700MHz LTE10MHz Band UL

[700 Band AGC threshold Uplink LTE 10 MHz Mid]

[700 Band +3dB above the threshold Uplink LTE 10 MHz Mid]

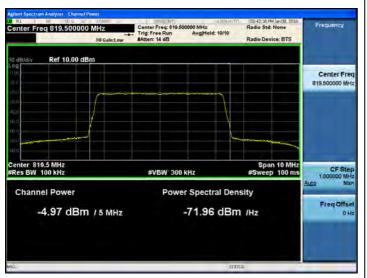


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

SMR 800,850Cellular LTE5MHz Band UL

[SMR 800,850Cellular AGC threshold Uplink LTE 5 MHz Low]

[SMR 800,850Cellular AGC threshold Uplink LTE 5 MHz Mid]



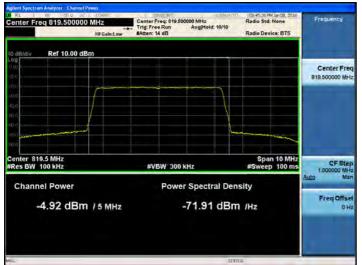


[SMR 800,850Cellular AGC threshold Uplink LTE 5 MHz High]

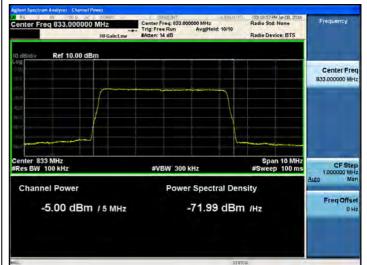




[SMR 800,850Cellular +3dB above the threshold Uplink LTE 5 MHz Low]



[SMR 800,850Cellular +3dB above the threshold Uplink LTE 5 MHz Mid]



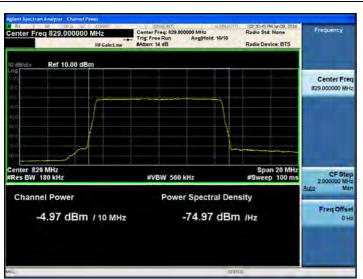
[SMR 800,850Cellular +3dB above the threshold Uplink LTE 5 MHz High]



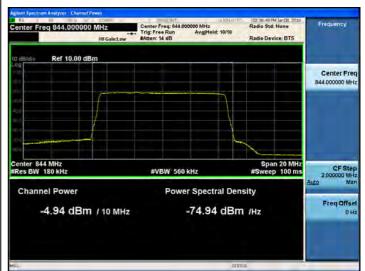
F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

850Cellular LTE10MHz Band UL

[850Cellular AGC threshold Uplink LTE 10 MHz Low]

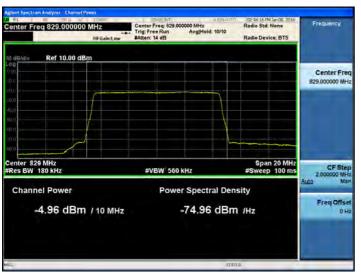


[850Cellular AGC threshold Uplink LTE 10 MHz High]



[850Cellular +3dB above the threshold Uplink

LTE 10 MHz Low]



[850Cellular +3dB above the threshold Uplink LTE 10 MHz Mid]



IC: 12124A-7S8CPAWB30



Channel Power

-4.94 dBm / 4.1 MHz

Report No.: HCT-R-1602-F006-1

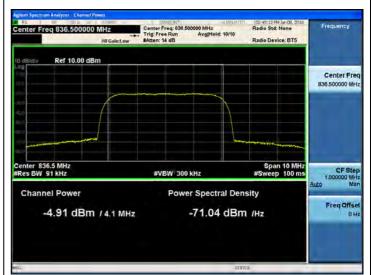
850Cellular UMTS Band UL

[850Cellular AGC threshold Uplink UMTS Low]

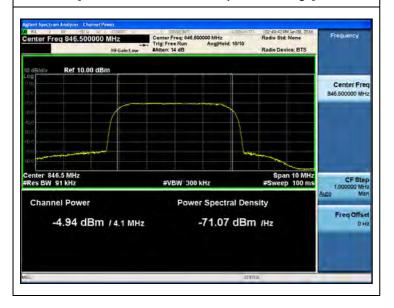
Power Spectral Density

-71.07 dBm /Hz

[850Cellular AGC threshold Uplink UMTS Mid]



[850Cellular AGC threshold Uplink UMTS High]

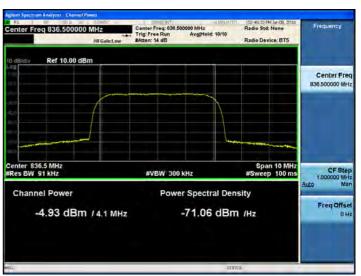




[850Cellular +3dB above the AGC threshold Uplink UMTS Low]

[850Cellular +3dB above the AGC threshold Uplink UMTS Mid]





[850Cellular +3dB above the AGC threshold Uplink UMTS High]



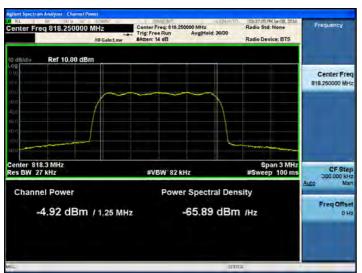
IC: 12124A-7S8CPAWB30



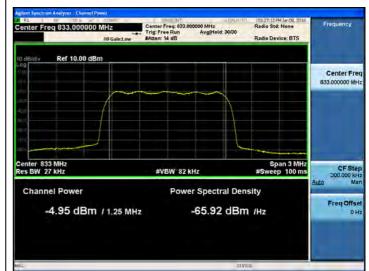


SMR 800,850Cellular CDMA Band UL

[SMR 800,850Cellular AGC threshold Uplink CDMA Low]



[SMR 800,850Cellular AGC threshold Uplink CDMA Mid]

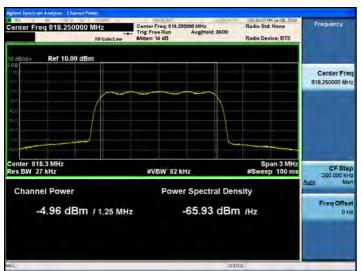


[SMR 800,850Cellular AGC threshold Uplink CDMA High]

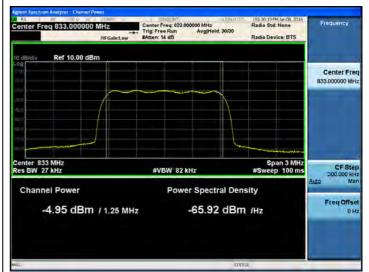


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

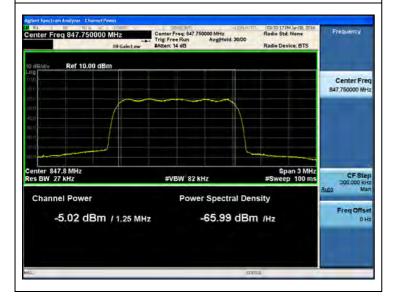
[SMR 800,850Cellular +3dB above the AGC threshold Uplink CDMA Low]



[SMR 800,850Cellular +3dB above the AGC threshold Uplink CDMA Mid]



[S SMR 800,850Cellular +3dB above the AGC threshold Uplink CDMA High]



IC: 12124A-7S8CPAWB30





850Cellular GSM Band UL

[850Cellular AGC threshold Uplink GSM Low]

Center Freq 824, 200000 MHz Trig Freqs 24200000 MHz Trig Freqs 24200000 MHz Trig Freqs 24200000 MHz Radio Device: BTS 10 disidiv Ref 10.00 dBm Center 824,2 MHz #Res BW 5.0 kHz #VBW 18 kHz Center 824,2 MHz #VBW 18 kHz Channel Power Power Spectral Density Freq 0ffset 0 Hz CF Step 60.000 kHz CF Step 60.000 kHz Auto Freq 0ffset O Hz Freq 0ffset O Hz

[850Cellular AGC threshold Uplink GSM Mid]



[850Cellular AGC threshold Uplink GSM High]



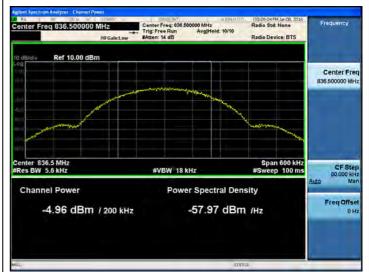
IC: 12124A-7S8CPAWB30



[850Cellular +3dB above the AGC threshold Uplink GSM Low]



[850Cellular +3dB above the AGC threshold Uplink GSM Mid]



[850Cellular +3dB above the AGC threshold Uplink

GSM High]



F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

Channel Power

-4.92 dBm / 5 MHz

Report No.: HCT-R-1602-F006-1

AWS 2100 LTE 5 MHz Band UL

[AWS 2100 AGC threshold UPlink LTE 5 MHz Low]

Center Freq 1.712500000 GHz SEGaint www Second Seco

Span 10 MHz #Sweep 100 ms

1,000000 MH

[AWS 2100 AGC threshold Uplink LTE 5 MHz Mid]



