

Page: 1 of 84 EMC-ARF-05 Rev 1.1

FCC ID: 2AYTR17K-A01

# Appendix -

# Test Data and Result for report GZCR250300034202 (A)

(For Lower & Upper 700MHz)



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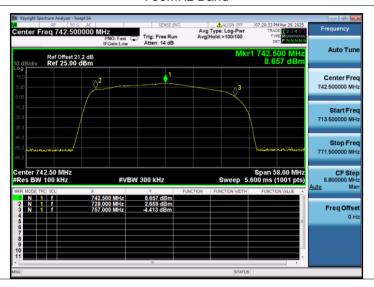
FMC-ARF-05 Rev 1.1 Page: 2 of 84

#### Authorized frequency band verification

#### Authorized frequency band verification

DL

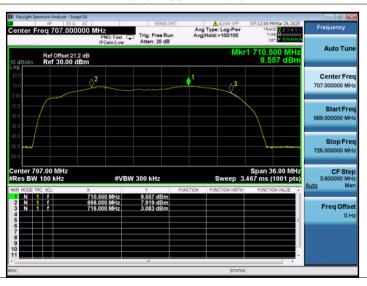
#### 700MHz Band



f0 =742.5MHz

UL

#### Lower 700MHz Band



f0 =710.5MHz



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FMC-ARF-05 Rev 1.1 Page: 3 of 84

#### Authorized frequency band verification

### Upper 700MHz Band



#### f0 = 778.2MHz

#### Remark:

The frequency point f0 with the highest power level fall in the CMRS band under test with reset the spectrum analyser span to 2 x the width of the CMRS band under test and adjust the tuned frequency of the signal generator to sweep 2 × the width of the CMRS band using the sweep function. EUT is compiled the KDB 935210 D03 Signal Booster Measurements v04r04 Authorized frequency band verification test requirement.



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FMC-ARF-05 Rev 1.1 Page: 4 of 84

#### **Maximum power**

Maximum Output Power										
		0				laximum	Output Power			
Path	Band Signal Input Signal Level (dBm)		Conducted (dBm)	Limit (dBm)	ERP (dBm)	Limit (dBm)	Verdict			
DL 700MI	700MHz	AWGN	Pre-AGC	-43	14.91	≤17	15.91	-47	PASS	
	70011112	GSM	Pre-AGC	-43	15.20		26.20	≤17	PASS	
	Lower 700MHz	AWGN	Pre-AGC	-45	17.89		16.49		PASS	
UL		GSM	Pre-AGC	-45	18.05	≥17	16.85	≤30	PASS	
	Upper 700MHz	AWGN	Pre-AGC	-45	18.74	& ≤30	17.34	_300	PASS	
		GSM	Pre-AGC	-45	18.83	≥30	17.43		PASS	

#### Remark:

- 1. The test frequency fo was determined in Authorized frequency band verification test in this report.
- 2. ERP = Conducted Output Power + Antenna Gain Cable loss, refer to clause 2 for the details about the declared antenna gain and cable loss.

Maximum transmitter test input levels									
Path	Band	Signal Type	Input Power (dBm)	Conducted output power (dBm)	Verdict				
	700MHz	AWGN	-21	14.78	PASS				
DL	7 001VII 12	GSM	-21	15.05	PASS				
	Lower 700MHz	AWGN	-24	17.68	PASS				
		GSM	-24	17.93	PASS				
UL	Upper	AWGN	-24	18.51	PASS				
	700MHz	GSM	-24	18.49	PASS				

#### Remark:

The EUT went into shutdown mode at the maximum input level indicated in 5.5 of KDB 935210 D03. Above test data was measured at input level 1dB less than that found to cause the shutdown, where the input power is much greater than 10dB above AGC.



