

Class “A” Linear RF Amplifier

- **Frequency Response: 20-500 MHz**
- **Linear Power: 20 watts class “A”**
- **Saturated Power: 50 watts**
- **Gain: 44 dB**



Description:

The NP-2500 is a class “A” 20 watt CW, rack mountable amplifier system designed to operate over the frequency range of 20 MHz to 500 MHz with a gain of 44dB. The NP-2500 operates from 95 to 255vac 47/63Hz, with RF input drive levels up to +3dBm. The NP-2500 is a self contained units consisting of the RF amplifier, AC to DC power supply, back panel shut down BNC connector and cooling fans.

ELECTRICAL SPECIFICATION: Temp.=25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	20		500	MHz
Power Output Saturated	P _{sat}		50		Watt
Power Output P-1dB	P _{-1dB}	25			Watt
Gain	G	41	44		dB
Small Signal Gain Flatness	ΔG		±1.0	±1.5	dB
Input VSWR	S11		1.5:1	2.0:1	-
Harmonics @ 20Watts Output	H			-28	dBc
Inter-modulation Point 2 Tones, 5W per tone @ 449 & 450 MHz	IP ₃		+54		dBm
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vac	95		255	Volt
Operating Current, @100-120Vac	Amps		4.4		Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms	Typical: 1ms OFF, 10ms ON.			ms

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimensions	19x 3.5 x 18.128	Max	Inch
RF Connectors IN/OUT	N	-	-
DC Connectors	N/A	-	-
Cooling	3.25” Fan and Heat-sink.	-	-
Weight	20	Typ	lb

