NP Technologies, Inc.

NP-512

Pulse RF Amplifier

- **Frequency Response: 380-420 MHz**
- **Power: 10 watts PEP**
- **CW Power: 3 watts**
- **Gain: 38 dB**

Description:
Designed for driving an acousto-optic (Bragg) cell. This amplifier utilizes RF Power MOSFET devices that provide high gain, wide dynamic range and great pulse reproduction with minimal pulse ringing.

ELECTRICAL SPECIFICATION @ VDD= +24VDC: Temp.=25°C, 50Ω System 0613

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	380		420	MHz
Power Output CW	P_{CW}		3		Watt
Power Output PEP (10 ns pulse 25% duty cycle)	P_{PEP}		10		Watt
Gain	G	35	38		dB
Small Signal Gain Flatness	ΔG			±1.0	dB
Input VSWR	S11		1.6:1	2.0:1	-
Harmonics @ 3 Watts CW	H		-19	-18	dBc
Inter-modulation Point 2 Tones, 0.5W per tone @ 380 & 381 MHz	IP_3		50		dBm
Spurious Signals	dBc		-70	-60	dBc
Operating Voltage	Vdc	23	24	28	Volt
Operating Current	Amps		1.5	2.0	Amp
Enable / Disable (shut down pin: gnd=off, open=on)	ms	Not Included			ms

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimensions	2.2 x 4 x 0.86	Max	Inch
RF Connectors IN/OUT	SMA	-	-
DC Connectors	Filtered feed-through	-	-
Cooling	Heat-sink not included	-	-
Weight	1	Max	lb

PROTECTIONS

Thermal Shutdown	None	Typ
Input Overdrive	+5 dBm PEP Max	Max
Load VSWR	Infinite up to 10 watts PEP	Max
Reverse Polarity Protection	None	-

ENVIRONMENTAL CHARACTERISTICS

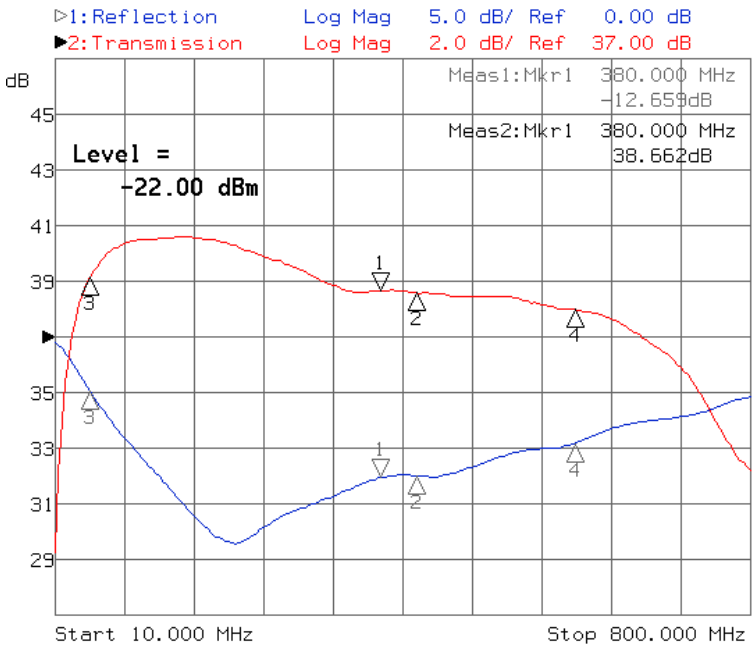
Parameter	Symbol	Min	Typ	Max	Units
Operating Case Temperature	Tc	0°C		+50°C	°C
Storage Temperature	Tstg	-30°C		+100°C	°C
Relative humidity non-condensation	RH	95			%

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

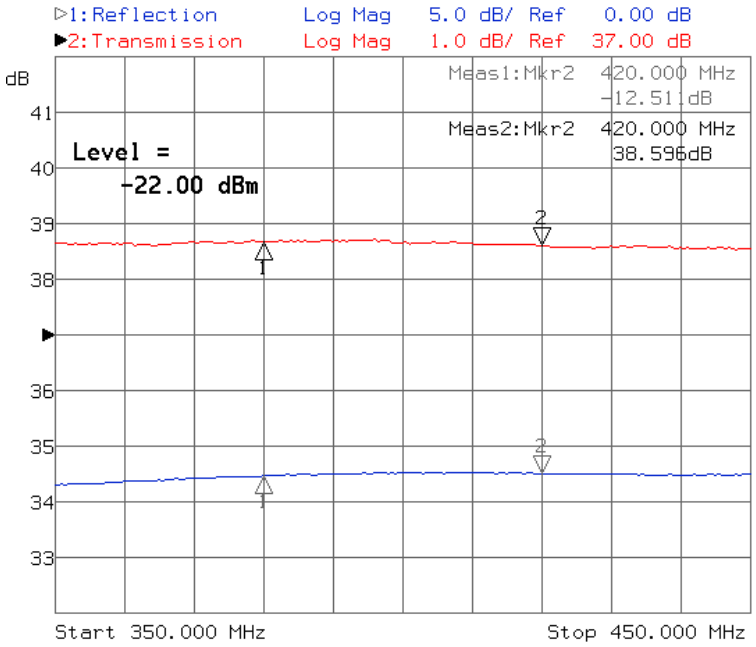
Web: www.nptrf.com
Email: sales@nptrf.com