[AWS 2100 AGC threshold Uplink LTE 5 MHz High]

#VBW 300 kHz

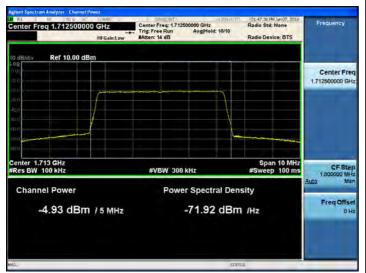
Power Spectral Density

-71.91 dBm /Hz

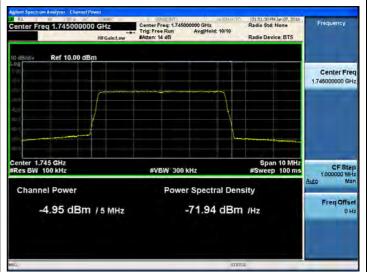




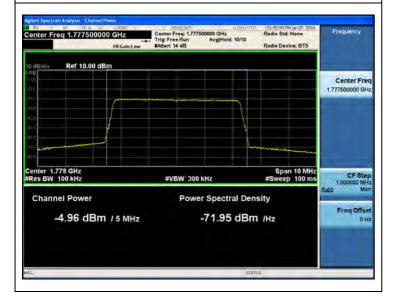
[AWS2100 +3dB above the threshold Uplink LTE 5 MHz Low]



[AWS2100 +3dB above the threshold Uplink LTE 5 MHz Mid]



[AWS2100+3dB above the threshold Uplink LTE 5 MHz High]



F-TP22-03 (Rev.00) FCC ID: zuqr788cpawb-2730

IC: 12124A-7S8CPAWB30

Freq Offse

Channel Power

-4.96 dBm / 10 MHz

Report No.: HCT-R-1602-F006-1

AWS 2100 LTE 10 MHz Band UL

[AWS 2100 AGC threshold Uplink LTE 10 MHz Low]

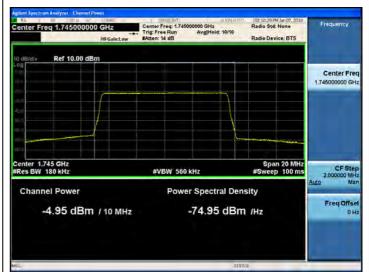
Ref 10.00 dBm Center Freq 1.715000000 GHz 2.000000 MH

#VBW 560 kHz

Power Spectral Density

-74.96 dBm /Hz

[AWS 2100 AGC threshold Uplink LTE 10 MHz Mid]



[AWS 2100 AGC threshold Uplink LTE 10 MHz High]

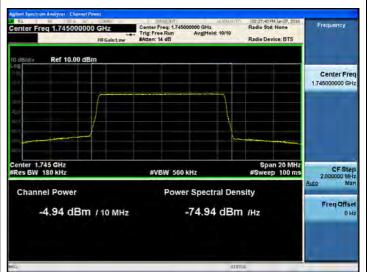




[AWS2100 +3dB above the threshold Uplink LTE 10 MHz Low]



[AWS2100 +3dB above the threshold Uplink LTE 10 MHz Mid]



[AWS2100+3dB above the threshold Uplink LTE 10 MHz High]



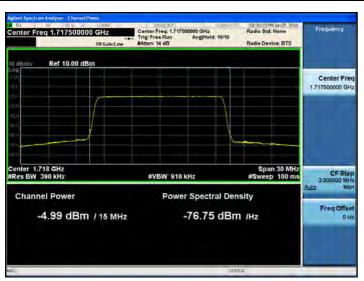
F-TP22-03 (Rev.00) FCC ID: zuqr788cpawb-2730

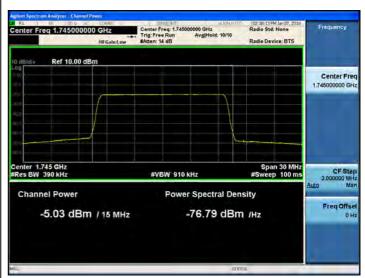
IC: 12124A-7S8CPAWB30

AWS 2100 LTE 15 MHz Band UL

[AWS 2100 AGC threshold Uplink LTE 15 MHz Low]

[AWS 2100 AGC threshold Uplink LTE 15 MHz Mid]





[AWS 2100 AGC threshold Uplink LTE 15 MHz High]

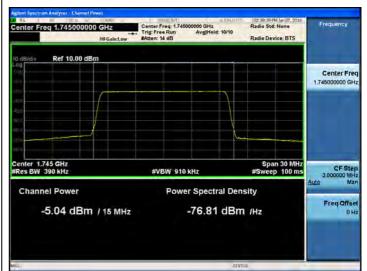


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

[AWS2100 +3dB above the threshold Uplink LTE 15 MHz Low]



[AWS2100 +3dB above the threshold Uplink LTE 15 MHz Mid]



[AWS2100+3dB above the threshold Uplink LTE 15 MHz High]



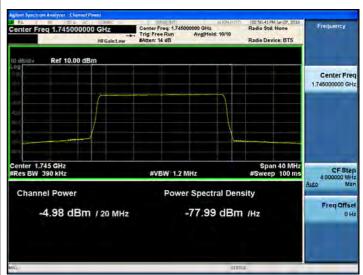
F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

AWS 2100 LTE 20 MHz Band UL

[AWS 2100 AGC threshold Uplink LTE 20 MHz Low]

[AWS 2100 AGC threshold Uplink LTE 20 MHz Mid]





[AWS 2100 AGC threshold Uplink LTE 20 MHz High]

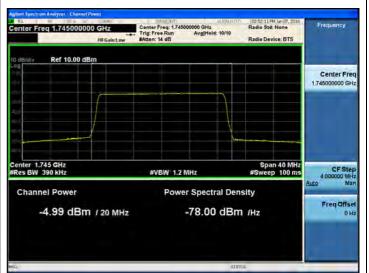




[AWS2100 +3dB above the threshold Uplink LTE 20 MHz Low]



[AWS2100 +3dB above the threshold Uplink LTE 20 MHz Mid]



[AWS2100+3dB above the threshold Uplink LTE 20 MHz High]



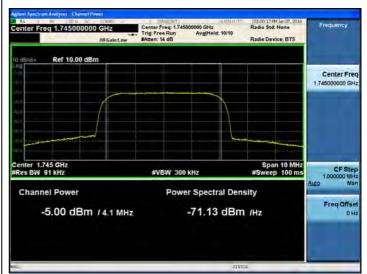
F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

AWS 2100 UMTS Band UL

[AWS 2100 AGC threshold Uplink UMTS Low]

Aglient Spectrum Analyzer Charmet Prent Center Freq 1.712500000 GHz Trig Free Mn AvgiHold 10/10 Radio Std: None Radio Device: BTS Center 1.713 GHz #Res BW 91 kHz Channel Power Power Spectral Density Frequency Center Freq 1.712500000 GHz Center Freq 1.712500000 GHz Center Freq 1.712500000 GHz Center Freq 1.712500000 GHz Center 1.713 GHz #Res BW 91 kHz #Res BW 91 kHz CF Step 1.000000 MHz Auto Man Freq Offset O Hz CF Step 1.000000 MHz Auto Man Freq Offset O Hz

[AWS 2100 AGC threshold Uplink UMTS Mid]

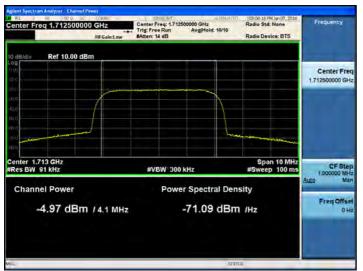


[AWS 2100 AGC threshold Uplink UMTS High]

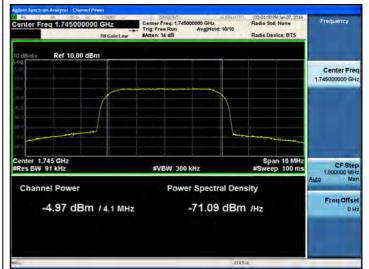




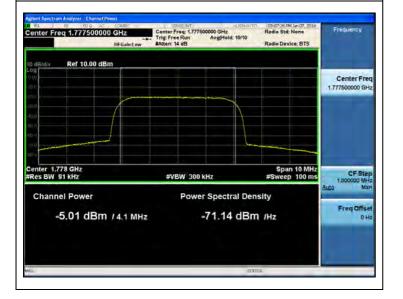
[AWS2100 +3dB above the threshold Uplink UMTS Low]



[AWS2100 +3dB above the threshold Uplink UMTS Mid]



[AWS2100+3dB above the threshold Uplink UMTS High]