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EMC-ARF-05 Rev 1.1 Page: 5 of 84

### Maximum booster gain computation

Maximum Gain										
Path	Band	Signal Type	Input Signal Level (dBm)		Conducted Output Power (dBm)	Gain (dB)	Limit (dB)	Verdict		
	700MHz	AWGN	Pre-AGC	-43	14.91	57.91	≤63.4	PASS		
DL		GSM	Pre-AGC	-43	15.20	58.20		PASS		
	Lower 700MHz	AWGN	Pre-AGC	-45	17.89	62.89		PASS		
UL		GSM	Pre-AGC	-45	18.05	63.05	≤63.4	PASS		
	Upper 700MHz	AWGN	Pre-AGC	-45	18.74	63.74		PASS		
		GSM	Pre-AGC	-45	18.83	63.83	≤64.3	PASS		

Equivalent Uplink and Downlink Gain										
Band	Signal Type	Uplink Gain (dB)	Downlink Gain (dB)	UL vs DL Gain  (dB)	Limit (dB)	Verdict				
Lower 700MHz Upper 700MHz	AWGN	62.89	57.91	4.98		PASS				
	GSM	63.05	58.20	4.85		PASS				
	AWGN	63.74	57.91	5.83	≤9	PASS				
	GSM	63.83	58.20	5.63		PASS				



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EMC-ARF-05 Rev 1.1 Page: 6 of 84

### Intermodulation product

	Intermodulation product										
Path	Band	In	put Signal	Worst Test Level (dBm)	Limit (dBm)	Verdict					
		two CW signals	Pre-AGC	-36.65		PASS					
DL	700MHz		10dB above AGC	-36.59	≤-19	PASS					
	Lower	two CW	Pre-AGC	-21.82		PASS					
	700MHz	signals	10dB above AGC	-20.19	≤-19	PASS					
UL	Upper	two CW	two CW Pre-AGC -24.15			PASS					
	700MHz	700MHz signals	10dB above AGC	-24.19	≤-19	PASS					



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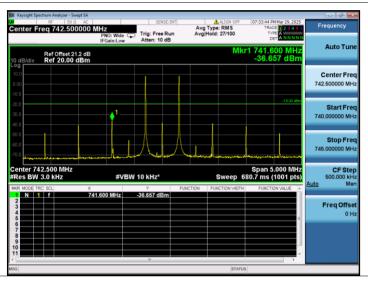


EMC-ARF-05 Rev 1.1 Page: 7 of 84

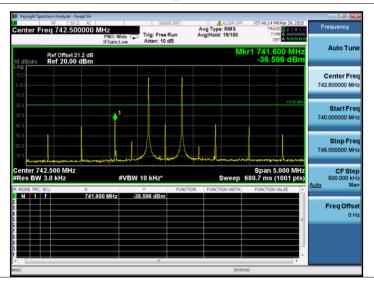
#### Intermodulation product

DL

#### 700MHz Band\_Pre-AGC



#### 700MHz Band\_10dB above AGC





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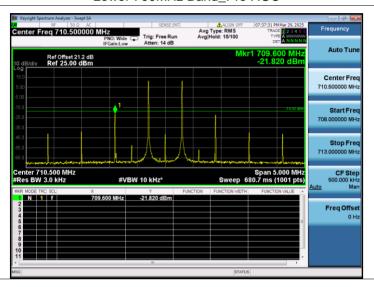


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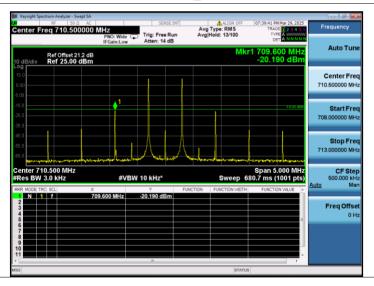
#### Intermodulation product

UL

Lower 700MHz Band Pre-AGC



#### Lower 700MHz Band\_10dB above AGC





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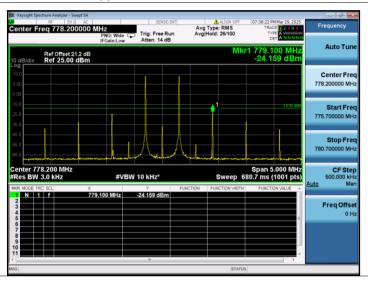


EMC-ARF-05 Rev 1.1 Page: 9 of 84

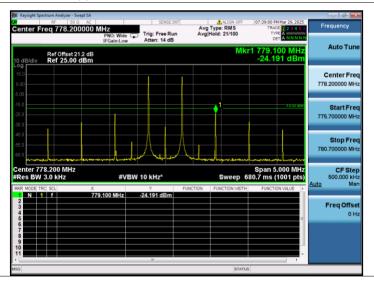
#### Intermodulation product

UL

#### Upper 700MHz Band Pre-AGC



#### Upper 700MHz Band\_10dB above AGC





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#### 5 Out-of-band emissions

