LG1 / SMLG1 / CLG1

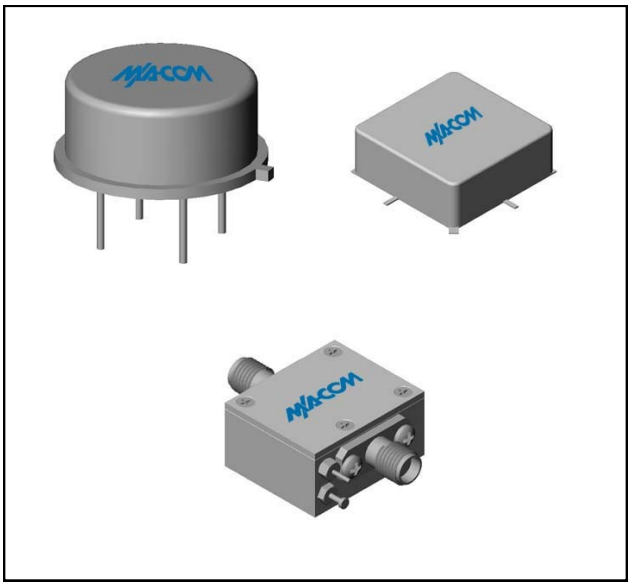
TO-8 Thin-Film Linearizer

Rev. V2

Features

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

Product Image



Ordering Information

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

** The connectorized version is not RoHs compliant.

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- V+ V_{CON}	mA	5 24 15	5 11 2.5
Combination of LG1 Plus G1 V- V+ V_{CON}	mA	5 31 15	5 21 2.5

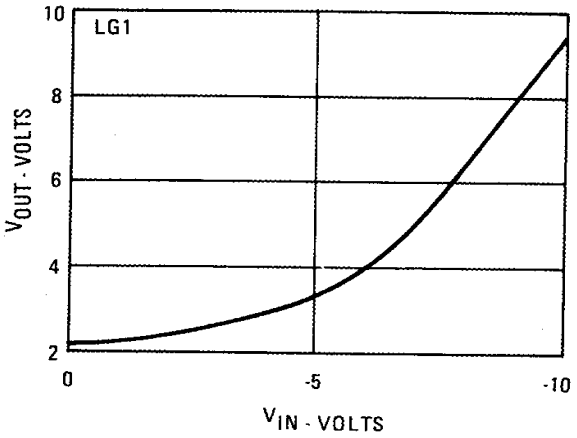
Weight approximately 2.0 grams (0.07 oz.)

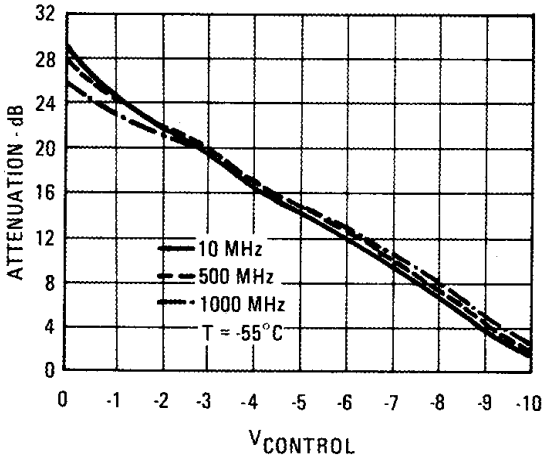
M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.
Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
https://www.macom.com/support

