 °C	836.6	-5	Pass
+30 °C	836.6	-12	Pass
+40 °C	836.6	-15	Pass
+50 °C	836.6	-17	Pass
+60 °C	836.6	-22	Pass
+70 °C	836.6	-14	Pass
+75 °C	836.6	-26	Pass

### Measurement Results vs. Variation of Temperature-GSM/GPRS850:TM1

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.135V	836.6	21	Pass
3.3 V	836.6	-19	Pass
4.4V	836.6	8	Pass

Measurement Results vs. Variation of Temperature—EGPRS850:TM2				
Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result	
-30 °C	836.6	6	Pass	
-20 °C	836.6	19	Pass	
-10 °C	836.6	11	Pass	
<b>C</b> 0	836.6	22	Pass	
+10 °C	836.6	-8	Pass	
+20 °C	836.6	10	Pass	
+30 °C	836.6	-12	Pass	
+40 °C	836.6	-25	Pass	
+50 °C	836.6	-23	Pass	
+60 ℃	836.6	12	Pass	
+70 °C	836.6	-3	Pass	
+75 °C	836.6	-17	Pass	

## Measurement Results vs. Variation of Voltage-EGPRS850:TM2

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.135V	836.6	21	Pass
3.3 V	836.6	-23	Pass
4.4V	836.6	16	Pass

Measurement Results vs. Variation of Temperature-GSM/GPRS1900:TM1			
Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	1880.0	4	Pass
-20 °C	1880.0	18	Pass
-10 °C	1880.0	-12	Pass
<b>C</b> 0	1880.0	15	Pass
+10 °C	1880.0	-13	Pass
+20 °C	1880.0	9	Pass
+30 °C	1880.0	22	Pass
+40 °C	1880.0	-15	Pass
+50 °C	1880.0	-19	Pass
+60 °C	1880.0	21	Pass
+70 °C	1880.0	-8	Pass
+75 °C	1880.0	-13	Pass

# Measurement Results vs. Variation of Voltage-GSM/GPRS1900:TM1

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.135V	1880.0	25	Pass
3.3 V	1880.0	22	Pass
4.4V	1880.0	-6	Pass

Measurement Results vs. Variation of Temperature—EGPRS1900:TM2				
Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result	
-30 °C	1880.0	2	Pass	
-20 °C	1880.0	11	Pass	
-10 °C	1880.0	10	Pass	
<b>3</b> 0	1880.0	20	Pass	
+10 °C	1880.0	-22	Pass	
+20 °C	1880.0	6	Pass	
+30 °C	1880.0	24	Pass	
+40 °C	1880.0	-25	Pass	
+50 °C	1880.0	-18	Pass	
℃ 00+	1880.0	7	Pass	
+70 °C	1880.0	13	Pass	
+75 °C	1880.0	-14	Pass	

# Measurement Results vs. Variation of Voltage-EGPRS1900:TM2

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.135V	1880.0	25	Pass
3.3 V	1880.0	22	Pass
4.4V	1880.0	-6	Pass

Measurement Results vs. Variation of Temperature—WCDMA850:TM3			
Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	836.6	-3	Pass
-20 °C	836.6	5	Pass
-10 °C	836.6	0	Pass
<b>C</b> 0	836.6	-24	Pass
+10 °C	836.6	3	Pass
+20 °C	836.6	-15	Pass
+30 °C	836.6	9	Pass
+40 °C	836.6	15	Pass
+50 °C	836.6	1	Pass
℃ 00+	836.6	-12	Pass
+70 °C	836.6	9	Pass
+75 °C	836.6	18	Pass

## Measurement Results vs. Variation of Voltage-WCDMA850:TM3

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.135V	836.6	-6	Pass
3.3 V	836.6	-15	Pass
4.4V	836.6	11	Pass

Measurement Results vs. Variation of Temperature—WCDMA1900:TM3			
Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	1880.0	18	Pass
-20 °C	1880.0	-12	Pass
-10 °C	1880.0	-11	Pass
<b>C</b> 0	1880.0	20	Pass
+10 °C	1880.0	6	Pass
+20 °C	1880.0	0	Pass
+30 °C	1880.0	24	Pass
+40 °C	1880.0	-6	Pass
+50 °C	1880.0	-12	Pass
+60 °C	1880.0	-14	Pass
+70 °C	1880.0	-16	Pass
+75 °C	1880.0	-21	Pass

# Measurement Results vs. Variation of Voltage-WCDMA1900:TM3

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.135V	1880.0	14	Pass
3.3 V	1880.0	-16	Pass
4.4V	1880.0	8	Pass