NP Technologies, Inc.

NP-499

Booster RF Amplifier

- **Frequency Response: 30-88 MHz**
- **Linear Power: 80 watt**
- **Saturated Power: 100 watts**
- **Gain: 13 dB**

Description:
Designed to boost the output of FM military VHF transceivers.
Mechanically replaces the cover on the vehicle mount adapter's power supply. This amplifier utilizes RF power MOSFET devices that provide high gain, wide dynamic range and excellent ruggedness.

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	30		88	MHz
Power Output Saturated	P_{sat}		100		Watt
Power Output P-1dB	P_{-1dB}	80			Watt
Gain	G	10	13		dB
Small Signal Gain Flatness	ΔG			±1.0	dB
Input VSWR	S11		1.5:1	2.0:1	-
Harmonics	H		-20		dBc
Inter-modulation Point 2 Tones, xW per tone @ x & x MHz	IP_3		-		dBm
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vdc	22	25	30	Volt
Operating Current	Amps		5.0		Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms		-		ms

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimensions	3.7 x 10.8 x 4.4	Max	Inch
RF Connectors IN/OUT	BNC	-	-
DC Connectors	AMPHENOL 187647-1 (4 PIN)	-	-
Cooling	Heat-sink, natural convection	-	-
Weight	6	Max	lb

PROTECTIONS

Thermal Shutdown	Bi-metal switch set at 80°C with self reset.	Typ
Input Overdrive	40 dBm Max	Max
Load VSWR	Infinite up to 50 watts	Max
Reverse Polarity Protection	None	-

ENVIRONMENTAL CHARACTERISTICS

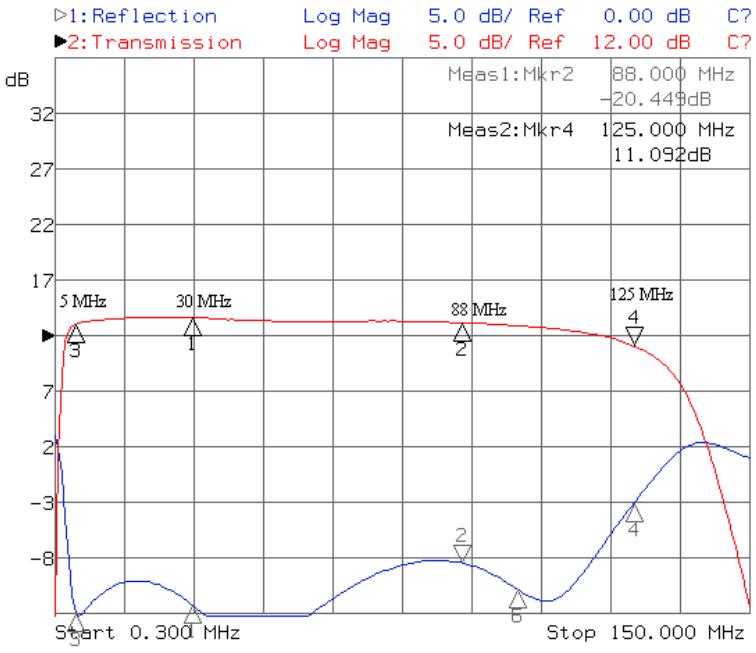
Parameter	Symbol	Min	Typ	Max	Units
Operating Case Temperature	Tc	-10°C		+60°C	°C
Storage Temperature	Tstg	-30°C		+100°C	°C
Relative humidity non-condensation	RH	95			%

2393 Teller Rd. Suite 108
Newbury Park, Ca. 91320

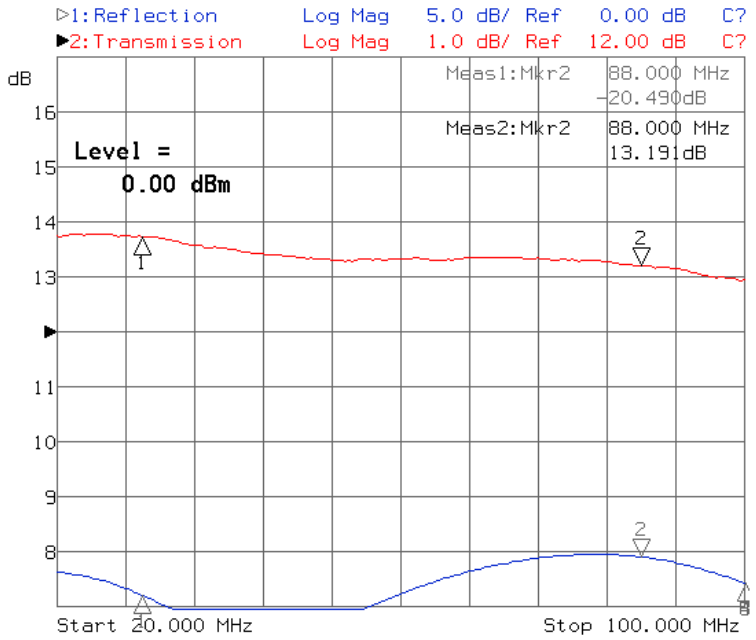
Web: www.nptrf.com
Email: sales@nptrf.com