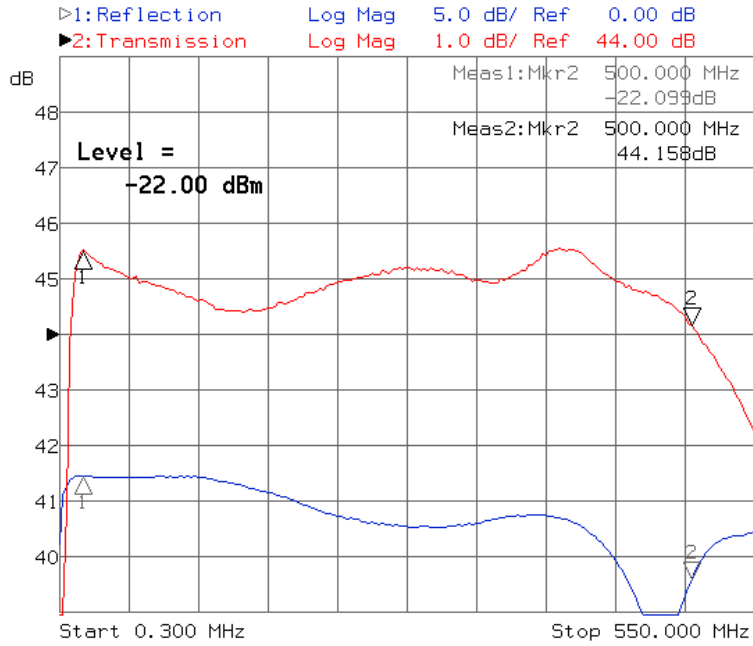
PROTECTIONS

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	N/A	-

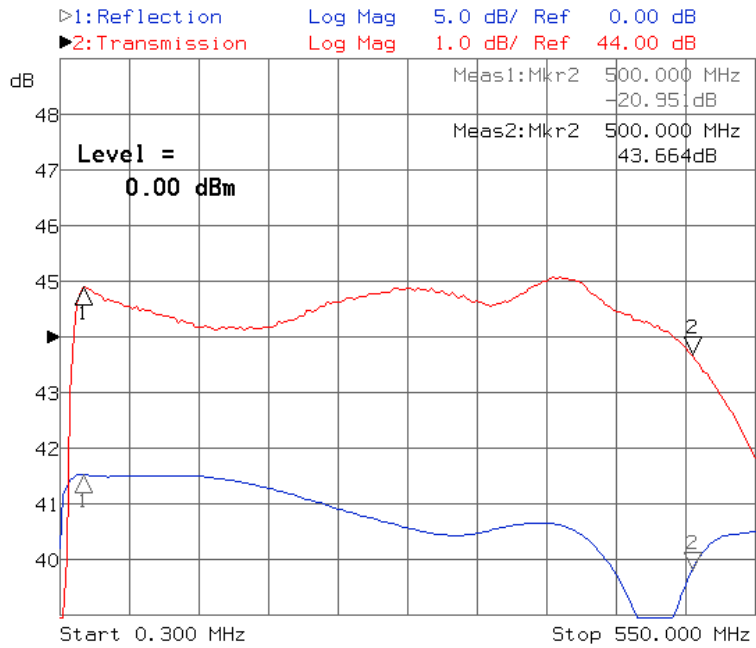
ENVIRONMENTAL CHARACTERISTICS

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

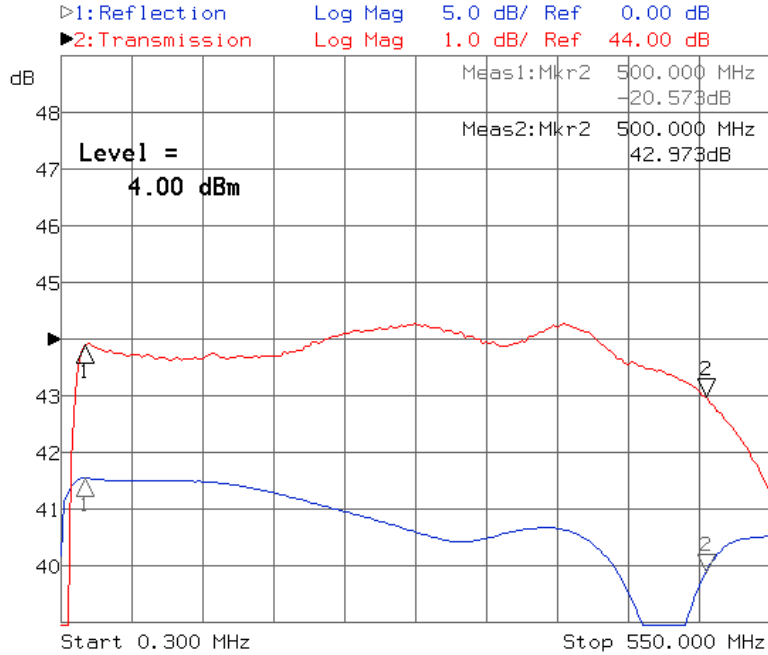


Small Signal Frequency Response Curve

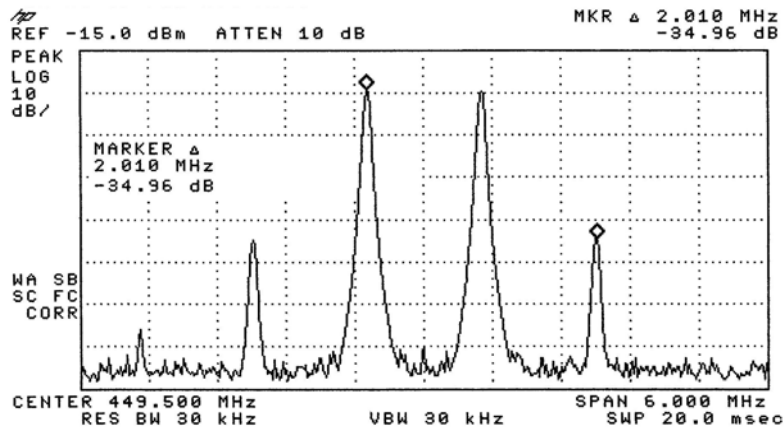


Frequency Response Curve @ 20 Watts Output

Response Curves



Frequency Response Curve @ 50 Watts Output



Two Tones 5 Watts Avg. Per Tone @ 449 & 450MHz
IP3 = +54dBm

Outline Drawing

