Application Note

UMTS (WCDMA) PERFORMANCE VS. OUTPUT POWER (TAMP-242GLN+) AN-60-043

WCMA Drop-In Low Noise Amplifier Module

Mini-Circuits TAMP-242GLN+ Ultra-low Noise Drop-In Amplifier Module is an ideal low noise amplifier for use in UMTS (WCDMA) Base Station or Tower Mounted Low Noise Applications. The TAMP-242GLN+ provides a optimized combination of critical performance: Low Noise / High Dynamic Range/ Input & Output Match / Unconditional Stability.

The High IP3 enables extremely low intermodulation and EVM distortion, making this an ideal high gain LNA for WCDMA signals. The multi-stage E-PHEMT based module provides typically +42 dBm OIP3 which translates to extremely linear performance in systems that require high dynamic range. *Click here for data sheet and other technical information*



Measurement Set-up



Summary Data



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicipatits.com

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AN-60-043 Rev. OR M125464 (12/09/09) File: AN60043.indd This document and its contents are the property of Mini-Circuits +7 dBm Mech Atten 30 dB

10 dB/div

0g

-2

Center 2.1 GHz

#Res BW 100 kHz

(MHz)

5.000

10.00

+10 dBm

10 dB/div

-3 -41 -5

-6

Center 2.1 GHz

#Res BW 100 kHz

(MHz)

5.000

10.00

Offset Freq. Integ BW

(MHz)

3.840

3.840

Mech Atten 32 dB

Offset Freq. Integ BW

(MHz)

3.840

3.840

Input: RF NCORR

Ref 20 dBm

Radio Device: BTS

Radio Device: BTS

ACLR 1 Plots vs. Output Power

+5 dBm

10 dB/div

.00

Ref Value 10.00 dBm

Ref 10 dBm

Input: RF NCORR IFGain:Low



CH Freg: 2.100000000 GHz

#VBW 1 MHz

CH Freq: 2.100000000 GHz Trig: RF Burst Avg #Atten: 32 dB

#VBW 1 MHz

dBm

-41.90

-57.11

Lower

dBc

-51.93

-67.13

dBm

-54.83

-60.58

Lower

dBc

-61.86

-67.60

Ģ

IFGain:Low

Trig: RF Burst

#Atten: 30 dB

Input: RF NCORR IFGain:Low

Ref 20 dBm

Avg|Hold: 62/100

Radio Device: BTS

Span 24.68 MHz

#Sweep 29 ms

dBc

-56.61

-60.58

Upper

Upper

dBc

-42.17

-57.27

dBc

-52.20

-67.29

dBc

-63.64

-67.61

AvalHold>100/100



CH Freq: 2.100000000 GHz

Avg|Hold>100/100

Trig: RF Burst

#Atten: 26 dB

+9 dBm







+11 dBm CH Freq: 2.100000000 GHz Trig: RF Burst Avg #Atten: 32 dB Mech Atten 32 dB Avg|Hold>100/100 Input: RF NCORR Ģ Radio Device: BTS Radio Device: BTS IFGain:Low 10 dB/div Ref 20 dBm -5| a. Span 24.68 MHz Center 2.1 GHz Span 24.68 MHz #Res BW 100 kHz #VBW 1 MHz #Sweep 29 ms #Sweep 29 ms Offset Freq. Integ BW Lower Upper (MHz) dBc dBm dBc dBc (MHz) 5.000 3.840 -47.68 -36.64 -47.72 -36.68

-66.34

-55.30

-66.65

For detailed performance specs & shopping online see web site

10.00

3.840

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