			Out-of-l	oand emissions		
Path	Band		Input S	ignal	Limit (dBm)	Verdict
			Lower	Pre-AGC	. 40	PASS
		0014	Edge	10dB above AGC		PASS
		GSM	Upper	Pre-AGC	≤-19	PASS
			Edge	10dB above AGC		PASS
			Lower	Pre-AGC		PASS
		1.25MHz	Edge	10dB above AGC	- 40	PASS
DL	700MHz	AWGN	Upper	Pre-AGC	≤-19	PASS
			Edge	10dB above AGC		PASS
		4.1MHz AWGN	Lower Edge	Pre-AGC	≤-19	PASS
				10dB above AGC		PASS
			Upper Edge	Pre-AGC		PASS
				10dB above AGC		PASS
		GSM	Lower Edge	Pre-AGC	≤-19	PASS
				10dB above AGC		PASS
			Upper Edge	Pre-AGC		PASS
				10dB above AGC		PASS
			Lower	Pre-AGC		PASS
	Lower	1.25MHz	Edge	10dB above AGC		PASS
UL	700MHz	AWGN	Upper	Pre-AGC	≤-19	PASS
			Edge	10dB above AGC		PASS
		4.1MHz AWGN	Lower	Pre-AGC	- ≤-19	PASS
			Edge	10dB above AGC		PASS
			Upper	Pre-AGC		PASS
			Edge	10dB above AGC		PASS



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EMC-ARF-05 Rev 1.1 Page: 11 of 84

Out-of-band emissions									
Path	Band		Input	t Signal	Limit (dBm)	Verdict			
			Lower	Pre-AGC		PASS			
		GSM	Edge	10dB above AGC	- 10	PASS			
			Upper	Pre-AGC	≤-19	PASS			
	Upper 700MHz		Edge	10dB above AGC	=	PASS			
			Lower Edge	Pre-AGC	≤-19 ≤-19	PASS			
				10dB above AGC		PASS			
UL			Upper	Pre-AGC		PASS			
			Edge	10dB above AGC		PASS			
			Lower Edge 4.1MHz	Pre-AGC		PASS			
		4.1MHz AWGN		10dB above AGC		PASS			
			/GN Upper Edge	Pre-AGC		PASS			
				10dB above AGC		PASS			



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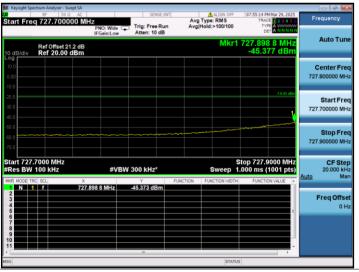
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#### **Out-of-band emissions**

#### DL 700MHz Band

GSM signal input Lower band edge Pre-AGC







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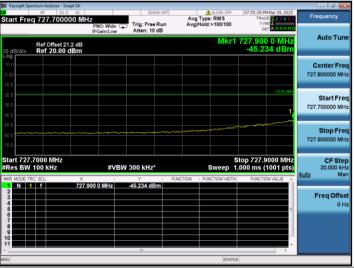
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#### **Out-of-band emissions**

#### DL 700MHz Band

GSM signal input Lower band edge 10dB above AGC







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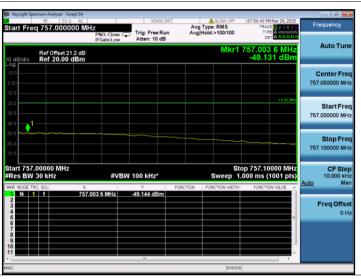