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

Response Curve



Broadband Small Signal Frequency Response Curve



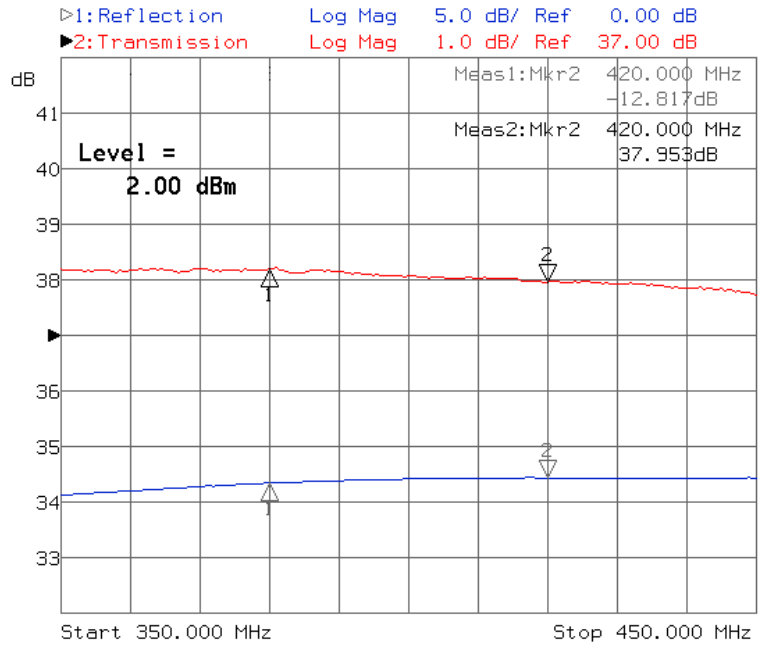
Small Signal Frequency Response Curve

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

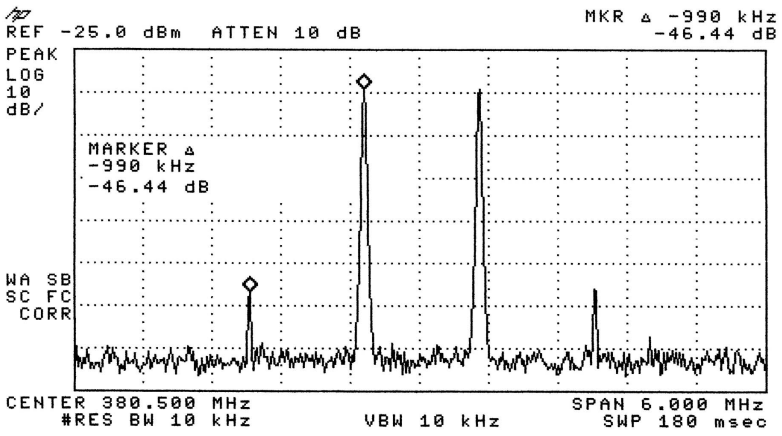
Web: www.nptrf.com
Email: sales@nptrf.com

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

Response Curve



10 Watt Frequency Response Curve



Two Tones 0.5 Watts Avg. Per Tone @ 380 & 381 MHz
IP3 = +50dBm

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

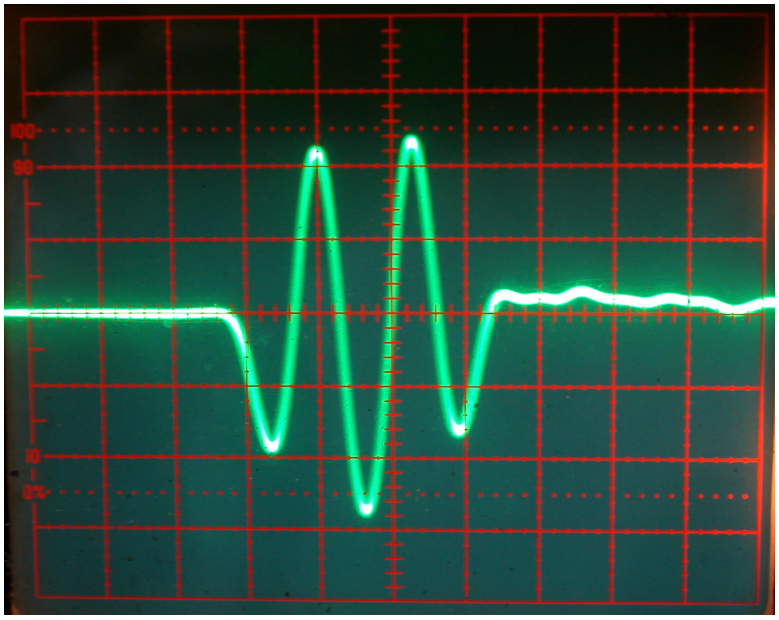
Web: www.nptrf.com
Email: sales@nptrf.com

