

#### **TO-8 Thin-Film Linearizer**

Rev. V2

#### **Features**

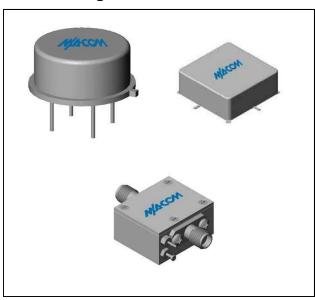
- AVAILABLE IN SURFACE MOUNT
- WIDE TEMPERATURE OPERATION
- YIELDS LINEAR ATTENUATION (dB) FOR LINEAR CONTROL VOLTAGE

### **Ordering Information**

Part Number	Package	
LG1	TO-8	
SMLG1	Surface Mount	
CLG1 **	SMA Connectorized	

<sup>\*\*</sup> The connectorized version is not RoHs compliant.

## **Product Image**



## Linearity Specifications: Frequency: 10 - 1000 MHz, attenuation range: 3 to 20 dB

Temperature	Units	Typical	Guaranteed Max.
25°C	dB	< ±1.0	±1.5
-54°C to +85°C	dB	< ±1.5	±2.0

# **Typical Current Drain**

	Units	Control Voltage= -10 V (Min. Attenuation)`	Control Voltage= 0 V (Max. Attenuation)
V-	mA	5	5
V+	mA	24	11
V <sub>CON</sub>	mA	15	2.5
Combination of LG1 Plus G1 V- V+ V <sub>CON</sub>	mA	5	5
	mA	31	21
	mA	15	2.5

Weight approximately 2.0 grams (0.07 oz.)

<sup>•</sup> North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

<sup>•</sup> India Tel: +91.80.43537383 Visit www.macomtech.com for additional data sheets and product information.

<sup>•</sup> China Tel: +86.21.2407.1588

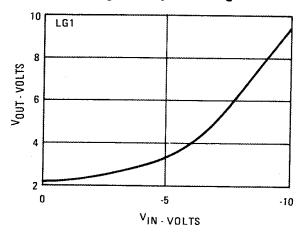


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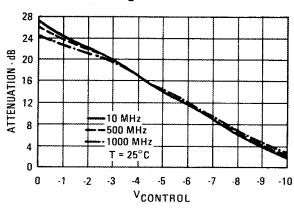
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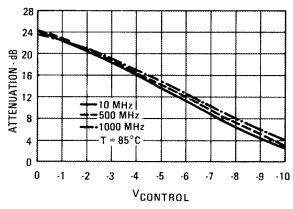
### **Typical Performance Curves**

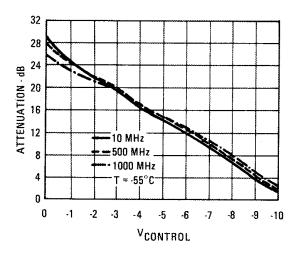
#### Output Voltage vs. Input Voltage

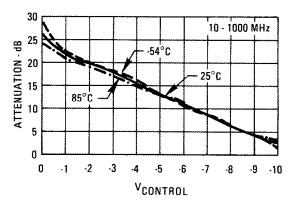


#### Attenuation of LG1 and G1 in Cascade vs. Control Voltage

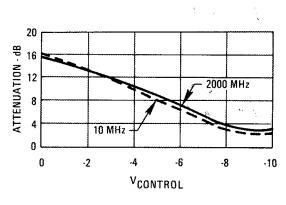








## Attenuation of LG1 and G2 in Cascade vs. Control Voltage



PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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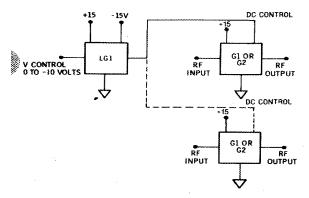


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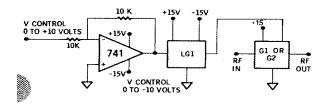
### **Absolute Maximum Ratings**

Parameter	Absolute Maximum	
Storage Temperature	-62°C to +125°C	
Maximum Case Temperature	125°C	
Maximum DC Voltage	+17 Volts	
"S" Series Burn-in Temperature (Case)	125°C	

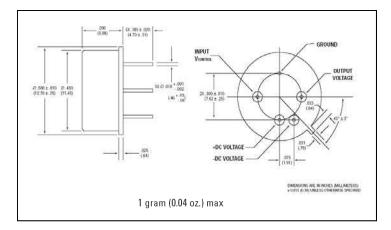


The LG1 can drive two G1's or G2's as shown above. The LG1 has a response time of 30 µs over its entire band of control voltage. The response time of the G1 or G2 is typically 60-100 µs.

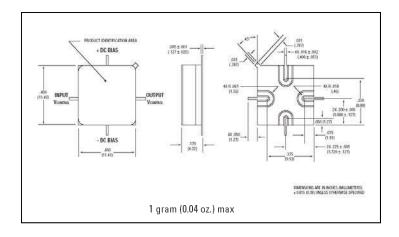
If a positive control voltage is desired the following circuit may be used. The op-amp buffer can also generate a very low source resistance in the order of thousands of an ohm.



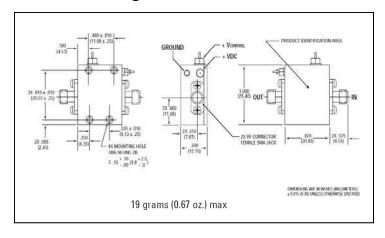
### **Outline Drawing: TO-8**



## **Outline Drawing: Surface Mount**



## **Outline Drawing: SMA Connectorized**



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