

2150-2170 MHz 30W WCDMA Multicarrier Linearized Power Amplifier

Description

The NA00514 is a Multicarrier (4FA) WCDMA 30 W Power Amplifier covering 2150-2170 MHz band for a small base station and repeaters. Its operating temperature is -20°C to $+60^{\circ}\text{C}$ ambient.

There are built-in alarms, monitoring and automatic shutdown/recovery circuits:

- Over Power Alarm/ Auto Shutdown
- VSWR Alarm/ Auto Shutdown
- Temperature Alarm/ Auto Shutdown/Auto Recovery
- Output Power Monitoring
- Enable/Disable Power

Products are screened by a vibration test with frequency 10-150 Hz and acceleration of gravity 2.0 g. The MTBF (Mean Time between Failure) is over 100,000 Hours.

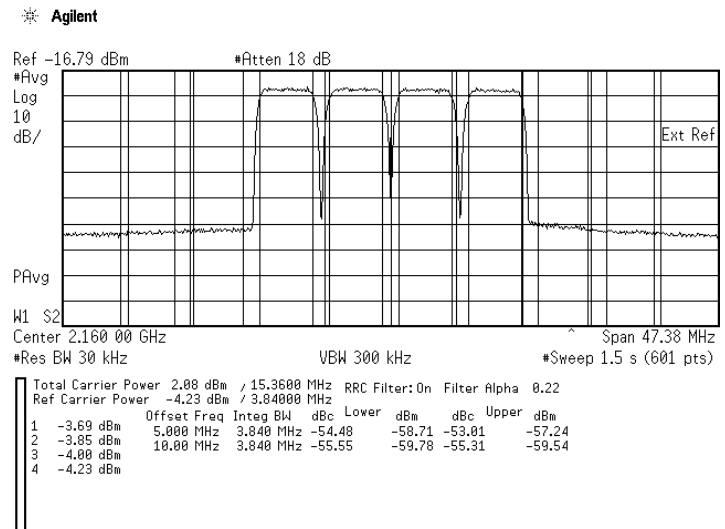
Electrical Performance

Parameter	Min.	Typ.	Max.	Units
Frequency	2150		2170	MHz
WCDMA Average Output Power (4FA)	30			W
Gain	52		54	dB
Gain Flatness			± 0.5	dB
Gain Variation Over Temperature			± 1.0	dB
Adjacent Channel Leakage Ratio*	-10 MHz		-53	dBc
	-5 MHz		-48	dBc
	+5 MHz		-48	dBc
	+10 MHz		-53	dBc
In/Out Return Loss	18			dB
DC supply voltage (Vcc)		+27		V
Current			12.5	A
Operating Temperature (Ambient)	-20		60	$^{\circ}\text{C}$

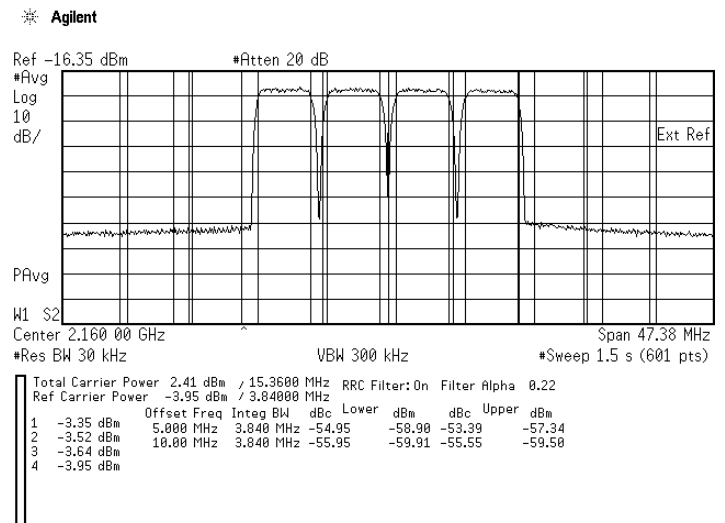
*Measured with HP ESG W-CDMA 4 Carriers and Pout 44.8 dBm over operating temperature. Per 3GPP TS-25.141