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

NP Technologies, Inc.

NP-512

Response Curve



Source: Coherent Cavity Dumper 7200

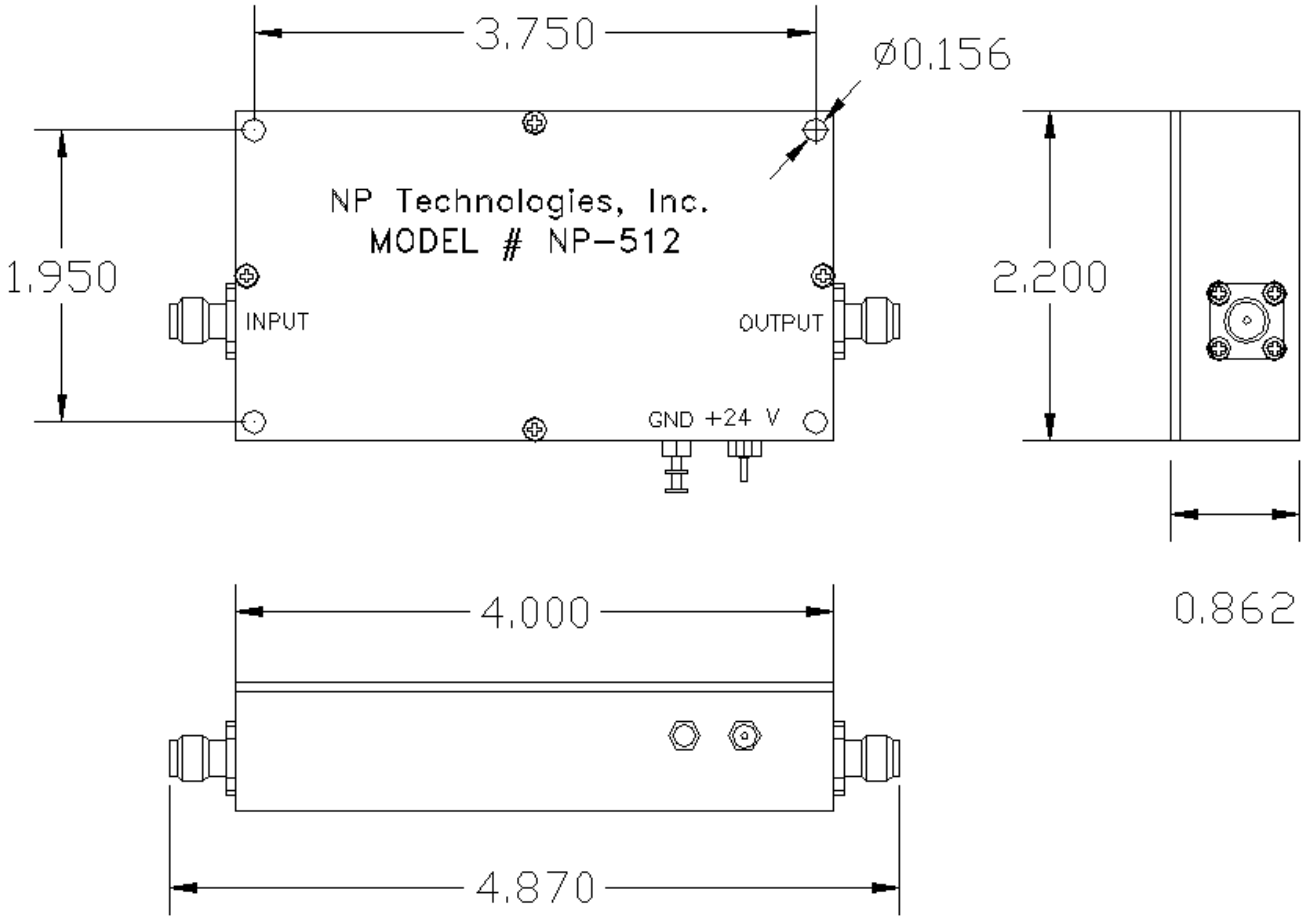
NP-512 @ 10 watts PEP

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

Outline Drawing



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