

Class “A” Linear RF Amplifier

3007

- **Frequency Response: 500-1000 MHz**
- **Linear Power: 20 watt**
- **Saturated Power: 50 watts**
- **Gain: 47 dB**

Description:

Designed for linear application in the 500 to 1000 MHz range. This amplifier utilizes class A RF Power MOSFET devices that provide high gain, wide dynamic range and an excellent 3rd order intercept. Suggested applications: multi-carrier, pulse, AM & FM modulation



ELECTRICAL SPECIFICATION @ VDD= +28VDC: Temp.=25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	500		1000	MHz
Power Output Saturated	P _{sat}		50		Watt
Power Output P-1dB	P _{-1dB}	20			Watt
Gain	G	45	49		dB
Small Signal Gain Flatness	ΔG			±1	dB
Input VSWR	S11		1.45:1	1.7:1	-
Harmonics @ 20 Watts	H		-40	-35	dBc
Inter-modulation Point 2 Tones, 5W per tone @ 950 & 951MHz	IP ₃		+54		dBm
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vdc	24	28	30	Volt
Operating Current @ 20 Watts	Amps		6.8		Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms	Typical: 1ms OFF, 10ms ON.			ms

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimensions	9.75 x 7.30 x 6.50	Max	Inch
RF Connectors IN/OUT	SMA	-	-
DC Connectors	Filtered feed-through	-	-
Cooling	Heat-sink and fan included	-	-
Weight	8.75	Max	lb

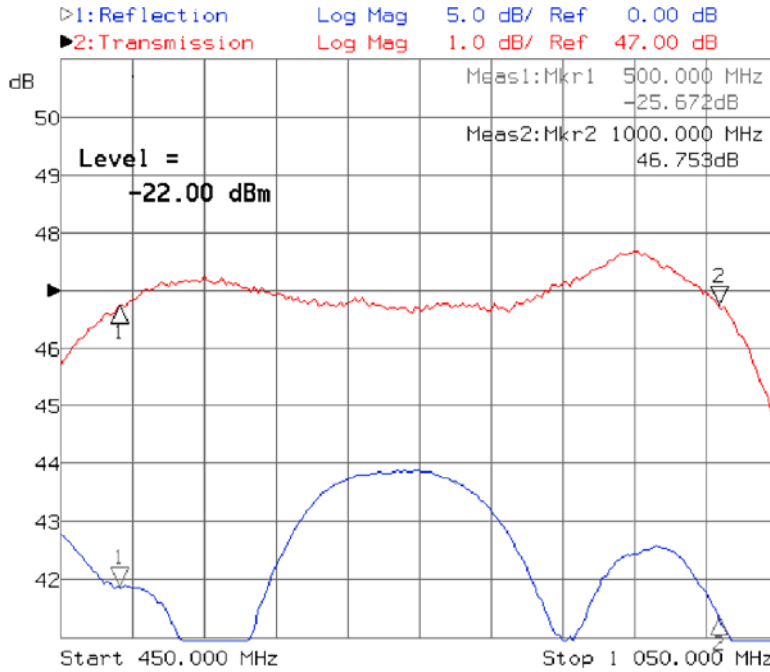
PROTECTIONS

Thermal Shutdown	Bi-metal switch set at 70°C with self reset.	Typ
Input Overdrive	Fold-back overdrive protection to 20 dBm	Max
Load VSWR	Infinite up to 20 watts	Max
Reverse Polarity Protection	Included	-

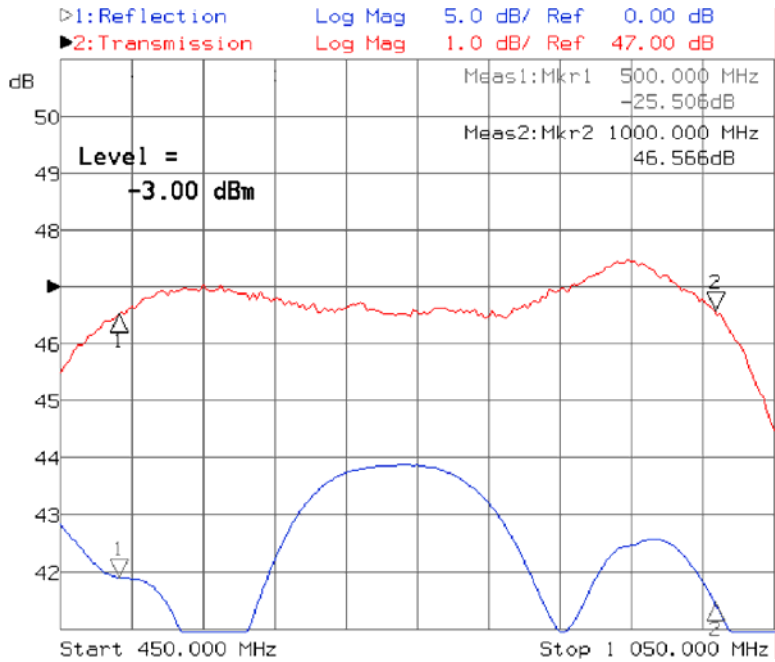
ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Units
Operating Case Temperature	T _c	0°C		+50°C	°C
Storage Temperature	T _{stg}	-30°C		+100°C	°C
Relative humidity non-condensation	RH	95			%