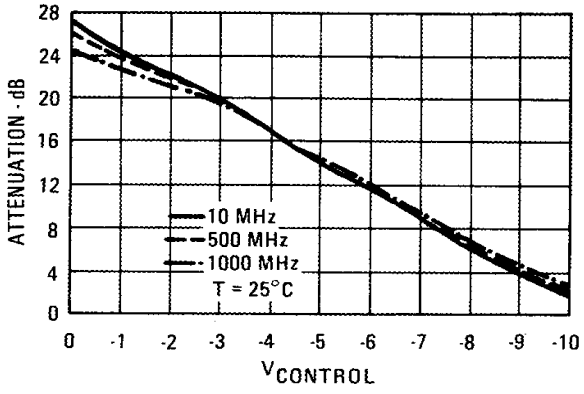
Typical Performance Curves

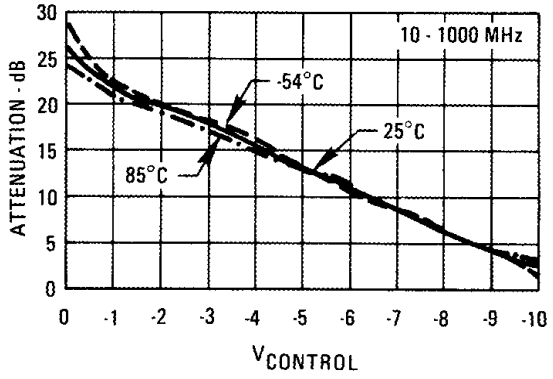
Output Voltage vs. Input Voltage

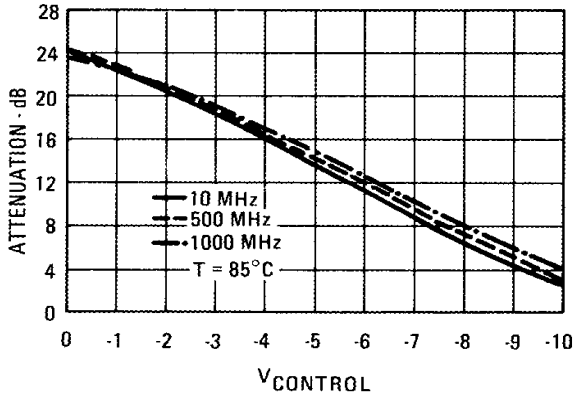




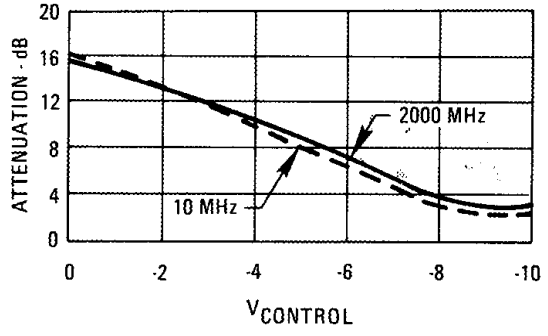
Attenuation of LG1 and G1 in Cascade vs. Control Voltage







Attenuation of LG1 and G2 in Cascade vs. Control Voltage

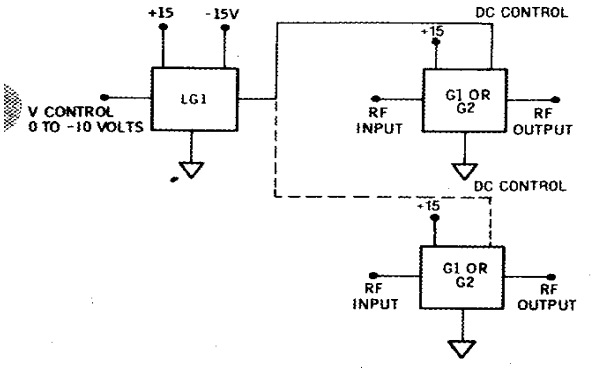


M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.
Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
https://www.macom.com/support