Typical Test Results

1. W-CDMA Signal Output (25°C Ambient)



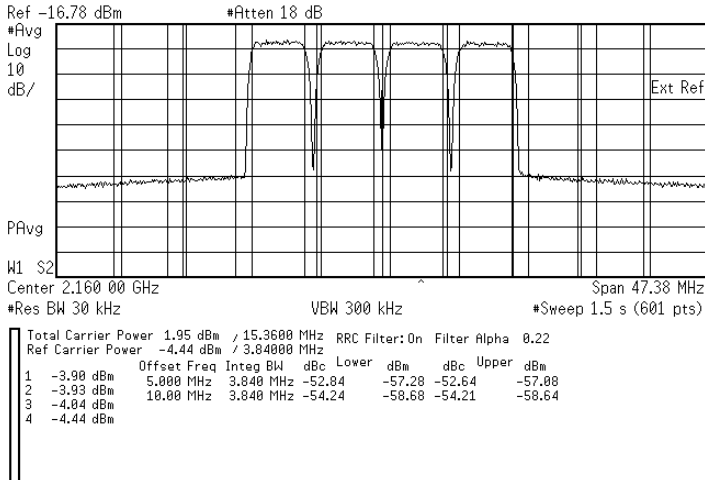
2. W-CDMA Signal Output (-20°C Ambient)



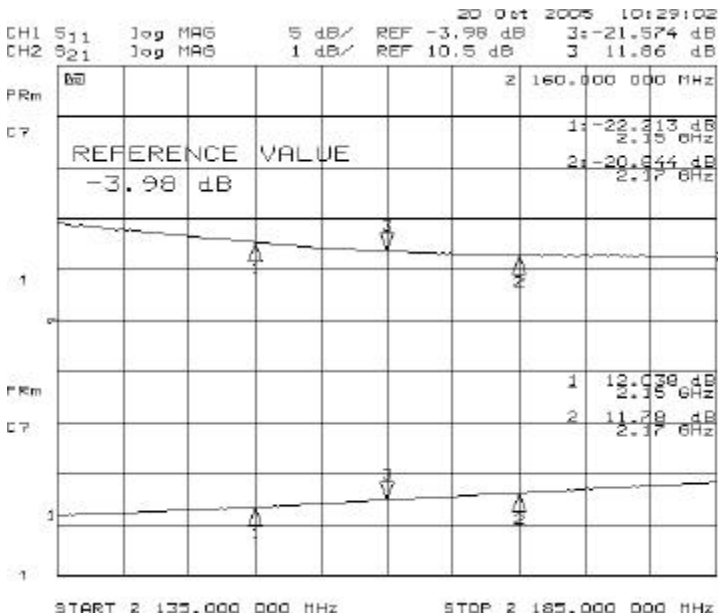
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3. W-CDMA Signal Output (70 °C Ambient)

