

Military Communications Booster RF Amplifier

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



Description:

This PA is designed to boost the output power of military VHF transceivers. This PA incorporates automatic T/R switching with bypass switch. It 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		1.3:1	1.5:1	-
Harmonics @ 80W, 2 nd /3 rd	H		-40/-20		dBc
AM Distortion 25 Carrier, 90% modulation @ 1KHz	Dis		3.3		%
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vdc	22	25	30	Volt
Operating Current @ 80W	Amps		9.0		Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms		N/A		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	Screw Type #6, SCI 52-160-002-A	-	-
Cooling	Heat-sink, natural convection	-	-
Weight	7	Max	lb

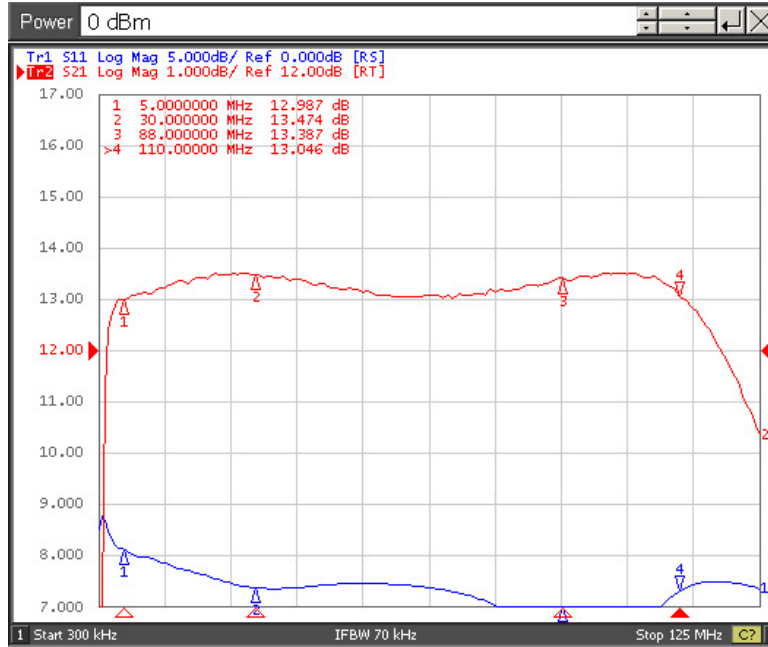
PROTECTIONS

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	-

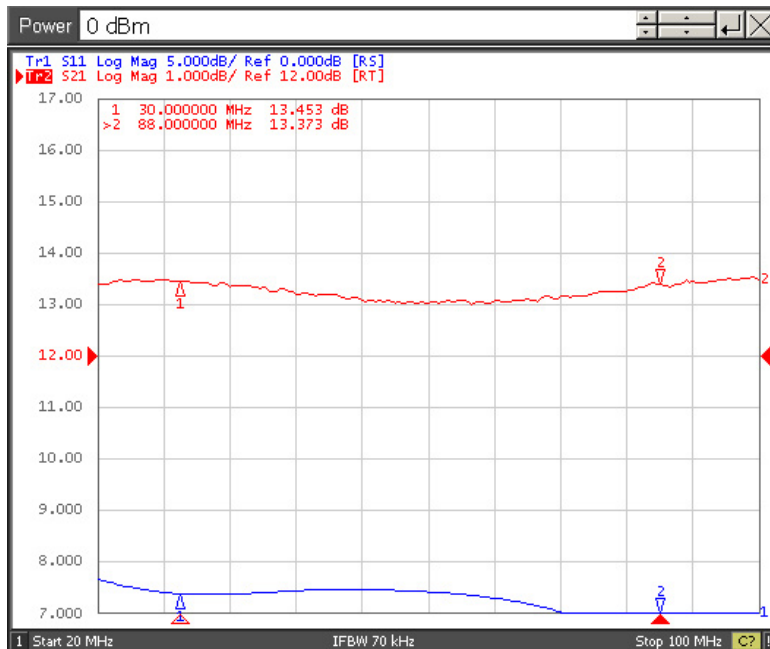
ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Units
Operating Case Temperature	T _c	-10°C		+60°C	°C
Storage Temperature	T _{stg}	-30°C		+100°C	°C
Relative humidity non-condensation	RH	95			%