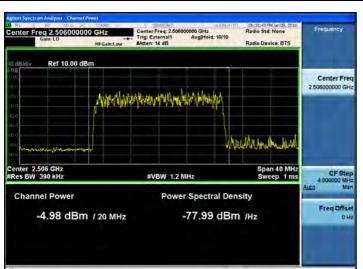


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

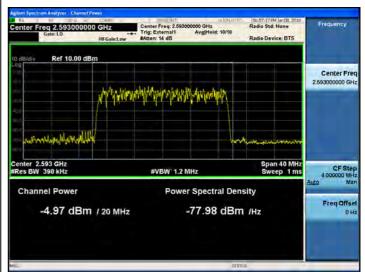


BRS LTE 20 MHz Band UL

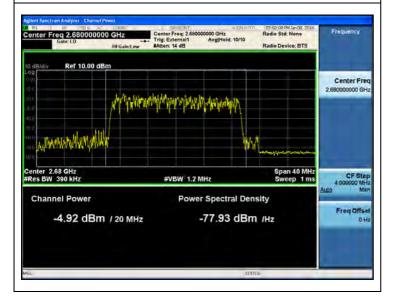
[BRS AGC threshold Uplink LTE 20MHz Low]



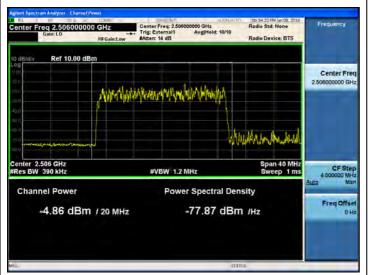
[BRS AGC threshold Uplink LTE 20MHz Mid]



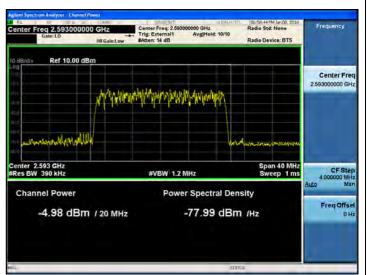
[BRS AGC threshold Uplink LTE 20MHz High]



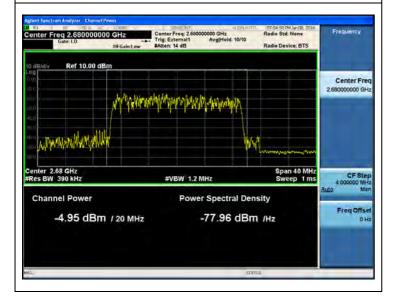
[BRS +3dB above the threshold Uplink LTE 20MHz Low]



[BRS +3dB above the threshold Uplink LTE 20MHz Mid]



[BRS +3dB above the threshold Uplink LTE 20MHz High]

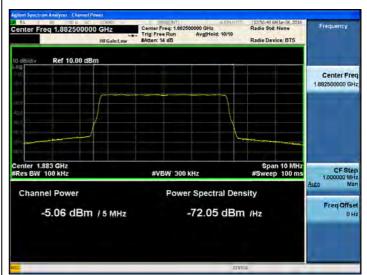




PCS 1900 LTE 5 MHz Band UL

[PCS 1900 AGC threshold Uplink LTE 5MHz Low]

[PCS 1900 AGC threshold Uplink LTE 5MHz Mid]



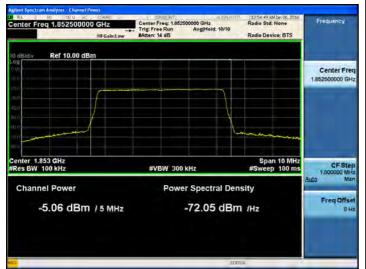
[PCS 1900 AGC threshold Uplink LTE 5MHz High]







[PCS 1900 +3dB above the threshold Uplink LTE 5MHz Low]



[PCS 1900 +3dB above the threshold Uplink LTE 5MHz Mid]



[PCS 1900 +3dB above the threshold Uplink LTE 5MHz High]

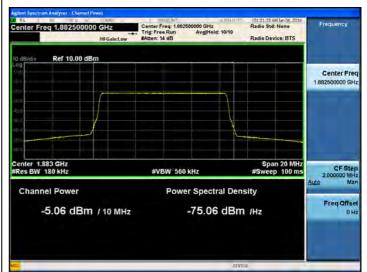


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

PCS 1900 LTE 10 MHz Band UL

[PCS 1900 AGC threshold Uplink LTE 10MHz Low]

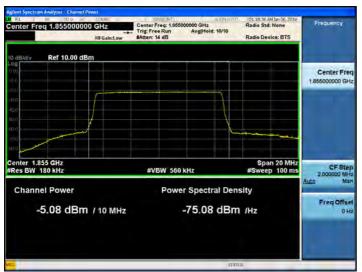
[PCS 1900 AGC threshold Uplink LTE 10MHz Mid]



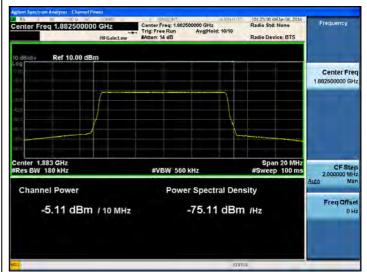
[PCS 1900 AGC threshold Uplink LTE 10MHz High]



[PCS 1900 +3dB above the threshold Uplink LTE 10MHz Low]



[PCS 1900 +3dB above the threshold Uplink LTE 10MHz Mid]



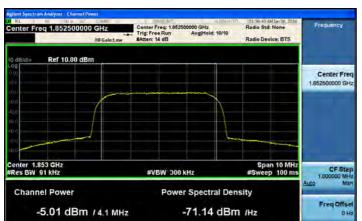
[PCS 1900 +3dB above the threshold Uplink LTE 10MHz High]



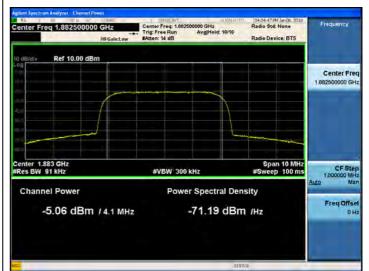


PCS 1900 UMTS Band UL

[PCS 1900 AGC threshold Uplink UMTS Low]



[PCS 1900 AGC threshold Uplink UMTS Mid]

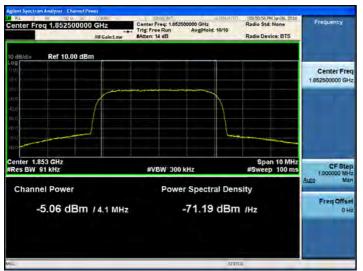


[PCS 1900 AGC threshold Uplink UMTS High]

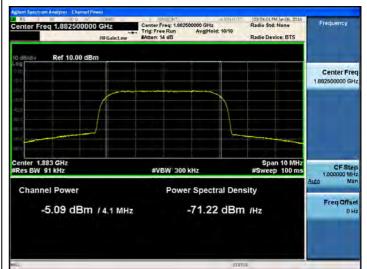


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

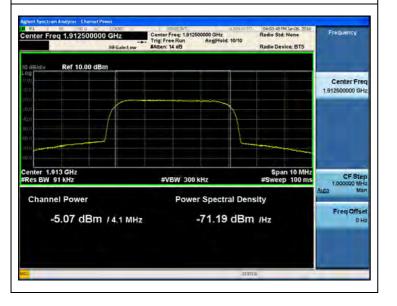
[PCS 1900 +3dB above the threshold Uplink UMTS Low]



[PCS 1900 +3dB above the threshold Uplink UMTS Mid]



[PCS 1900 +3dB above the threshold Uplink UMTS High]



F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

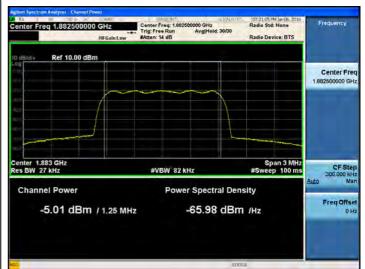


PCS 1900 CDMA Band UL

[PCS 1900 AGC threshold Uplink CDMA Low]

Center Freq 1.851250000 GHz Trigs Freq 1.851250000 GHz Trigs Freq 1.851250000 GHz Attan: 14 dB Center Freq 1.851250000 GHz Trigs Freq 1.851250000 GHz Attan: 14 dB Center Freq 1.851250000 GHz Frequency Radio Device: BTS Center Freq 1.851250000 GHz Center Freq 1.851250000 GHz Center Freq 1.851250000 GHz Center T.851 GHz Res BW 27 kHz #VBW 82 kHz Span 3 MHz #Sweep 100 ms Attan: 14 dB CF Step 300,0000 kHz Attan: 14 dB CF Step 300,000 kHz Attan: 14 dB CF Step 300,0

[PCS 1900 AGC threshold Uplink CDMA Mid]



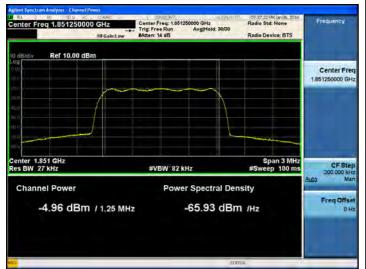
[PCS 1900 AGC threshold Uplink CDMA High]







[PCS 1900 +3dB above the threshold Uplink CDMA Low]



[PCS 1900 +3dB above the threshold Uplink CDMA Mid]



[PCS 1900 +3dB above the threshold Uplink CDMA High]



