

**Cascadable Amplifier  
10 to 500 MHz**

**SMLA88**

V2

**Features**

- AVAILABLE IN SURFACE MOUNT
- SYMMETRICAL CLIPPING  
GOOD EVEN-ORDER SUPPRESSION
- HIGH OUTPUT LEVEL: +17 dBm (TYP.)
- HIGH THIRD-ORDER IP: +28 dBm (TYP.)

**Description**

The LA88 limiting amplifier is a discrete hybrid design, which uses thin film manufacturing processes for accurate performance and high reliability. This design uses a Schottky diode limiter circuit at the input, and a single stage bipolar transistor feedback amplifier at the output. An RF choke is used for DC power supply decoupling. Both TO-8 and Surface Mount packages are hermetically sealed, and MIL-STD-883 environmental screening is available.

**Ordering Information**

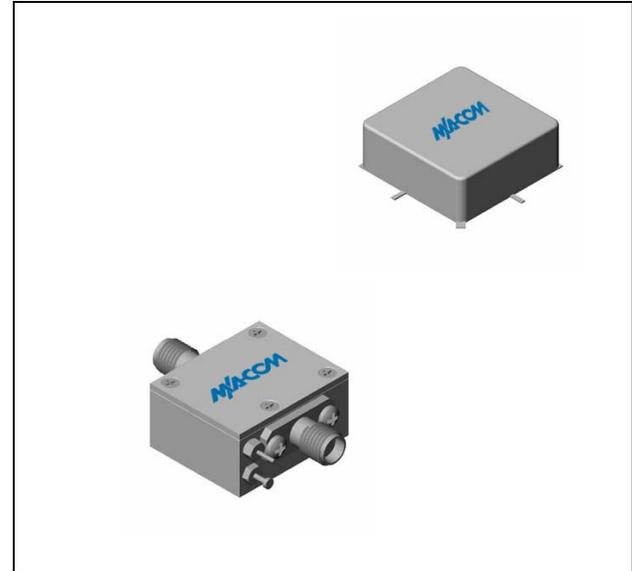
Part Number	Package
SMLA88	Surface Mount
CLA88 **	SMA Connectorized

\*\* The connectorized version is not RoHS compliant.

**Electrical Specifications:  $Z_0 = 50\Omega$ ,  $V_{CC} = +15 V_{DC}$**

Parameter	Units	Typical	Guaranteed	
		25°C	0° to 50°C	-54° to +85°C*
Frequency	MHz	10-600	10-500	10-500
Small Signal Gain (min)	dB	16.5	16.0	15.0
Gain Flatness (max)	dB	±0.2	±0.5	±0.7
Noise Figure (max)	dB	6.0	6.5	7.0
Power Output @ 1 dB comp. (min)	dBm	+17.0	+15.0	+13.0
Output Limiting Level (max) Pin = +20 dBm	dBm	+20.5	+21.0	+22.5
VSWR Input / Output (max)		1.7:1	1.9:1	2.0:1
DC Current @ 15 Volts (max)	mA	89	91	93

**Product Image**



**Absolute Maximum Ratings**

Parameter	Absolute Maximum
Storage Temperature	-62°C to +125°C
Maximum Case Temperature	125°C
Maximum DC Voltage	+17 V
Maximum Continuous Input Power	+23 dBm
Maximum Short Term 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:  $V_{CC} = +15 V_{DC}$**

Parameter	Rating
Thermal Resistance $\theta_{jc}$	°C/W
Transistor Power Dissipation $P_d$	W
Junction Temperature Rise Above Case $T_{jc}$	°C

\* Over temperature performance limits for part number CLA88, guaranteed from 0°C to +50°C only.