Response Curve

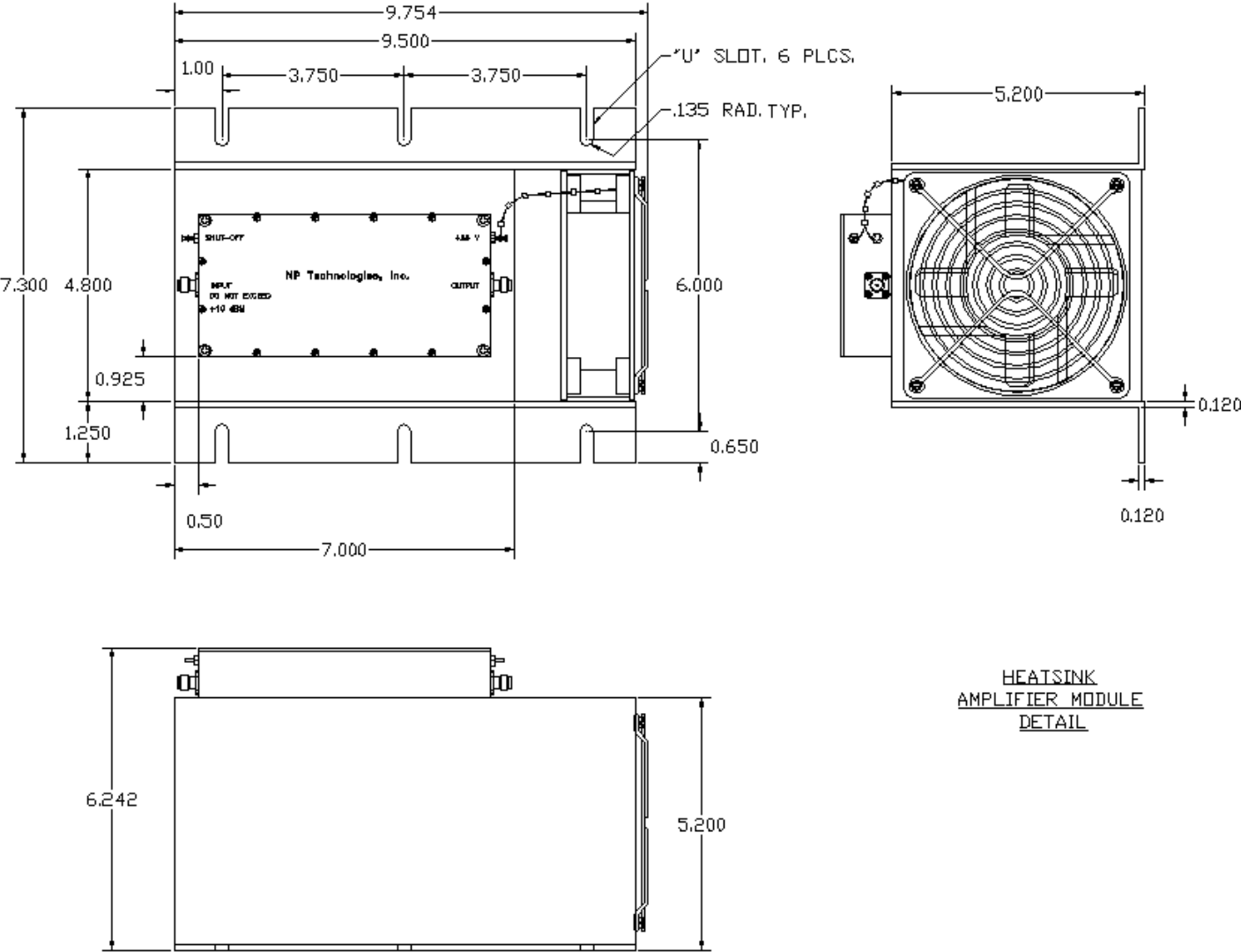


Small Signal Frequency Response Curve



Frequency Response Curve @ 20 Watt Output

Outline Drawing



HEATSINK
AMPLIFIER MODULE
DETAIL