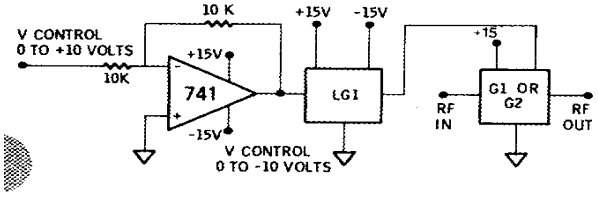
Absolute Maximum Ratings

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

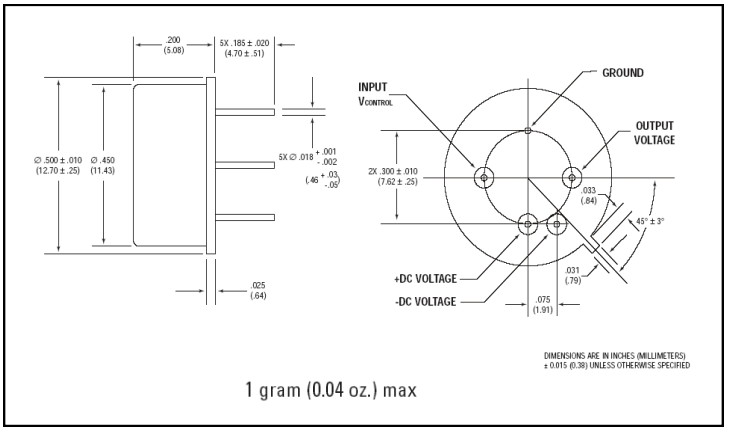


The LG1 can drive two G1's or G2's as shown above. The LG1 has a response time of 30 µs over its entire band of control voltage. The response time of the G1 or G2 is typically 60-100 µs.

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.

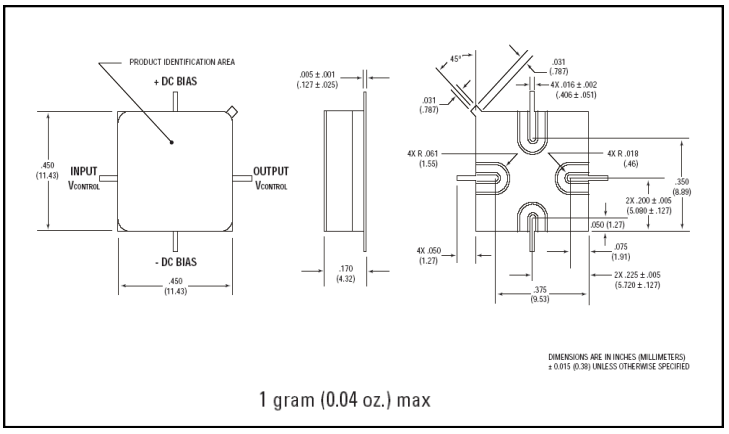


Outline Drawing: TO-8



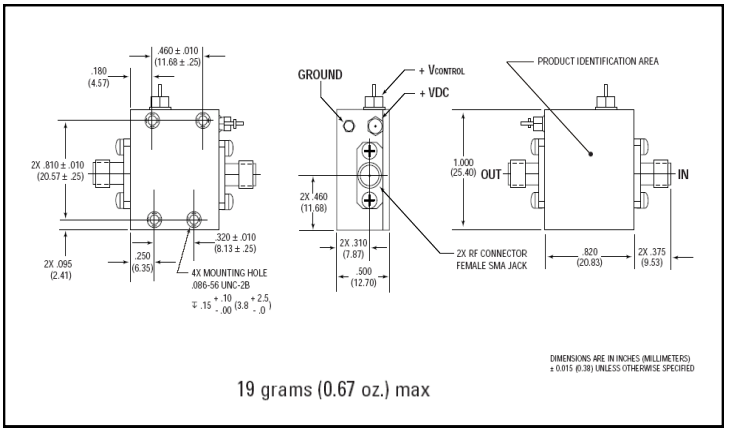
1 gram (0.04 oz.) max

Outline Drawing: Surface Mount



1 gram (0.04 oz.) max

Outline Drawing: SMA Connectorized



19 grams (0.67 oz.) max

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.
Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
https://www.macom.com/support

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.