F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730

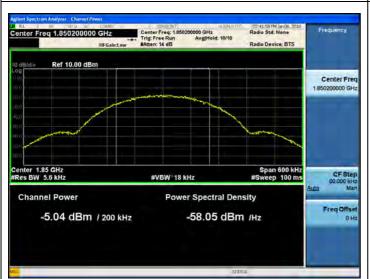
IC: 12124A-7S8CPAWB30





PCS 1900 GSM Band UL

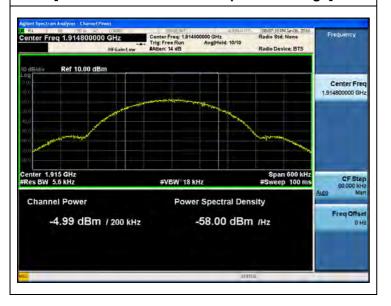
[PCS 1900 AGC threshold Uplink GSM Low]



[PCS 1900 AGC threshold Uplink GSM Mid]



[PCS 1900 AGC threshold Uplink GSM High]



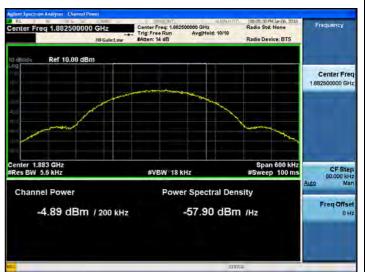




[PCS 1900 +3dB above the threshold Uplink GSM Low]



[PCS 1900 +3dB above the threshold Uplink GSM Mid]



[PCS 1900 +3dB above the threshold Uplink GSM High]





WCS LTE 10MHz Band UL

[WCS AGC threshold Uplink LTE 10MHz]

Center Freq 2.310000000 GHz Trigs Freq Part Awgifield: 10/10 Radio Std: None Radio Device: BTS Center Freq 2.310000000 GHz Trigs Freq Part Awgifield: 10/10 Radio Device: BTS Center Freq 2.310000000 GHz Center Freq 2.310000000 GHz

[WCS +3dB above the threshold Uplink LTE 10MHz]





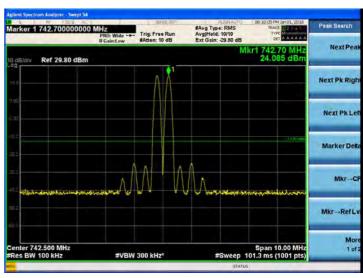
Multi-channel Enhancer for IC 700 MHz Band DL

MHz Band DL

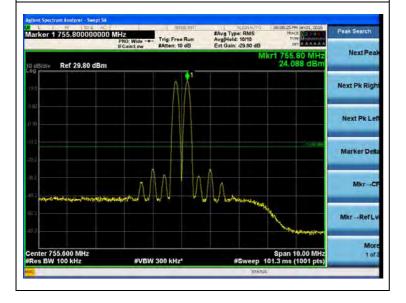
[700MHz Downlink Mid]



[700MHz Downlink Low]



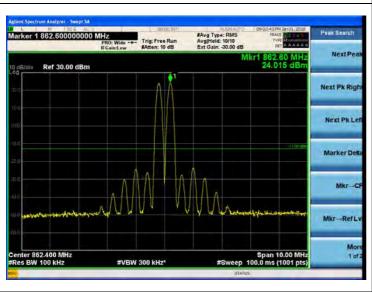
[700MHz Downlink High]

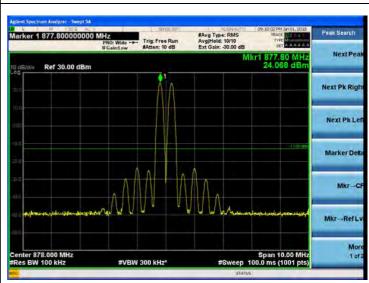


SMR 800,850Cellular Band DL

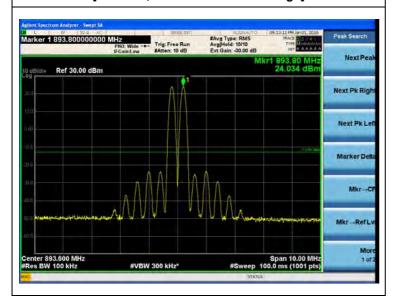
[SMR 800,850Cellular Downlink Low]

[SMR 800,850Cellular Downlink Mid]





[SMR 800,850Cellular Downlink High]

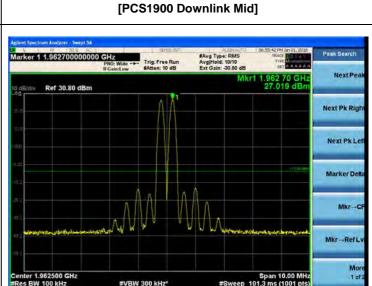


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730

IC: 12124A-7S8CPAWB30

PCS1900 Band DL

[PCS1900 Downlink Low] Aglient Spectrum Analyzer - Swept SA Marker 1 1.93060000000 GHz PBUS Winter 1 1.93060000000 GHz PBUS Winter 1 1.930600000000 GHz PBUS Winter 1 1.930 80 GHz PBUS Winter 1 1.930 80 GHz Agree 1 1.930 80 GHz Ref 30.80 dBm Agree 1 1.930 80 GHz Next Pk Ref Next Pk Ref Marker Deta Mkr - Ref Lv Center 1.930400 GHz #Res BW 100 kHz #VBW 300 kHz* #Sweep 100.0 ms (1001 pts) [PCS1900 Downlink High]





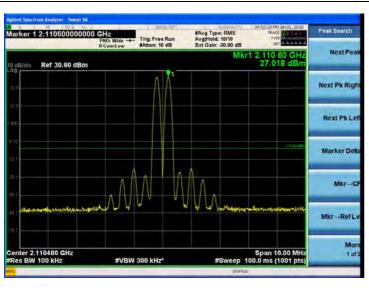
IC: 12124A-7S8CPAWB30

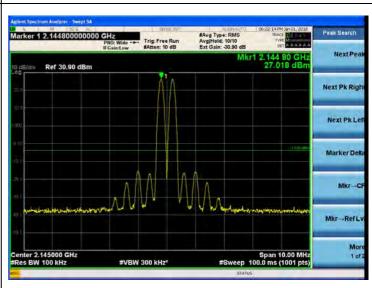


AWS2100 Band DL

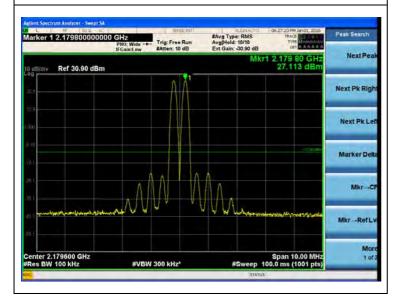
[AWS2100 Downlink Low]

[AWS2100 Downlink Mid]





[AWS2100 Downlink High]





WCS Band DL

[WCS Downlink Low] [WCS Downlink Mid] Ref 31.10 dBm Next Pk Le Marker De #VBW 300 kHz* #VBW 300 kHz*

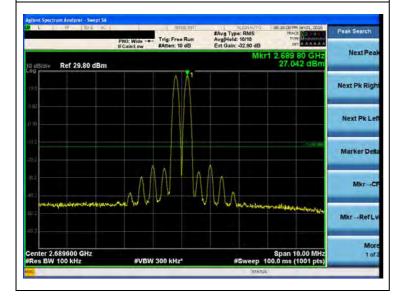
[WCS Downlink High]





BRS Band DL

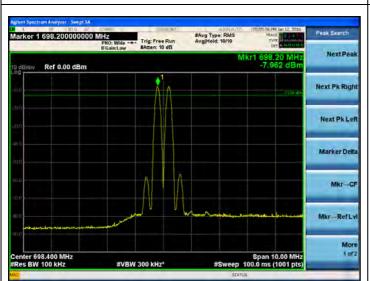
[BRS Downlink High]



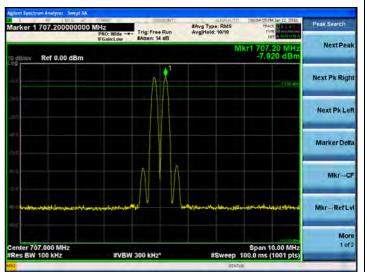


700 MHz Band_LTE 5MHz UL

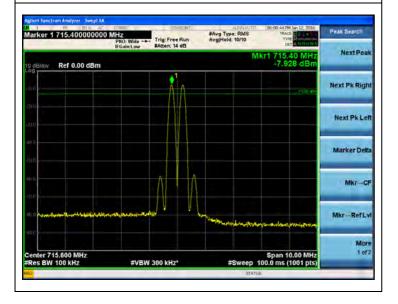
[700MHz LTE5MHz Uplink Low]



[700MHz LTE5MHz Uplink Mid]



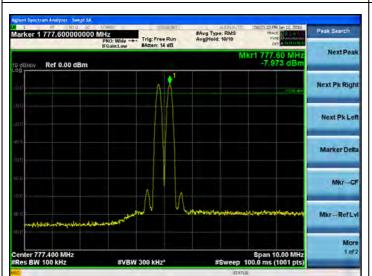
[700MHz LTE5MHz Uplink High]



