

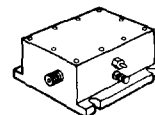
**SHP10-15-08**

**The RF Line**  
**Linear Power Amplifier**

... designed for wideband linear applications in the 10 to 1000 MHz frequency range. This solid state, Class A amplifier incorporates microstrip circuit technology and high performance, gold metallized transistors to provide a complete broadband, linear amplifier operating from a supply voltage of 28 volts.

- Specified  $V_{CC} = 28$  Volt and  $T_C = 25^\circ\text{C}$  Characteristics:
  - Frequency Range — 10 to 1000 MHz
  - Output Power — 0.8 W Typ @ 1 dB Gain Compression,  $f = 500$  MHz
  - Power Gain — 15 dB Typ @  $f = 100$  MHz
  - ITO — 42 dBm Typ @  $f = 1000$  MHz
  - Noise Figure — 8.5 dB Typ @  $f = 1000$  MHz
- 50 Ohm Input/Output Impedance
- Heavy Duty Machined Housing
- Gold Metallized Transistors for Improved Reliability
- Moisture Resistant, EMI Shielded Package

**0.8 WATT**  
**10-1000 MHz**  
**LINEAR**  
**POWER**  
**AMPLIFIER**



**SHP**  
**CASE 389A-01, STYLE 1**

**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	32	Vdc
RF Power Input	$P_{in}$	20	dBm
Storage Temperature Range	$T_{stg}$	-55 to +100	$^\circ\text{C}$
Operating Temperature Range	$T_C$	-40 to +85	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $T_C = 25^\circ\text{C}$ ,  $V_{CC} = 28$  V, 50  $\Omega$  system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current ( $V_{CC} = 28$ V)	$I_{CC}$	360	400	440	mA
Power Gain ( $f = 100$ MHz)	$G_p$	14	15	16	dB
Bandwidth	BW	10	—	1000	MHz
Gain Flatness (P-P) ( $f = 10$ -1000 MHz)	—	—	$\pm 0.5$	$\pm 1$	dB
Input/Output VSWR ( $f = 40$ -900 MHz) ( $f = 10$ -1000 MHz)	—	—	2:1	2.5:1	—
Output Power @ 1 dB Gain Compression ( $f = 500$ MHz) ( $f = 1000$ MHz)	$P_o$ 1dB	28 27	29 28	—	dBm
Third Order Intercept Point ( $f = 500$ MHz) ( $f = 1000$ MHz)	ITO	41 40	43 42	—	dBm
Noise Figure ( $f = 500$ MHz) ( $f = 1000$ MHz)	NF	—	7.5 8.5	8.5 9.5	dB