LA17 / SMLA17 / CLA17

ΜΑζΟΜ

Cascadable Amplifier 10 - 1000 MHz

Features

- 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

Description

The LA17 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

Parameter

Frequency

Small Signal Gain (min)

Gain Flatness (max)

Noise Figure (max)

Power Output @ 1 dB comp. (min)

Output Limiting Level (max)

Pin = +20 dBm

VSWR Input / Output (max)

DC Current @ 15 Volts (max)

Part Number	Package
LA17	TO-8
SMLA17	Surface Mount
CLA17 **	SMA Connectorized

** The connectorized version is not RoHs compliant.

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

Units

MHz

dB

dB

dB

dBm

dBm

mΑ

Typical

25°C

5-1100

11.5

±0.3

5.8

+10.0

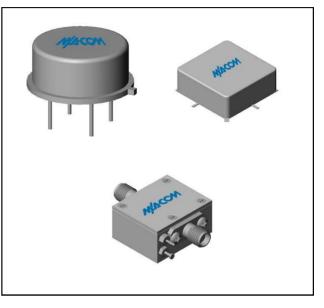
+15.0

<1.7:1/

<1.7:1

55

Product Image



Parameter Absolute Maximum Storage Temperature -62°C to +125°C Case Temperature +125°C DC Voltage +17 V **Continuous Input Power** +23 dBm Short Term Input power 400 mW (1 minute max.) Peak Power (3 µsec max.) 1 W "S" Series Burn-In 125°C Temperature (case)

Absolute Maximum Ratings

Thermal Data: V_{CC} = +15 V_{DC}

	Parameter	Rating
+17.0	Thermal Resistance θ_{jc}	45°C/W
2.0:1 / 2.0:1	Transistor Power Dissipation P_d	0.448 W
59	Junction Temperature Rise Above Case T _{jc}	20.2°C

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* Over temperature performance limits for part number CLA17, guaranteed from 0°C to +50°C only.

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Guaranteed

-54° to +85°C*

10-1000

9.5

±0.7

7.2

+5.0

0° to 50°C

10-1000

10.5

±0.5

6.7

+7.0

+16.0

1.9:1/ 1.9:1

57

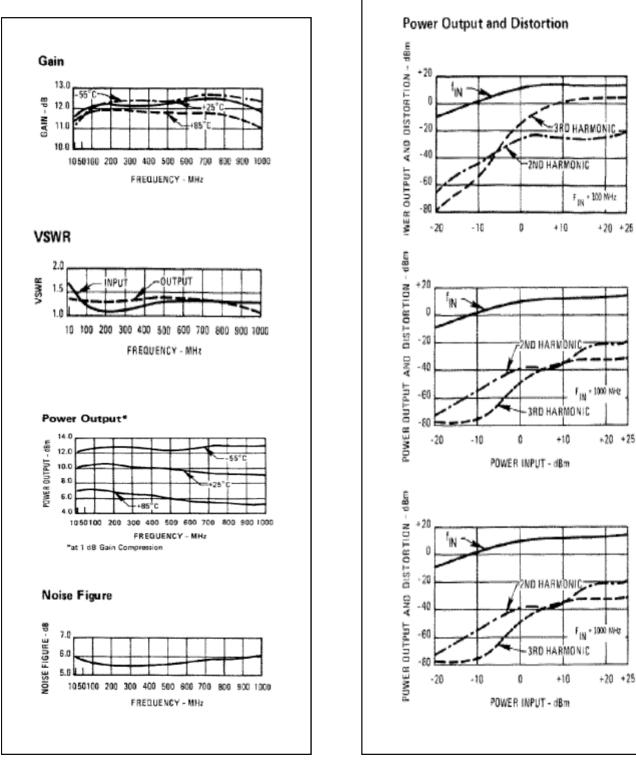
Rev. V2

LA17 / SMLA17 / CLA17



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Typical Performance Curves at +25°C



2

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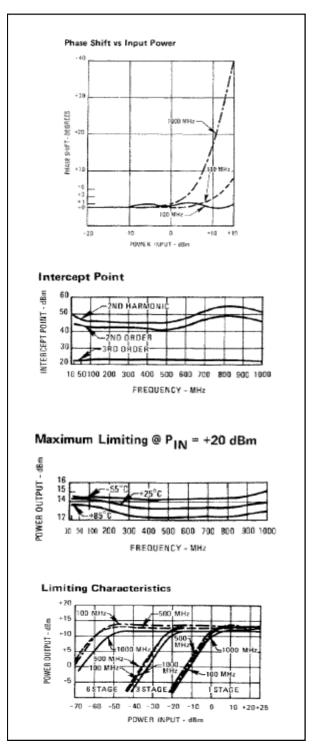
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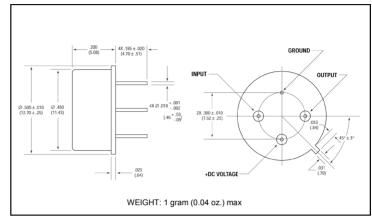


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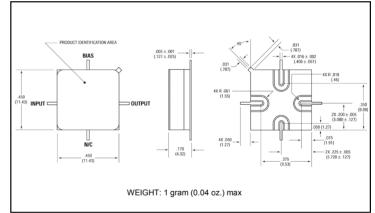
Typical Performance Curves at +25°C



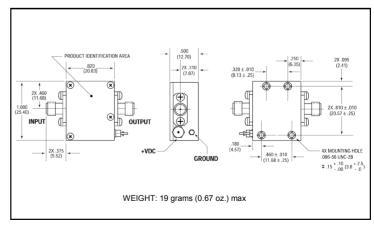
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount



Outline Drawing: SMA Connectorized *



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

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