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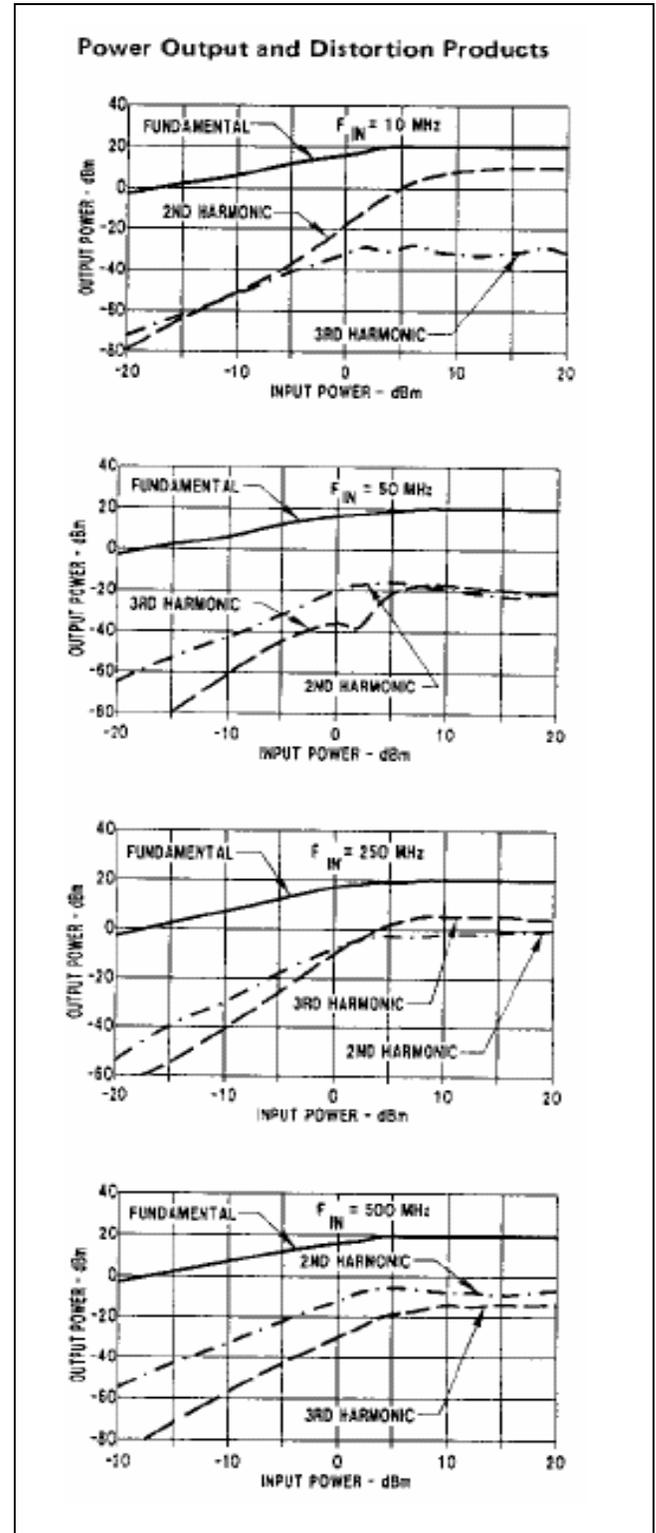
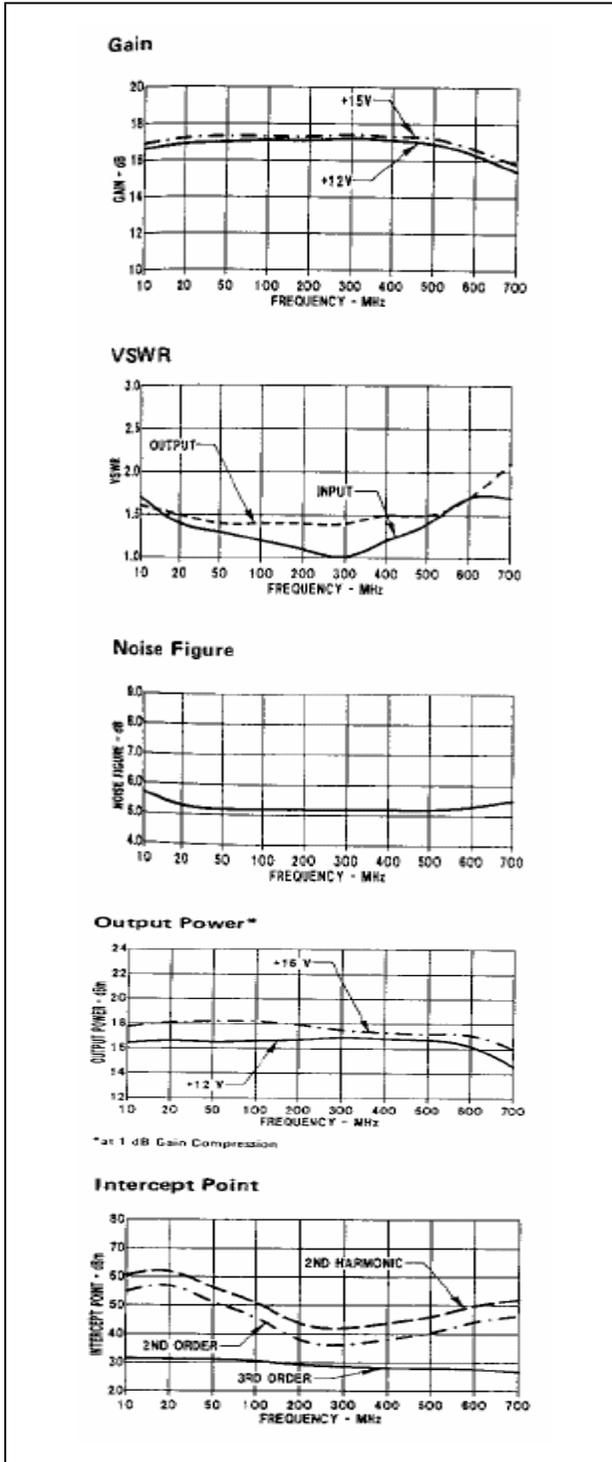
Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

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**Typical Performance Curves at +25°C**