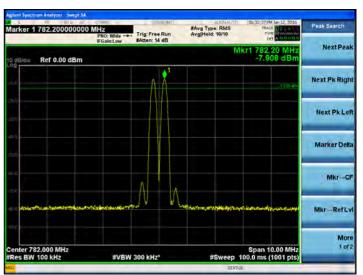
F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

700 MHz Band_LTE 10MHz UL

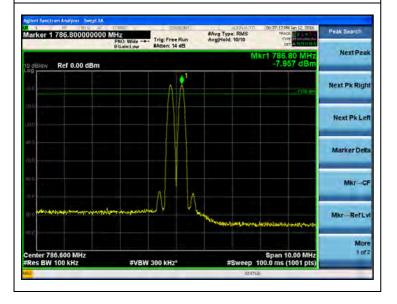
[700MHz LTE10MHz Uplink Low]



[700MHz LTE10MHz Uplink Mid]



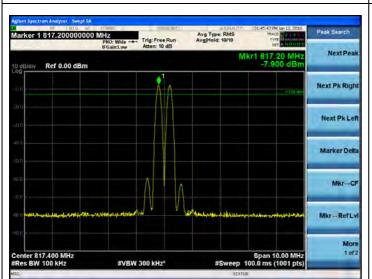
[700MHz LTE10MHz Uplink High]



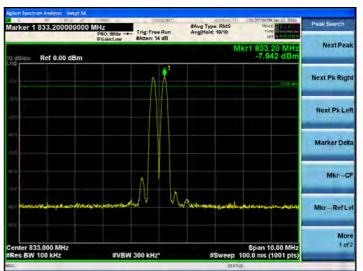
F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

SMR 800,850Cellular Band UL

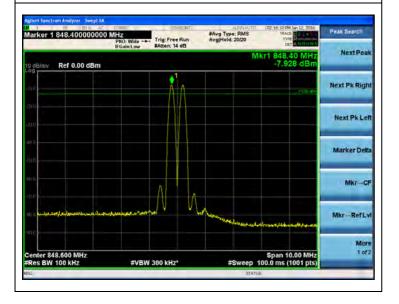
[SMR 800,850Cellular Uplink Low]



[SMR 800,850Cellular Uplink Mid]



[SMR 800,850Cellular Uplink High]



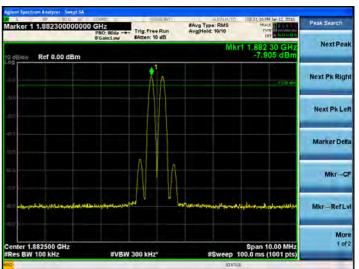
F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

PCS1900 Band UL

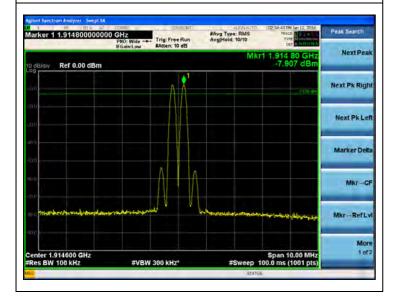
[PCS1900 Uplink Low]



[PCS1900 Uplink Mid]



[PCS1900 Uplink High]



F-TP22-03 (Rev.00) FCC ID: zuqr788cpawb-2730

IC: 12124A-7S8CPAWB30

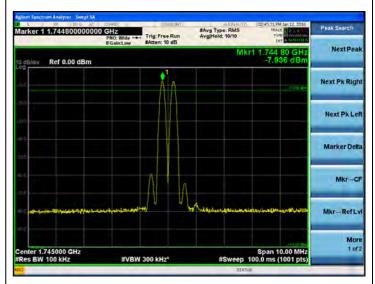
Mkr-RefLv

Report No.: HCT-R-1602-F006-1

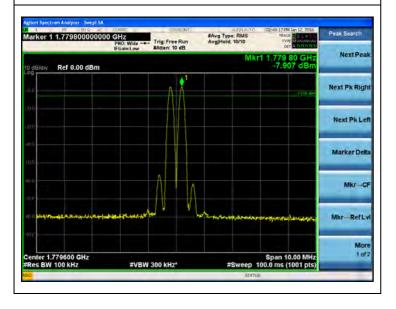
AWS2100 Band UL

[AWS2100 Uplink Low]

[AWS2100 Uplink Mid]



[AWS2100 Uplink High]

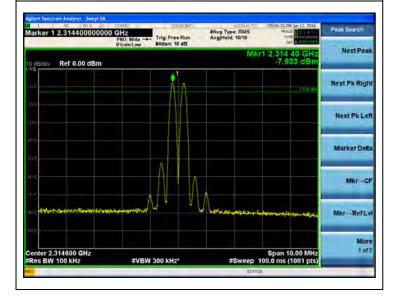


F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

WCS Band UL

[WCS Uplink Mid] Append Special on Analysis Serge IA Marker 1 2.305600000000 GHz PRO, Water -- PRO, Water

[WCS Uplink High]



F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

Power Back-off for IC

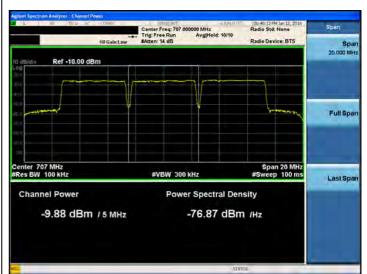
22.29 dBm / 5 MHz

[700 MHz Band Downlink 3 Carrier]

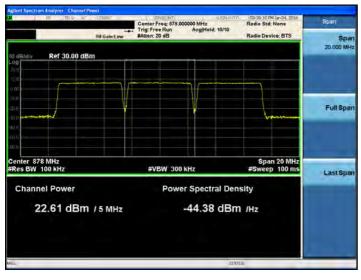
Canter Free 742 500000 MHz Trig Free Run Addio Std: None Radio Std: None Radi

-44.70 dBm /Hz

[700 MHz Band Uplink 3 Carrier]



[800 MHz Band Downlink 3 Carrier]



[800 MHz Band Uplink 3 Carrier]

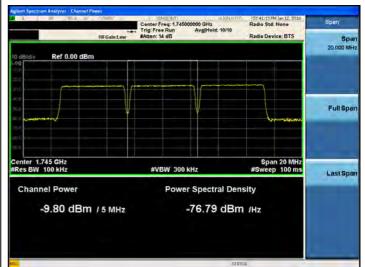




[AWS 2100 Band Downlink 3 Carrier]



[AWS 2100 Band Uplink 3 Carrier]



[BRS Band Downlink 3 Carrier]



[BRS Band Uplink 3 Carrier]

No test

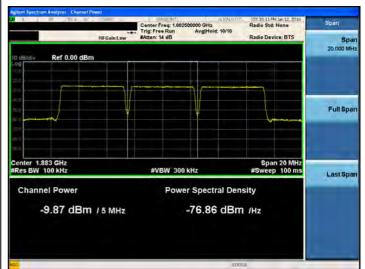
Note. Because BRS Band is TDD System(the uplink and downlink transmissions usually share the same frequency), worst case(downlink) is tested

IC: 12124A-7S8CPAWB30



Aglient Spectrum Analyzer: Channel Present Contact Freq: 1902200000 GHz Trig: Freq: 1902200000 GHz Trig: Freq: 1902200000 GHz Trig: Freq: 1902200000 GHz Radio Std: None Radio Std: None Radio Device: BTS Span 20.000 MHz Full Span Contact 1,963 GHz #Res BW 100 kHz #Res BW 100 kHz Power Spectral Density 25.59 dBm / 5 MHz Span / 5 MHz

[PCS 1900 Band Uplink 3 Carrier]



[WCS Band Uplink 3 Carrier]

[WCS Band Downlink 3 Carrier]

NO Test

Note. The minimum 30MHz bandwidth required to test

But wcs band supports 10MHz bandwidth

NO Test

Note. The minimum 30MHz bandwidth required to test

But wcs band supports 10MHz bandwidth

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7. OCCUPIED BANDWIDTH

FCC Rules

Test Requirement(s):

§ 2.1049 Measurements required: Occupied bandwidth:

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to

0.5 percent of the total mean power radiated by a given emission shall be measured under the specified conditions of § 2.1049 (a) through (i) as applicable.

Test Procedures:

Measurements were in accordance with the test methods section 3.4 of KDB 935210 D05 v01 and section 4.2 of KDB 971168 D01 v02r02.

Test is 99% OBW measured and used.

- a) Connect a signal generator to the input of the EUT.
- b) Configure the signal generator to transmit the AWGN signal.
- c) Configure the signal amplitude to be just below the AGC threshold level (see 3.2), but not more than 0.5 dB below.
- d) Connect a spectrum analyzer to the output of the EUT using appropriate attenuation.
- e) Set the spectrum analyzer center frequency to the center frequency of the operational band under test. The span range of the spectrum analyzer shall be between 2 times to 5 times the OBW.
- f) The nominal resolution bandwidth (RBW) shall be in the range of 1% to 5 % of the anticipated OBW, and the VBW shall be \geq 3 × RBW.
- g) Set the reference level of the instrument as required to preclude the signal from exceeding the maximum spectrum analyzer input mixer level for linear operation. In general, the peak of the spectral envelope must be more than [10 log (OBW / RBW)] below the reference level.