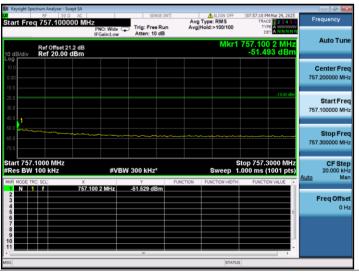
EMC-ARF-05 Rev 1.1 Page: 14 of 84

#### **Out-of-band emissions**

#### DL 700MHz Band

GSM signal input Upper band edge Pre-AGC







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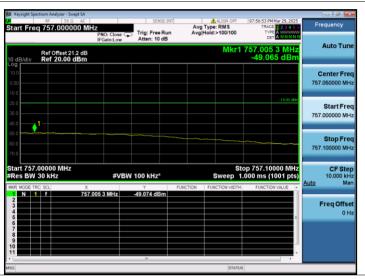


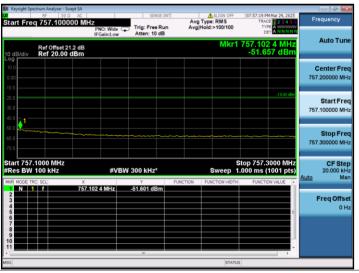
EMC-ARF-05 Rev 1.1 Page: 15 of 84

#### **Out-of-band emissions**

#### DL 700MHz Band

GSM signal input Upper band edge 10dB above AGC







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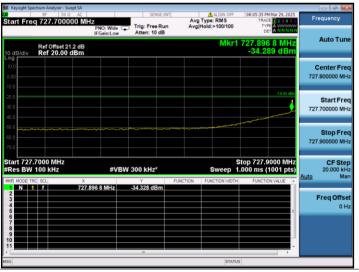
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#### **Out-of-band emissions**

#### DL 700MHz Band

1.25MHz AWGN signal input Lower band edge Pre-AGC







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FMC-ARF-05 Rev 1.1 Page: 17 of 84

#### **Out-of-band emissions**

#### DL 700MHz Band

1.25MHz AWGN signal input Lower band edge 10dB above AGC







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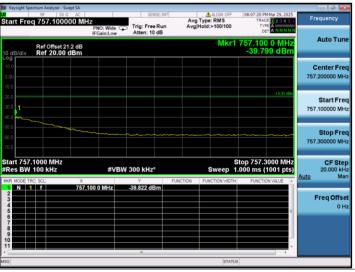
EMC-ARF-05 Rev 1.1 Page: 18 of 84

#### **Out-of-band emissions**

#### DL 700MHz Band

1.25MHz AWGN signal input Upper band edge Pre-AGC







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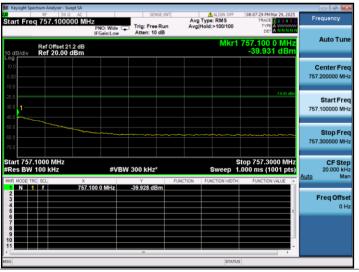
FMC-ARF-05 Rev 1.1 Page: 19 of 84

#### **Out-of-band emissions**

#### DL 700MHz Band

1.25MHz AWGN signal input Upper band edge 10dB above AGC







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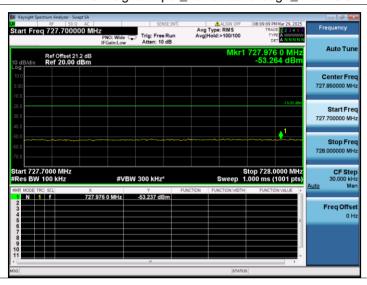


EMC-ARF-05 Rev 1.1 Page: 20 of 84

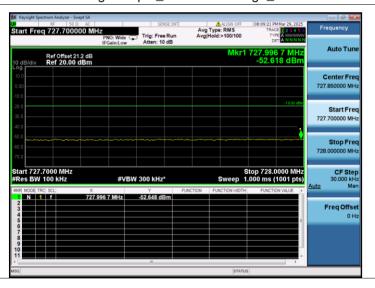
#### **Out-of-band emissions**

#### DL 700MHz Band

4.1MHz AWGN signal input Lower band edge Pre-AGC



4.1MHz AWGN signal input\_Lower band edge\_10dB above AGC





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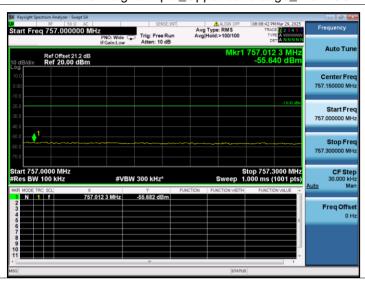