Response Curves

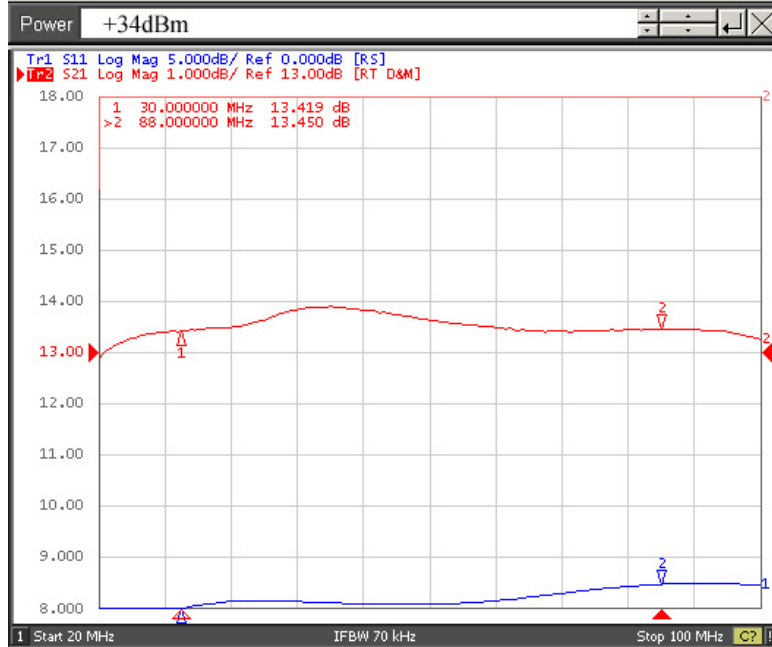


Broadband Small Signal Frequency Response Curve

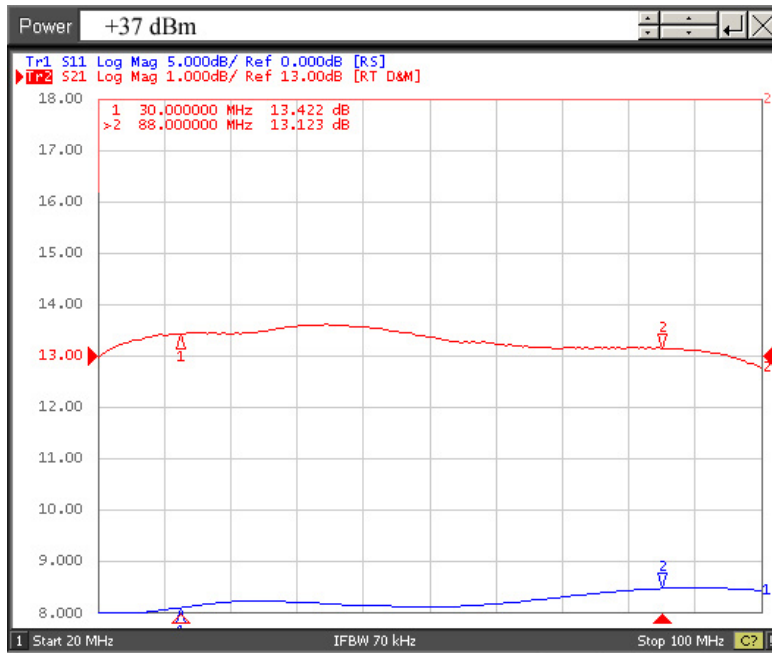


Small Signal Frequency Response Curve

Response Curves

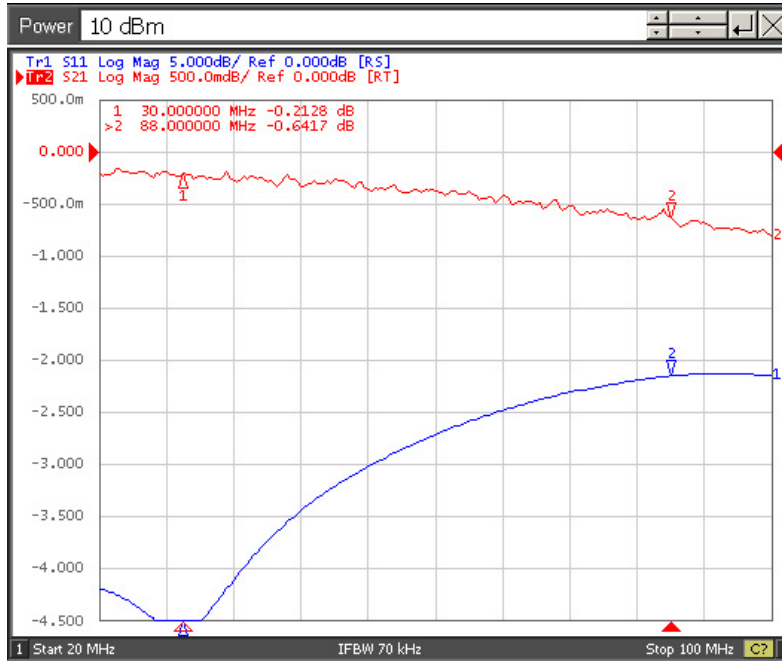