NOTE—Steps f) and g) may require iteration to enable adjustments within the specified tolerances.

- h) The noise floor of the spectrum analyzer at the selected RBW shall be at least 36 dB below the reference level.
- i) Set spectrum analyzer detection function to positive peak.
- j) Set the trace mode to max hold.
- k) Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.
- I) Repeat steps e) to k) with the input signal connected directly to the spectrum analyzer (i.e., input signal measurement).
- m) Compare the spectral plot of the input signal (determined from step I) to the output signal

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FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30





(determined from step k) to affirm that they are similar (in passband and rolloff characteristic features and relative spectral locations), and include plot(s) and descriptions in test report.

n) Repeat for all frequency bands authorized for use by the EUT.

IC Rules

Test Requirements: RSS-GEN 4.6.1

When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.

Test Procedures: RSS-GEN 4.6.1

The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth.

Video averaging is not permitted. Where practical, a sampling detector shall be used given that a peak or peak hold may produce a wider bandwidth than actual.

The trace data points are recovered and directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.

Test Results: The EUT complies with the requirements of this section.

Input Signal	Input Level (dBm)	Maximum Amp Gain
700 MHz		
SMR800	DL : -15 dBm UL : -42 dBm	DL : 42 dB UL : 37 dB
850 Cellular	UL:-42 aBM	UL.37 dB
PCS 1900		
AWS 2100	DL : -15 dBm	DL : 45 dB
wcs	UL : -45 dBm	UL : 40 dB
BRS		

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FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30





[Downlink Output]

	Channel	Frequency (MHz)	OBW (MHz)
700 Band_	Low	731.50	4.556
LTE 5 MHz	Middle	742.50	4.529
AGC threshold	High	753.50	4.533
700 Band_ LTE 5 MHz	Low	731.50	4.438
+3dBm above	Middle	742.50	4.528
the AGC threshold	High	753.50	4.432
700 Band_	Low	734.00	9.032
LTE 10 MHz AGC threshold	Middle	741.00	9.002
	High	751.00	8.998
700 Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	734.00	9.023
	Middle	741.00	9.018
	High	751.00	9.012



	Channel	Frequency (MHz)	OBW (MHz)
SMR 800	Low	864.50	4.541
,850 Cellular Band_ LTE 5 MHz	Middle	878.00	4.533
AGC threshold	High	891.50	4.542
SMR 800 ,850 Cellular	Low	864.50	4.535
Band_ LTE 5 MHz +3dBm above	Middle	878.00	4.546
the AGC threshold	High	891.50	4.540
850 Cellular	Low	874.00	9.011
Band_ LTE 10 MHz	Middle	-	
AGC threshold	High	889.00	9.025
850 Cellular Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	874.00	9.003
	Middle	-	
	High	889.00	8.930

IC: 12124A-7S8CPAWB30



	Channel	Frequency (MHz)	OBW (MHz)
850 Cellular	Low	871.50	4.163
Band_ UMTS	Middle	881.50	4.173
AGC threshold	High	891.50	4.178
850 Cellular Band_	Low	871.50	4.167
UMTS +3dBm above	Middle	881.50	4.177
the AGC threshold	High	891.50	4.181
SMR 800	Low	863.25	1.272
,850 Cellular Band_ CDMA	Middle	878.00	1.269
AGC threshold	High	892.75	1.271
SMR 800 ,850 Cellular	Low	863.25	1.276
Band_ CDMA +3dBm above	Middle	878.00	1.270
the AGC threshold	High	892.75	1.268

IC: 12124A-7S8CPAWB30



	Channel	Frequency (MHz)	OBW (MHz)
850 Cellular	Low	869.20	0.247
Band_ GSM	Middle	881.50	0.246
AGC threshold	High	893.80	0.246
850 Cellular Band_ GSM +3dBm above the AGC threshold	Low	869.20	0.247
	Middle	881.50	0.246
	High	893.80	0.246



		T	
	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	2112.50	4.542
Band_ LTE 5 MHz	Middle	2145.00	4.531
AGC threshold	High	2177.50	4.535
AWS 2100 Band_	Low	2112.50	4.532
LTE 5 MHz +3dBm above	Middle	2145.00	4.530
the AGC threshold	High	2177.50	4.537
AWS 2100 Band_ LTE 10 MHz AGC threshold	Low	2115.00	9.016
	Middle	2145.00	9.030
	High	2175.00	9.008
AWS 2100 Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	2115.00	9.012
	Middle	2145.00	9.033
	High	2175.00	9.023

IC: 12124A-7S8CPAWB30



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	2117.50	13.528
Band_ LTE 15 MHz	Middle	2145.00	13.540
AGC threshold	High	2172.50	13.527
AWS 2100 Band_	Low	2117.50	13.523
LTE 15 MHz +3dBm above	Middle	2145.00	13.547
the AGC threshold	High	2172.50	13.542
AWS 2100 Band_ LTE 20 MHz AGC threshold	Low	2120.00	17.963
	Middle	2145.00	17.988
	High	2170.00	17.976
AWS 2100 Band_ LTE 20 MHz +3dBm above the AGC threshold	Low	2120.00	17.962
	Middle	2145.00	17.977
	High	2170.00	17.974



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	2112.50	4.171
Band_ UMTS	Middle	2145.00	4.163
AGC threshold	High	2177.50	4.184
AWS 2100 Band_	Low	2112.50	4.166
UMTS +3dBm above the AGC threshold	Middle	2145.00	4.180
	High	2177.50	4.173



	Channel	Frequency (MHz)	OBW (MHz)
	Low	2506.00	17.966
BRS_ LTE 20 MHz AGC threshold	Middle	2593.00	17.988
AGC tilleshold	High	2680.00	17.983
BRS_	Low	2506.00	17.962
LTE 20 MHz +3dBm above the AGC threshold	Middle	2593.00	17.972
	High	2680.00	17.974



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900	Low	1932.50	4.523
Band_ LTE 5 MHz	Middle	1962.50	4.541
AGC threshold	High	1992.50	4.529
PCS 1900 Band_	Low	1992.50	4.528
LTE 5 MHz +3dBm above	Middle	1992.50	4.543
the AGC threshold	High	1992.50	4.526
PCS 1900	Low	1935.00	9.011
Band_ LTE 10 MHz	Middle	1960.00	9.016
AGC threshold	High	1990.00	9.016
PCS 1900 Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	1935.00	9.001
	Middle	1960.00	9.022
	High	1990.00	9.015

IC: 12124A-7S8CPAWB30



	Channel	Frequency (MHz)	OBW (MHz)
	Low	1932.50	4.166
PCS 1900 Band_ UMTS	Middle	1962.50	4.176
AGC threshold	High	1992.50	4.175
PCS 1900 Band_	Low	1932.50	4.159
UMTS +3dBm above	Middle	1962.50	4.172
the AGC threshold	High	1992.50	4.167
PCS 1900	Low	1931.25	1.270
Band_ CDMA AGC threshold	Middle	1962.50	1.272
	High	1993.75	1.271
PCS 1900 Band_ CDMA +3dBm above the AGC threshold	Low	1931.25	1.270
	Middle	1962.50	1.268
	High	1993.75	1.267



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900	Low	1930.20	0.246
Band_ GSM	Middle	1963.50	0.246
AGC threshold	High	1994.80	0.246
PCS 1900 Band_	Low	1932.20	0.246
GSM +3dBm above the AGC threshold	Middle	1963.50	0.246
	High	1994.80	0.246



	Channel	Frequency (MHz)	OBW (MHz)
	Low	-	-
WCS_ LTE 10MHz AGC threshold	Middle	2355.00	8.982
	High	-	-
WCS_	Low	-	
LTE 10MHz +3dBm above the AGC threshold	Middle	2355.00	8.981
	High	-	-



[Downlink Input]

	Channel	Frequency (MHz)	OBW (MHz)
700 Band_	Low	731.50	4.538
LTE 5 MHz AGC threshold	Middle	742.50	4.530
	High	753.50	4.532
700 Band_	Low	734.00	9.018
LTE 10 MHz AGC threshold	Middle	741.00	9.019
	High	751.00	9.018

	Channel	Frequency (MHz)	OBW (MHz)
SMR 800	Low	864.50	4.540
,850 Cellular Band_ LTE 5 MHz AGC threshold	Middle	878.00	4.526
	High	891.50	4.540
850 Cellular	Low	874.00	9.028
Band_ LTE 10 MHz AGC threshold	Middle	-	
	High	889.00	9.017

FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30



	Channel	Frequency (MHz)	OBW (MHz)
850 Cellular	Low	871.50	4.168
Band_ UMTS	Middle	881.50	4.176
AGC threshold	High	891.50	4.173
SMR 800 ,850 Cellular Band_ CDMA AGC threshold	Low	863.25	1.269
	Middle	878.00	1.272
	High	892.75	1.271
850 Cellular Band_ GSM AGC threshold	Low	869.20	0.246
	Middle	881.50	0.246
	High	893.80	0.246



