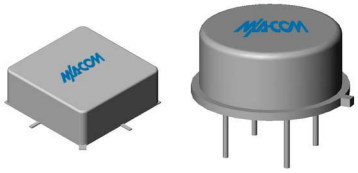
LA17 / SMLA17



10 TO 1000 MHz
TO-8 CASCADABLE LIMITING AMPLIFIER

- SYMMETRICAL CLIPPING:
  GOOD EVEN-ORDER SUPPRESSION
- MEDIUM OUTPUT LEVEL: +10 dBm (TYP.)
- HIGH THIRD-ORDER INTERCEPT POINT: +28 dBm (TYP.)
- FAST PULSE RECOVERY TIME: < 50 NSEC

Specifications (Rev. Date: 3/02)*

Characteristic	Typical	Guaranteed	
		0° to 50°C	-54° to +85°C
Frequency	5-1100 MHz	10-1000 MHz	10-1000 MHz
Small Signal Gain (min.)	11.5 dB	10.5 dB	9.5 dB
Gain Flatness (max.)	±0.3 dB	±0.5 dB	±0.7 dB
Noise Figure (max.)	5.8 dB	6.7 dB	7.2 dB
Power Output @ 1 dB comp. (min.)	+10.0 dBm	+7.0 dBm	+5.0 dBm
Output Limiting Level (max.) @ Pin = +20 dBm	+15.0 dBm	+16.0 dBm	+17.0 dBm
IP3	+28 dBm		
VSWR Input / Output (max.)	< 1.7:1 / < 1.7:1	1.9:1 / 1.9:1	2.0:1 / 2.0:1
DC Current @ 15 Volts (max.)	55 mA	57 mA	59 mA

*Measured in a 50-ohm system at +15 Vdc Nominal. IP3 in the linear region range only.

Absolute Maximum Ratings

Storage Temperature	-62 to +125°C
Maximum Case Temperature	125°C
Maximum DC Voltage	+17 Volts
Maximum Continuous RF Input Power	+23 dBm
Maximum Short Term RF Input Power (1 minute max.)	400 mW
Maximum Peak Power (3 µsec max.)	1 W
"S" Series Burn-in Temperature (Case)	125°C

Thermal Data: V_{cc} = 15 Vdc

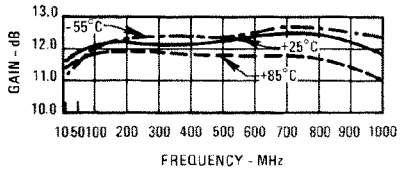
Thermal Resistance θ_{jc}	45°C/W
Transistor Power Dissipation P_d	0.448 W
Junction Temperature Rise Above Case T_{jc}	20.2°C

Outline Drawings

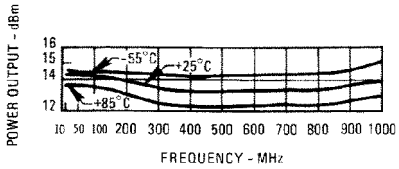
Package	TO-8	Surface Mount	SMA Connectorized
Figure	BG	AA	CE
Model	LA17	SMLA17	CLA17

Typical Performance at 25°C

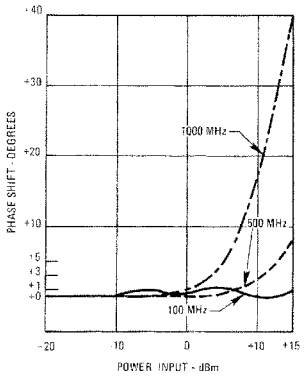
Gain



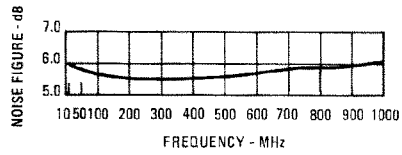
Maximum Limiting @ P_{IN} = +20 dBm



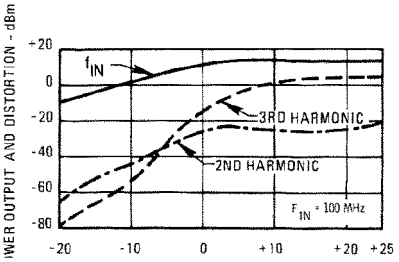
Phase Shift vs Input Power



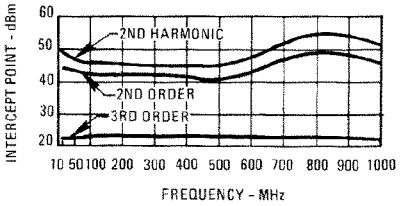
Noise Figure



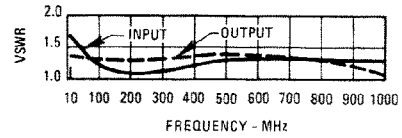
Power Output and Distortion

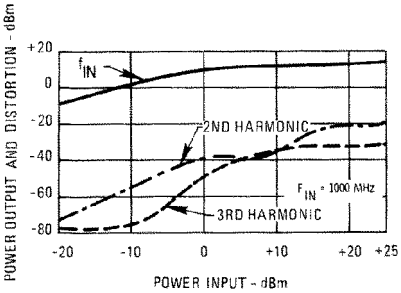


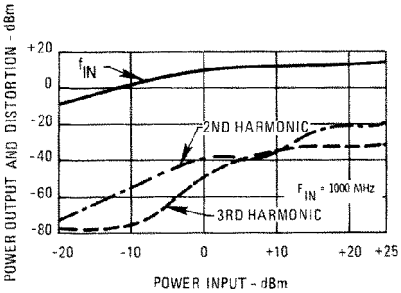
Intercept Point



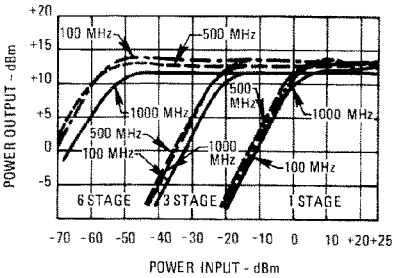
VSWR



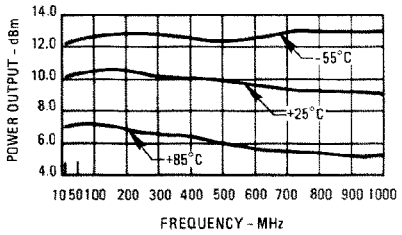




Limiting Characteristics



Power Output*



*at 1 dB Gain Compression