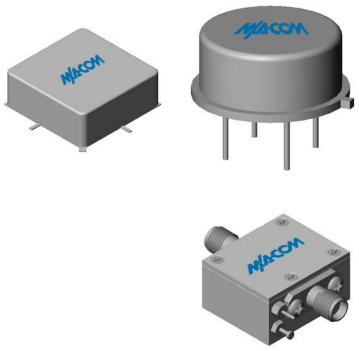
LA45 / SMLA45



1000 TO 4000
TO-8 CASCADABLE LIMITING AMPLIFIER

- SYMMETRICAL CLIPPING:
  GOOD EVEN-ORDER SUPPRESSION
- MEDIUM OUTPUT LEVEL: +14.0 dBm (TYP.)
- MEDIUM GAIN: 11.5 dB (TYP.)
- WIDE BANDWIDTH: 0.8-4.2 GHz (TYP.)

Specifications (Rev. Date: 3/02)*

Characteristic	Typical	Guaranteed	
		0° to 50°C	-54° to +85°C
Frequency	800-4200 MHz	1000-4000 MHz	1000-4000 MHz
Small Signal Gain (min.)	11.5 dB	10.0 dB	9.0 dB
Gain Flatness (max.)	±0.6 dB	±0.8 dB	±1.0 dB
Noise Figure (max.)	8.0 dB	9.5 dB	10.0 dB
Power Output @ 1 dB comp. (min.)	+14.0 dBm	+12.5 dBm	+11.5 dBm
Output Limiting Level (max.) @ Pin = +17 dBm	+15.5 dBm	+17.0 dBm	+17.5 dBm
IP3 / IP2[1]	+24.0 / +46.0 dBm		
Second Order Harmonic IP[1]	+50.0 dBm		
VSWR Input / Output (max.)	1.7:1 / 1.6:1	2.1:1 / 2.0:1	2.2:1 / 2.1:1
DC Current @ 15 Volts (max.)	110 mA	115 mA	120 mA

*Measured in a 50-ohm system at +15 Vdc Nominal.

Absolute Maximum Ratings

Storage Temperature	-65 to +125°C
Maximum Case Temperature	85°C
Maximum DC Voltage	+16 Volts
Maximum Continuous RF Input Power	+17 dBm
Maximum Short Term RF Input Power (1 minute max.)	100 mW
"S" Series Burn-in Temperature (Case)	85°C

Thermal Data: V_{cc} = 15 Vdc

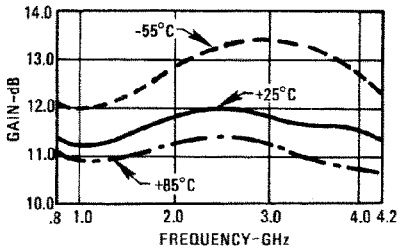
Thermal Resistance θ_{jc}	108.9°C/W
Transistor Power Dissipation P_d	0.476 W
Junction Temperature Rise Above Case T_{jc}	52°C

Outline Drawings

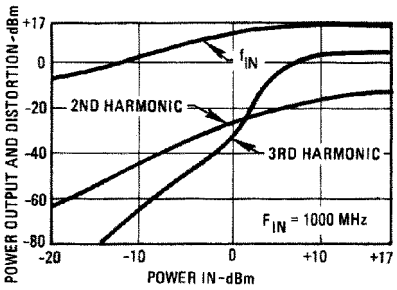
Package	TO-8	Surface Mount	SMA Connectorized
Figure	BG	AA	CE
Model	LA45	SMLA45	CLA45

Typical Performance at 25°C

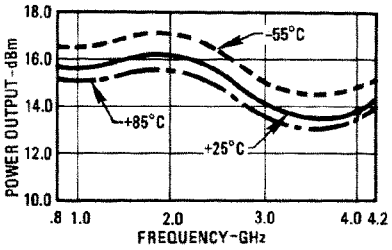
Gain



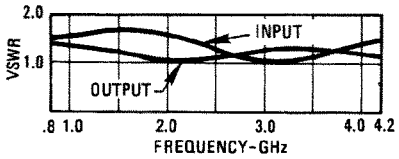
Power Output and Distortion

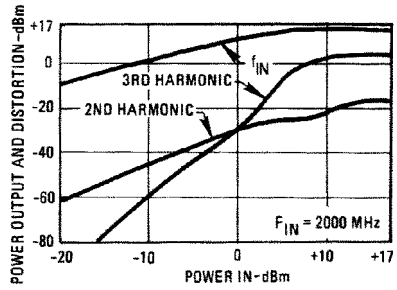


Maximum Limiting Level @ Pin = +17 dBm

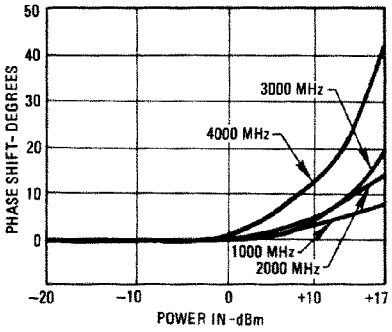


VSWR

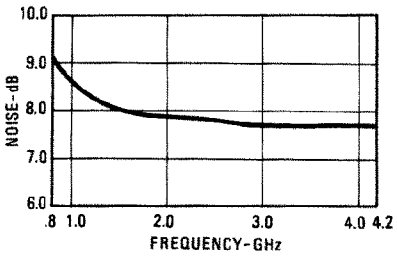


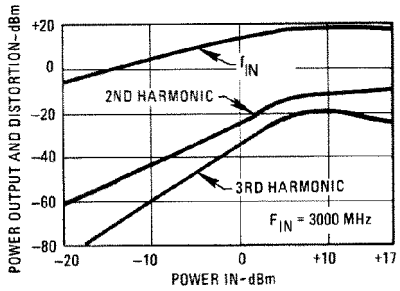


Phase Shift vs. Input Power

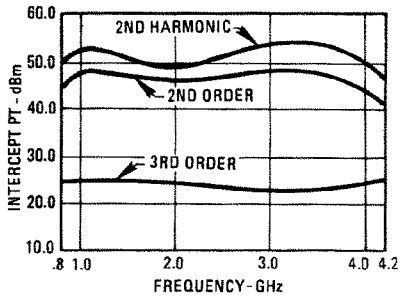


Noise Figure





Intercept Point



Power Output*