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	2112.50	4.545
Band_ LTE 5 MHz	Middle	2145.00	4.542
AGC threshold	High	2177.50	4.537
AWS 2100	Low	2115.00	9.013
Band_ LTE 10 MHz	Middle	2145.00	9.020
AGC threshold	High	2175.00	9.017
AWS 2100	Low	2117.50	13.548
Band_ LTE 15 MHz	Middle	2145.00	13.525
AGC threshold	High	2172.50	13.543
AWS 2100 Band_ LTE 20 MHz AGC threshold	Low	2120.00	17.982
	Middle	2145.00	17.982
	High	2170.00	17.987



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	2112.50	4.171
Band_ UMTS	Middle	2145.00	4.172
AGC threshold	High	2177.50	4.165



	Channel	Frequency (MHz)	OBW (MHz)
BRS_ LTE 20 MHz AGC threshold	Low	2506.00	17.992
	Middle	2593.00	17.979
	High	2680.00	17.980

	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900	Low	1932.50	4.532
Band_ LTE 5 MHz AGC threshold	Middle	1962.50	4.538
	High	1992.50	4.544
PCS 1900	Low	1935.00	9.009
Band_ LTE 10 MHz AGC threshold	Middle	1960.00	9.004
	High	1990.00	9.006



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900	Low	1932.50	4.173
Band_ UMTS	Middle	1962.50	4.175
AGC threshold	High	1992.50	4.173
PCS 1900 Band_ CDMA AGC threshold	Low	1931.25	1.270
	Middle	1962.50	1.269
	High	1993.75	1.268
PCS 1900 Band_ GSM AGC threshold	Low	1930.20	0.246
	Middle	1963.50	0.246
	High	1994.80	0.246



	Channel	Frequency (MHz)	OBW (MHz)
	Low	-	-
WCS_ LTE 10MHz AGC threshold	Middle	2355.00	9.009
	High	-	-

IC: 12124A-7S8CPAWB30





[Uplink Output]

	Channel	Frequency (MHz)	OBW (MHz)
700 Band_	Low	700.50	4.540
LTE 5 MHz	Middle	707.00	4.545
AGC threshold	High	713.50	4.513
700 Band_ LTE 5 MHz	Low	700.50	4.542
+3dBm above	Middle	707.00	4.551
the AGC threshold	High	713.50	4.525
700 Band_	Low	-	-
LTE 10 MHz	Middle	782.00	8.972
AGC threshold	High	-	-
700 Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	-	-
	Middle	782.00	8.979
	High	-	-



	Channel	Frequency (MHz)	OBW (MHz)
SMR 800	Low	819.50	4.526
,850 Cellular Band_ LTE 5 MHz	Middle	833.00	4.524
AGC threshold	High	846.50	4.539
SMR 800 ,850 Cellular	Low	819.50	4.552
Band_ LTE 5 MHz +3dBm above	Middle	833.00	4.536
the AGC threshold	High	846.50	4.534
850 Cellular	Low	829.00	8.989
Band_ LTE 10 MHz	Middle	-	
AGC threshold	High	844.00	8.997
850 Cellular Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	829.00	9.002
	Middle	-	
	High	844.00	9.007

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	Channel	Frequency (MHz)	OBW (MHz)
850 Cellular Band_ UMTS AGC threshold	Low	826.50	4.172
	Middle	836.50	4.175
	High	846.50	4.169
850 Cellular Band_ UMTS +3dBm above the AGC threshold	Low	826.50	4.167
	Middle	836.50	4.175
	High	846.50	4.168
SMR 800 ,850 Cellular Band_ CDMA AGC threshold	Low	818.25	1.270
	Middle	833.00	1.268
	High	847.75	1.269
SMR 800 ,850 Cellular Band_ CDMA +3dBm above the AGC threshold	Low	818.25	1.273
	Middle	833.00	1.272
	High	847.75	1.266

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	Channel	Frequency (MHz)	OBW (MHz)
850 Cellular	Low	824.20	0.246
Band_ GSM AGC threshold	Middle	836.50	0.594
	High	848.80	0.246
850 Cellular Band_ GSM +3dBm above the AGC threshold	Low	824.20	0.246
	Middle	836.50	0.246
	High	848.80	0.246



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	1712.50	4.531
Band_ LTE 5 MHz	Middle	1745.00	4.542
AGC threshold	High	1777.50	4.547
AWS 2100 Band_	Low	1712.50	4.529
LTE 5 MHz +3dBm above	Middle	1745.00	4.530
the AGC threshold	High	1777.50	4.547
AWS 2100	Low	1715.00	9.008
Band_ LTE 10 MHz	Middle	1745.00	9.022
AGC threshold	High	1775.00	9.010
AWS 2100 Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	1715.00	9.010
	Middle	1745.00	9.020
	High	1775.00	9.011



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	1717.50	13.526
Band_ LTE 15 MHz	Middle	1745.00	13.539
AGC threshold	High	1772.50	13.522
AWS 2100 Band_	Low	1717.50	13.542
LTE 15 MHz +3dBm above	Middle	1745.00	13.531
the AGC threshold	High	1772.50	13.526
AWS 2100	Low	1720.00	17.963
Band_ LTE 20 MHz	Middle	1745.00	17.982
AGC threshold	High	1770.00	17.960
AWS 2100 Band_ LTE 20 MHz +3dBm above the AGC threshold	Low	1720.00	17.970
	Middle	1745.00	17.988
	High	1770.00	17.960

IC: 12124A-7S8CPAWB30



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	1712.50	4.165
Band_ UMTS AGC threshold	Middle	1745.00	4.165
	High	1777.50	4.174
AWS 2100 Band_ UMTS +3dBm above the AGC threshold	Low	1712.50	4.167
	Middle	1745.00	4.178
	High	1777.50	4.169



	Channel	Frequency (MHz)	OBW (MHz)
	Low	2506.00	17.964
BRS_ LTE 20 MHz AGC threshold	Middle	2593.00	17.977
	High	2680.00	17.974
BRS_	Low	2506.00	17.964
LTE 20 MHz +3dBm above the AGC threshold	Middle	2593.00	17.986
	High	2680.00	17.967



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900	Low	1852.50	4.510
Band_ LTE 5 MHz	Middle	1882.50	4.510
AGC threshold	High	1912.50	4.514
PCS 1900 Band_	Low	1852.50	4.511
LTE 5 MHz +3dBm above	Middle	1882.50	4.517
the AGC threshold	High	1912.50	4.512
PCS 1900	Low	1855.00	9.010
Band_ LTE 10 MHz	Middle	1882.50	9.015
AGC threshold	High	1910.00	8.992
PCS 1900 Band_ LTE 10 MHz +3dBm above the AGC threshold	Low	1855.00	9.002
	Middle	1882.50	9.015
	High	1910.00	9.011



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900	Low	1852.50	4.167
Band_ UMTS	Middle	1882.50	4.176
AGC threshold	High	1912.50	4.179
PCS 1900 Band_	Low	1852.50	4.168
UMTS +3dBm above	Middle	1882.50	4.165
the AGC threshold	High	1912.50	4.174
PCS 1900	Low	1851.25	1.270
Band_ CDMA	Middle	1882.50	1.272
AGC threshold	High	1913.75	1.275
PCS 1900 Band_ CDMA +3dBm above the AGC threshold	Low	1851.25	1.272
	Middle	1882.50	1.271
	High	1913.75	1.267



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900	Low	1850.20	0.246
Band_ GSM AGC threshold	Middle	1882.50	0.246
	High	1914.80	0.246
PCS 1900 Band_ GSM +3dBm above the AGC threshold	Low	1850.20	0.246
	Middle	1882.50	0.246
	High	1914.80	0.246



	Channel	Frequency (MHz)	OBW (MHz)
	Low	1	ı
WCS_ LTE 10MHz AGC threshold	Middle	2310.00	9.012
	High	-	ı
WCS_ LTE 10MHz +3dBm above the AGC threshold	Low	-	-
	Middle	2310.00	9.010
	High	-	-



[Uplink Input]

	Channel	Frequency (MHz)	OBW (MHz)
700 Band_	Low	700.50	4.532
LTE 5 MHz AGC threshold	Middle	707.00	4.542
	High	713.50	4.541
700 Band_	Low	-	-
LTE 10 MHz AGC threshold	Middle	782.00	9.004
	High	-	-

	Channel	Frequency (MHz)	OBW (MHz)
SMR 800	Low	819.50	4.535
,850 Cellular Band_ LTE 5 MHz AGC threshold	Middle	833.00	4.547
	High	846.50	4.537
850 Cellular	Low	829.00	9.012
Band_ LTE 10 MHz AGC threshold	Middle		
	High	844.00	9.018

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	Channel	Frequency (MHz)	OBW (MHz)
850 Cellular	Low	826.50	4.169
Band_ UMTS	Middle	836.50	4.172
AGC threshold	High	846.50	4.174
SMR 800 ,850 Cellular Band_ CDMA AGC threshold	Low	818.25	1.265
	Middle	833.00	1.268
	High	847.75	1.273
850 Cellular Band_ GSM AGC threshold	Low	824.20	0.247
	Middle	836.50	0.248
	High	848.80	0.247