Phone: (805) 376-9299
Fax: (805) 376-9288

Response Curve



Broadband Small Signal Frequency Response Curve



Small Signal Frequency Response Curve

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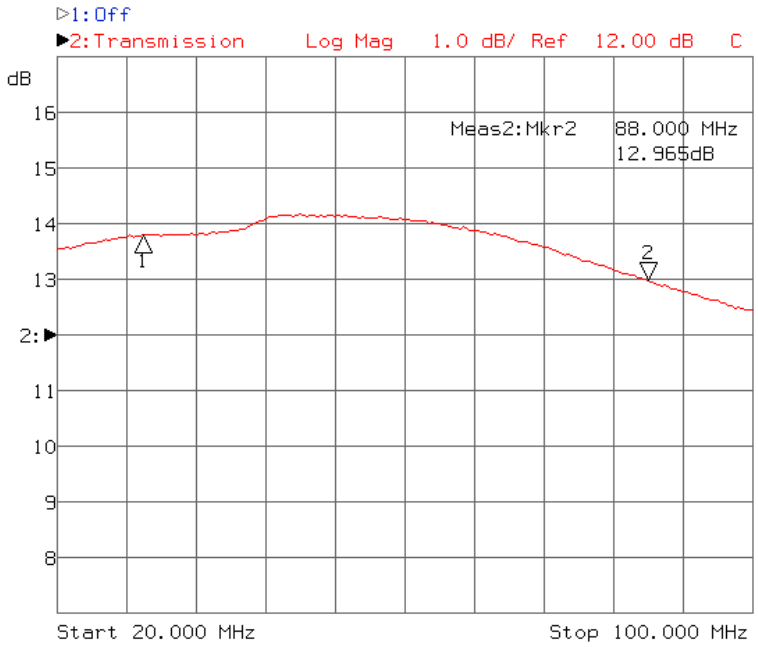
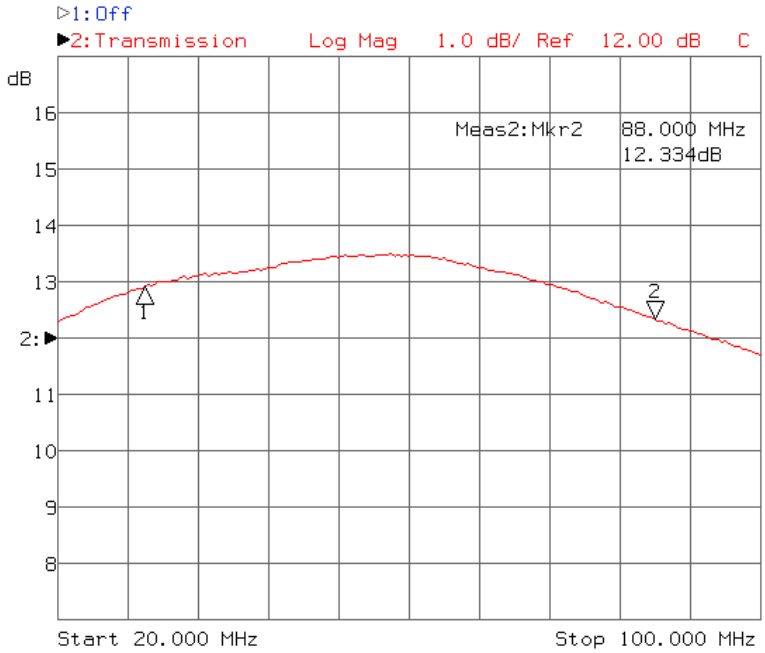


Frequency Response Curve @ 50 Watt Output



Frequency Response Curve @ 100 Watt Output

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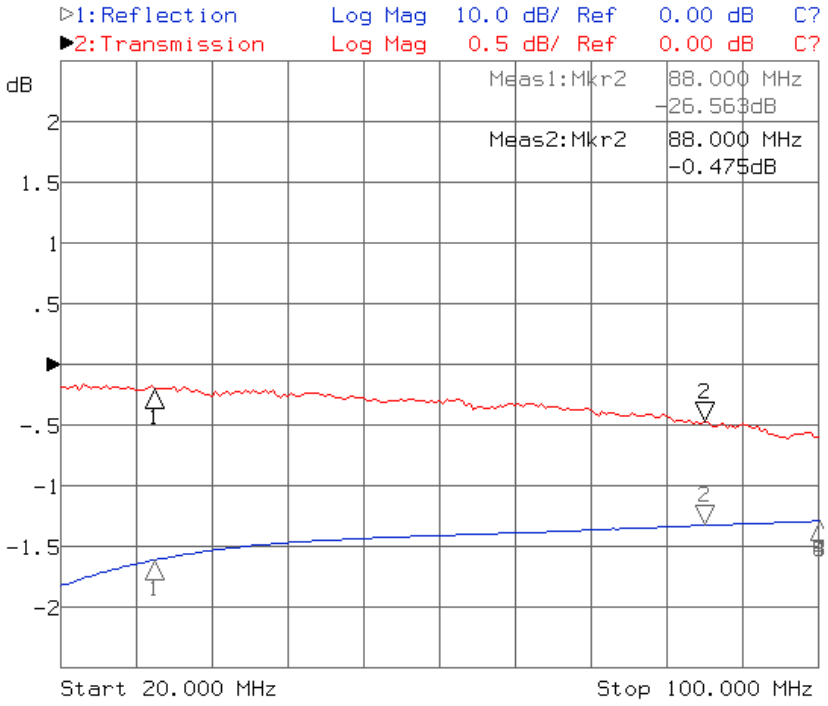