✱ Agilent



4. Gain and Return Loss



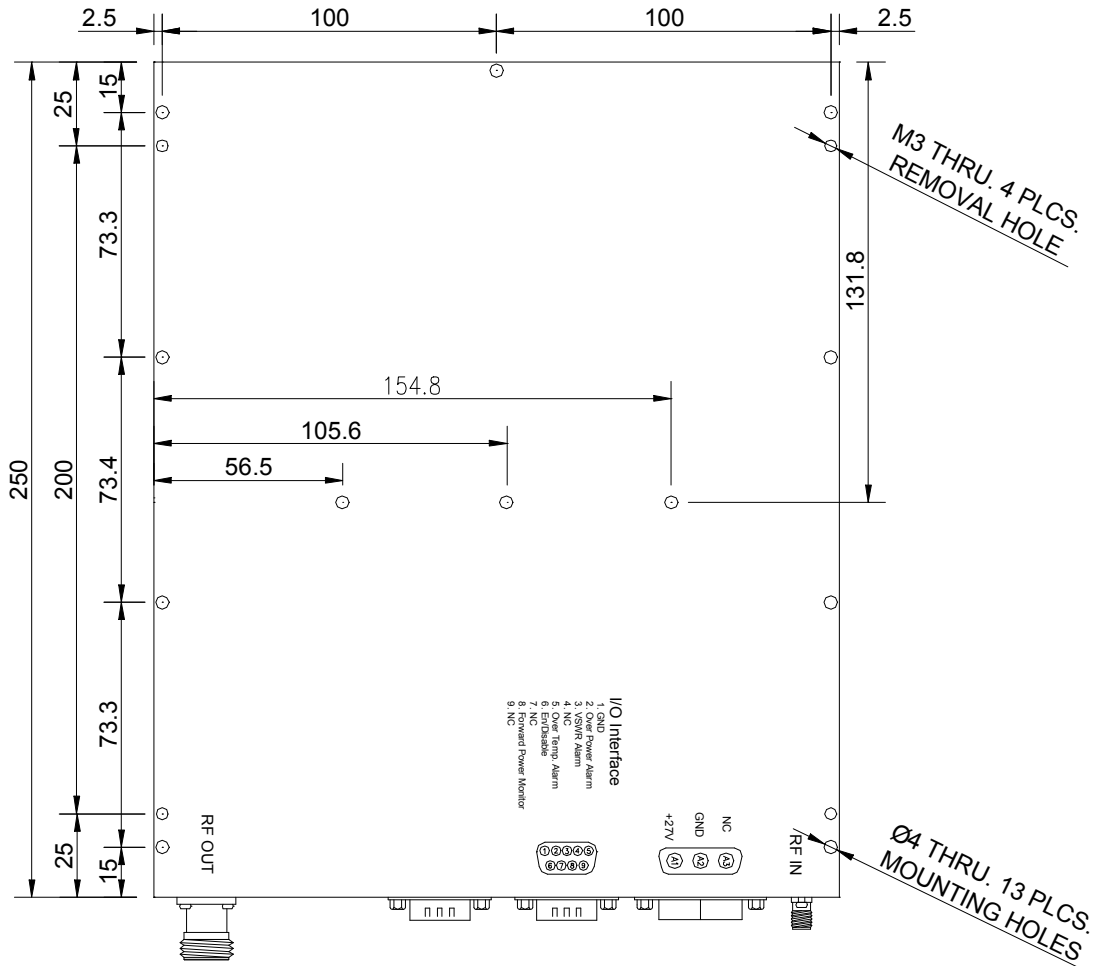
Connector Description

Name	Type	Pin	Description
RFIN	SMA-F		(I) RF Input Signal
RFOUT	N-F		(O) RF Output Signal
DC	D-SUB	A1	(I) DC Input +27 V
		A2	Ground
		A3	NOT CONNECTED.
I/O	D-SUB 9 Pins Male	1	GROUND
		2	(OH) OVER POWER ALARM Alarm at 47 ± 0.5 dBm
		3	(OH) VSWR ALARM Alarm at 39 ± 1 dBm of Reverse Power from Output.
		4	NOT CONNECTED.
		5	(OH) OVER TEMPERATURE ALARM Alarm set at 85 ± 5 °C Recovered at 65 ± 5 °C
		6	(IH) Disable
		7	NOT CONNECTED
		8	(O) FORWARD POWER MONITOR 4 V ± 0.5 V @ 45 dBm 0.1 V/dBm
		9	NOT CONNECTED
RESERVED	D-SUB	1-9	RESERVED.

(I: Input, O: Output, H: High Active, L: Low Active)

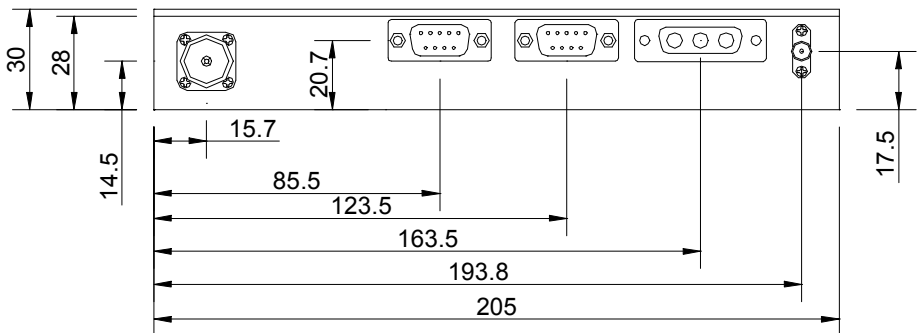
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OUTLINE



- I/O Interface
- 1. RF IN
 - 2. Over Power Alarm
 - 3. VSWR Alarm
 - 4. Over Temp Alarm
 - 5. EPO/Safe
 - 6. EPO/Safe
 - 7. NC
 - 8. Power Power Monitor
 - 9. NC

- +27V
- GND
- NC



UNIT: MM TOLERANCES .X : ±0.1 .XX : ±0.05