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100	Low	1712.50	4.547
Band_ LTE 5 MHz	Middle	1745.00	4.531
AGC threshold	High	1777.50	4.516
AWS 2100 Band_ LTE 10 MHz AGC threshold	Low	1715.00	9.021
	Middle	1745.00	9.014
	High	1775.00	9.018
AWS 2100 Band_ LTE 15 MHz AGC threshold	Low	1717.50	13.525
	Middle	1745.00	13.546
	High	1772.50	13.543
AWS 2100 Band_ LTE 20 MHz AGC threshold	Low	1720.00	17.991
	Middle	1745.00	17.993
	High	1770.00	17.996



	Channel	Frequency (MHz)	OBW (MHz)
AWS 2100 Band_ UMTS AGC threshold	Low	1712.50	4.179
	Middle	1745.00	4.177
	High	1777.50	4.178

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	Channel	Frequency (MHz)	OBW (MHz)
BRS_ LTE 20 MHz AGC threshold	Low	2506.00	17.989
	Middle	2593.00	17.992
	High	2680.00	17.980



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900 Band_ LTE 5 MHz AGC threshold	Low	1852.50	4.513
	Middle	1882.50	4.507
	High	1912.50	4.512
PCS 1900 Band_ LTE 10 MHz AGC threshold	Low	1855.00	9.021
	Middle	1882.50	9.012
	High	1910.00	9.016



	Channel	Frequency (MHz)	OBW (MHz)
PCS 1900 Band_ UMTS AGC threshold	Low	1852.50	4.169
	Middle	1882.50	4.173
	High	1912.50	4.175
PCS 1900 Band_ CDMA AGC threshold	Low	1851.25	1.268
	Middle	1882.50	1.275
	High	1913.75	1.267
PCS 1900 Band_ GSM AGC threshold	Low	1850.20	0.246
	Middle	1882.50	0.246
	High	1914.80	0.247



	Channel	Frequency (MHz)	OBW (MHz)
WCS_ LTE 10MHz AGC threshold	Low	-	-
	Middle	2310.00	9.021
	High	-	-



Plots of Occupied Bandwidth 700 MHz Band_LTE 5MHz DL_Output

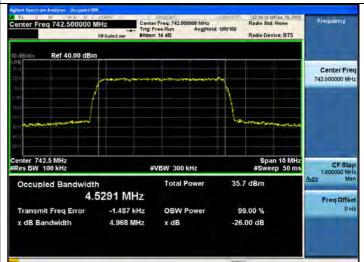
[700 Band AGC threshold Downlink Output LTE 5 MHz Low]



[700 Band AGC threshold Downlink Output LTE 5 MHz High]



[700 Band AGC threshold Downlink Output LTE 5 MHz Mid]



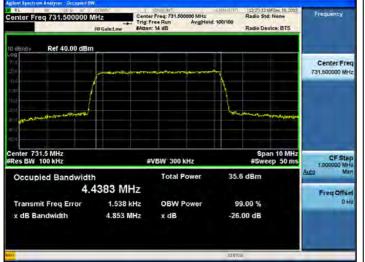
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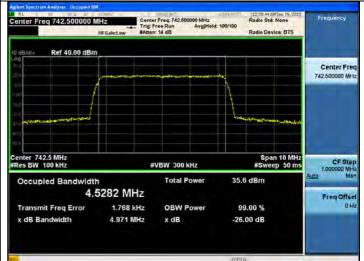
IC: 12124A-7S8CPAWB30



[700 Band +3dBm above the AGC threshold Downlink Output LTE 5 MHz Low]



[700 Band +3dBm above the AGC threshold Downlink Output LTE 5 MHz Mid]



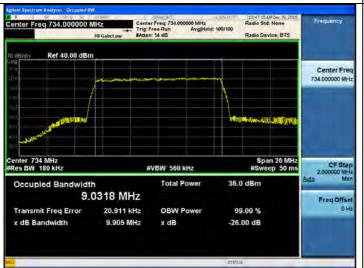
[700 Band +3dBm above the AGC threshold Downlink Output LTE 5 MHz High]



F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

700 MHz Band_LTE 10MHz DL_Output

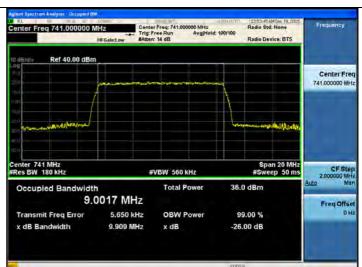
[700 Band AGC threshold Downlink Output LTE 10 MHz Low]



[700 Band AGC threshold Downlink Output LTE 10 MHz High]



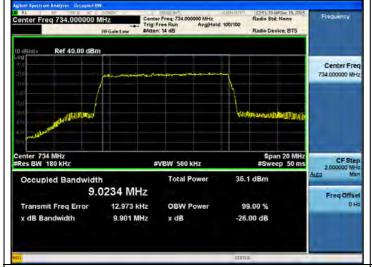
[700 Band AGC threshold Downlink Output LTE 10 MHz Mid]



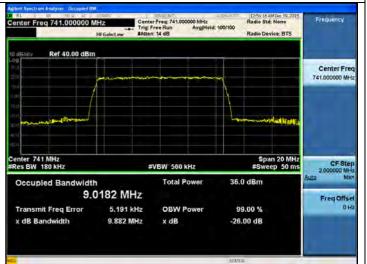
IC: 12124A-7S8CPAWB30



[700 Band +3dBm above the AGC threshold Downlink Output LTE 10 MHz Low]



[700 Band +3dBm above the AGC threshold Downlink Output LTE 10 MHz Mid]



[700 Band +3dBm above the AGC threshold Downlink Output LTE 10 MHz High]



F-TP22-03 (Rev.00) FCC ID: ZUQR7S8CPAWB-2730 IC: 12124A-7S8CPAWB30

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SMR 800,850 Cellular Band_LTE 5 MHz DL_Output

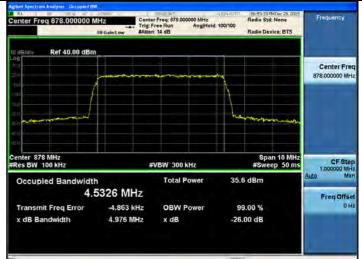
[SMR 800,850 Cellular Band AGC threshold Downlink Output LTE 5 MHz Low]



[SMR 800,850 Cellular Band AGC threshold Downlink Output LTE 5 MHz High]



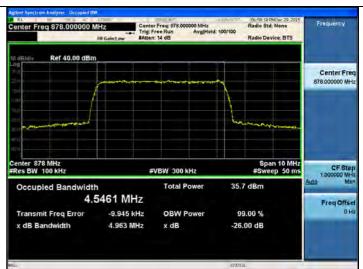
[SMR 800,850 Cellular Band AGC threshold Downlink Output LTE 5 MHz Mid]



[SMR 800,850 Cellular Band +3dBm above the AGC threshold Downlink Output LTE 5 MHz Low]

hold SMR 800,850 Cellular Band +3dBm above the AGC threshold Downlink Output LTE 5 MHz Mid]





[SMR 800,850 Cellular Band +3dBm above the AGC threshold

Downlink Output LTE 5 MHz High]

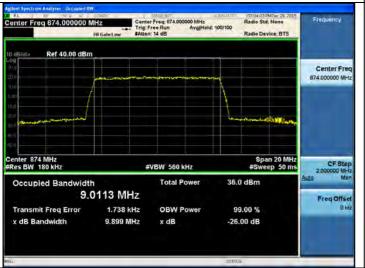


IC: 12124A-7S8CPAWB30



850 Cellular Band_LTE 10 MHz DL_Output

[850 Cellular Band AGC threshold Downlink Output LTE 10 MHz Low]



[850 Cellular Band +3dBm above the AGC threshold Downlink Output

LTE 10 MHz Low]



[850 Cellular Band AGC threshold Downlink Output

LTE 10 MHz High]



[850 Cellular Band +3dBm above the AGC threshold Downlink Output LTE 10 MHz High]

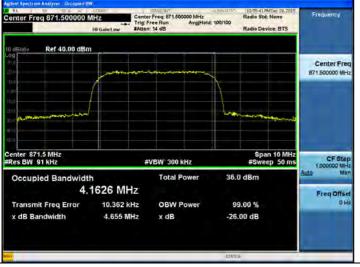


IC: 12124A-7S8CPAWB30

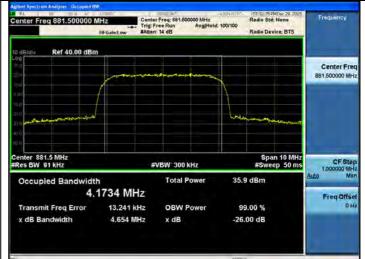


850 Cellular Band_UMTS DL_Output

[850 Cellular Band AGC threshold Downlink Output UMTS Low]



[850 Cellular Band AGC threshold Downlink Output UMTS Mid]



[850 Cellular Band AGC threshold Downlink Output UMTS High]



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