Through loss

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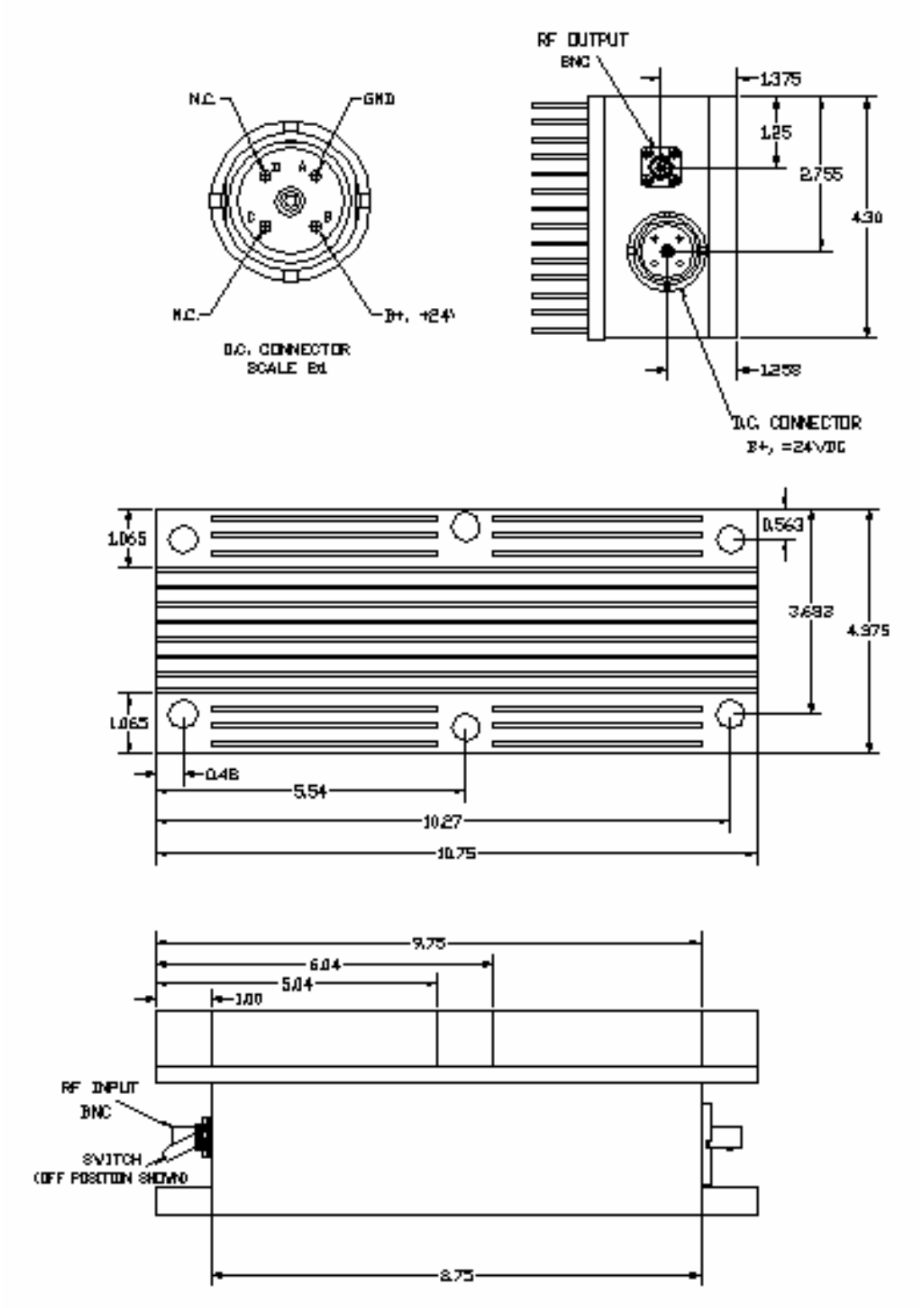
Outline Drawing



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