Frequency Response Curve @ 50 Watt Output



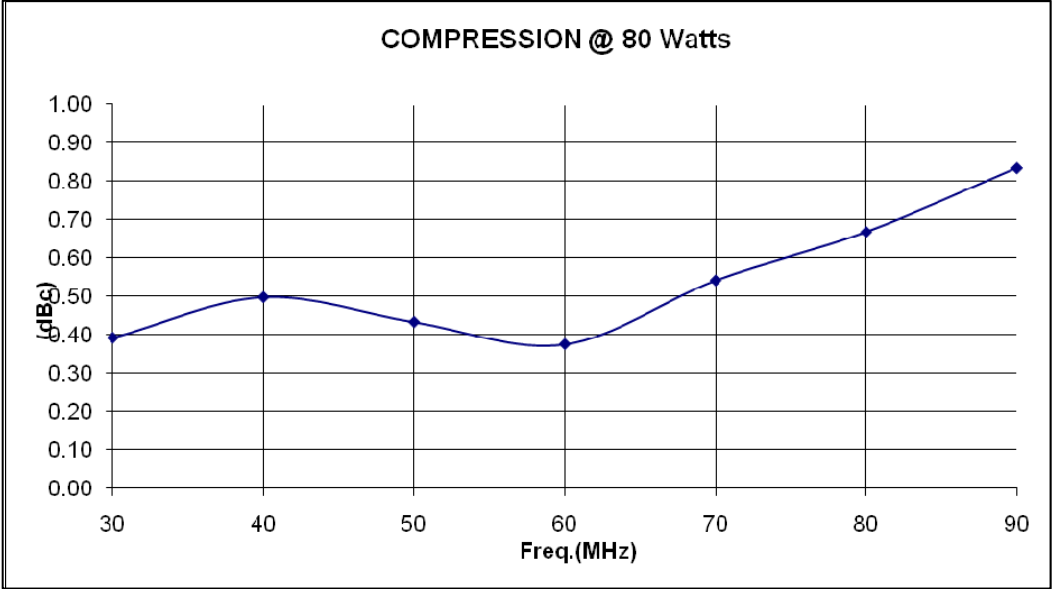
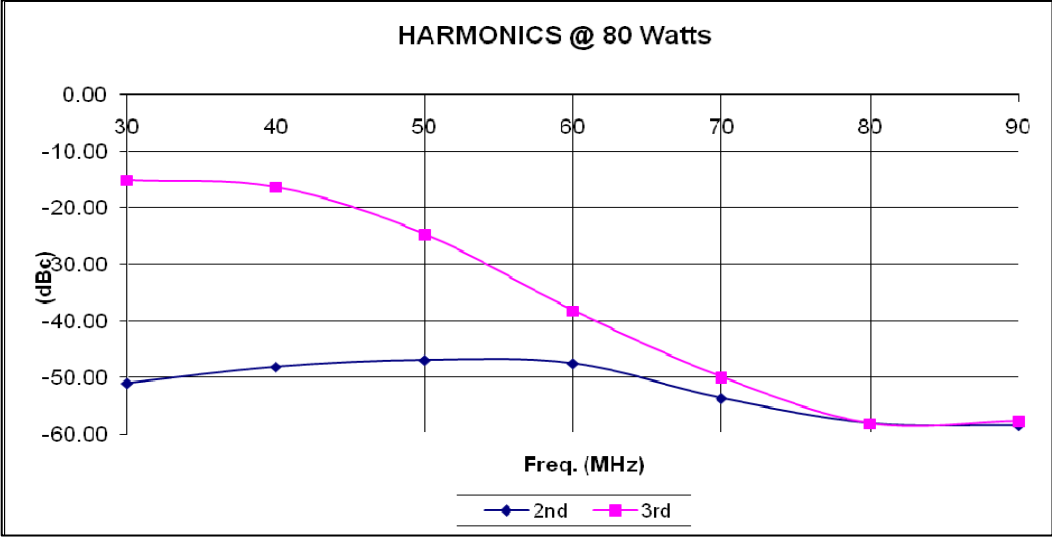
Frequency Response Curve @ 100 Watt Output

Response Curves



Through loss

Response Curves



Outline Drawing