EMC-ARF-05 Rev 1.1 Page: 21 of 84

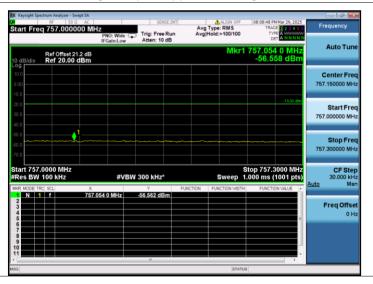
#### **Out-of-band emissions**

#### DL 700MHz Band

4.1MHz AWGN signal input Upper band edge Pre-AGC



4.1MHz AWGN signal input\_Upper band edge\_10dB above AGC





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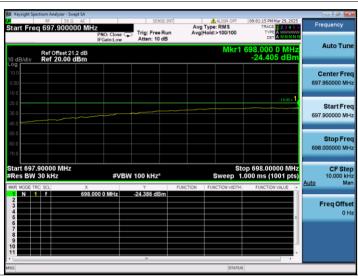


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#### **Out-of-band emissions**

#### **UL Lower 700MHz Band**

GSM signal input Lower band edge Pre-AGC







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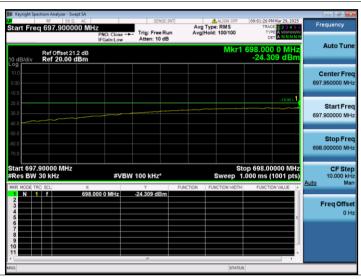


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#### **Out-of-band emissions**

#### **UL Lower 700MHz Band**

GSM signal input Lower band edge 10dB above AGC







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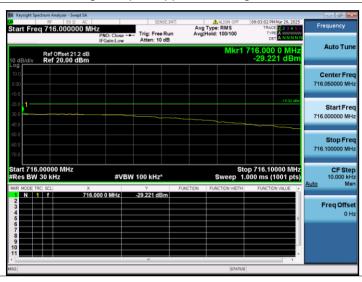


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#### **Out-of-band emissions**

#### **UL Lower 700MHz Band**

GSM signal input Upper band edge Pre-AGC







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EMC-ARF-05 Rev 1.1 Page: 25 of 84

#### **Out-of-band emissions**

#### **UL Lower 700MHz Band**

GSM signal input Upper band edge 10dB above AGC







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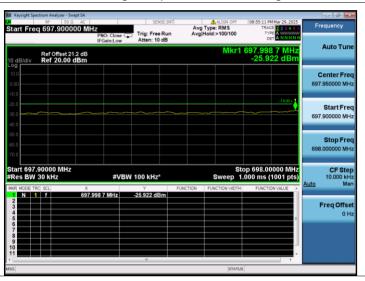


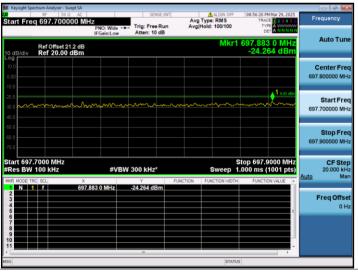
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#### **Out-of-band emissions**

#### **UL Lower 700MHz Band**

1.25MHz AWGN signal input Lower band edge Pre-AGC







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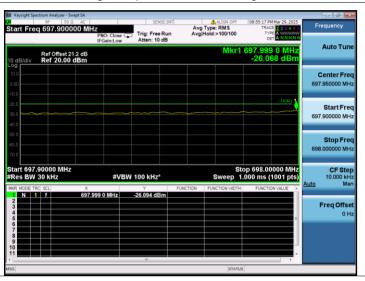


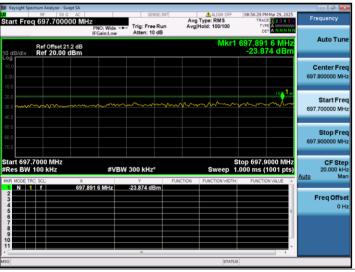
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#### **Out-of-band emissions**

#### **UL Lower 700MHz Band**

1.25MHz AWGN signal input Lower band edge 10dB above AGC







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