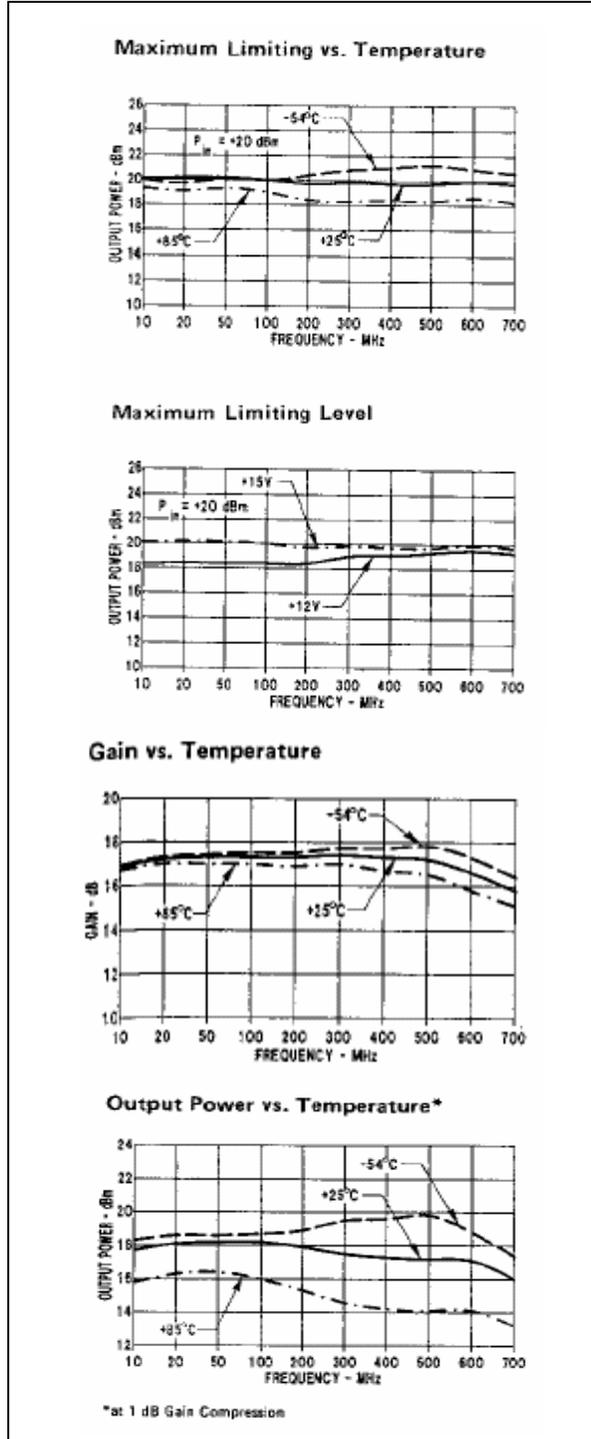


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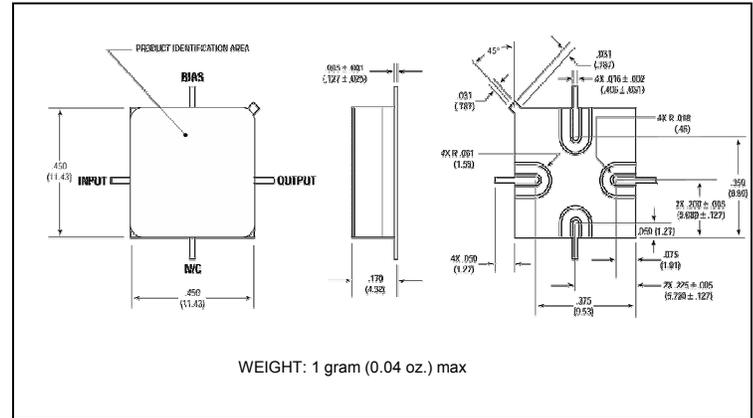
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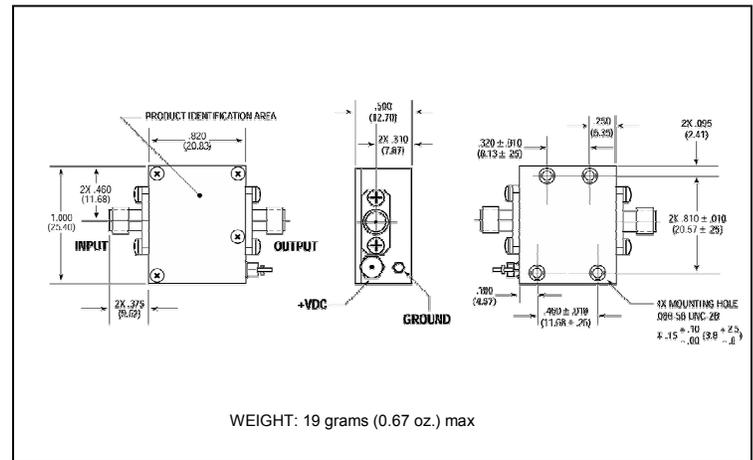
**Typical Performance Curves at +25°C**



**Outline Drawing: Surface Mount \***



**Outline Drawing: SMA Connectorized \***



\* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.