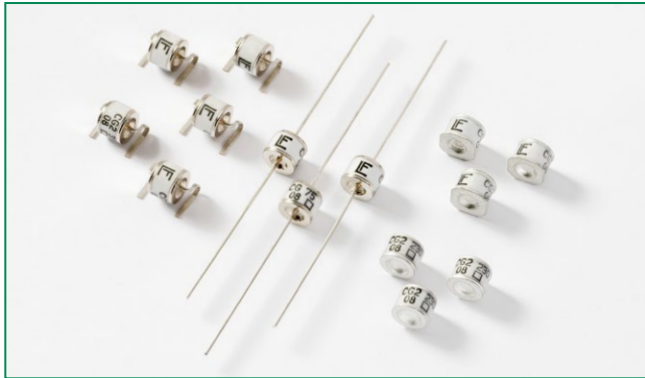






THE DATASHEET OF CG2800MS



CG/CG2 Series



Agency Approvals

AGENCY	AGENCY FILE NUMBER
	E128662 ¹
	E320116 ²

NOTES:
 1. Certified to UL 497B.
 2. Only CG2300, CG2470, CG2600, CG2800 and CG221000. Certified to UL 1449.

2 Electrode GDT Graphical Symbol



Additional Information



Datasheet



Resources



Samples

Description

Littelfuse's highly reliable CG/CG2 Series GDTs provide a high degree of surge protection in a small size ideal for board level circuit protection.

GDTs function as switches which dissipate a minimum amount of energy and therefore handle currents that far surpass other types of transient voltage protection. Their gas-filled, rugged ceramic metal construction make them well suited to adverse environments.

The CG/CG2 series comes in a variety of forms including surface mount, core, straight and shaped leads, to serve a variety of mounting methods.

The CG Series (75V-110V) is ideal for protection of test and communication equipment and other devices in which low voltage limits and extremely low arc voltages are required.

The CG2 Series (145V-1000V) is ideal for protecting equipment where higher voltage limits and holdover voltages are necessary.

Features

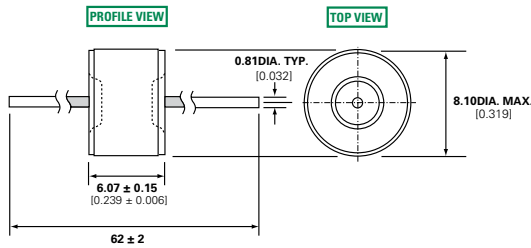
- RoHS and Lead-free compliant
- Rugged Ceramic-Metal construction
- Low Capacitance (<1.5pf)
- Meets REA PE-80
- Available in surface mount, and a variety of lead options options
- RoHS Compliant and Lead-Free

Applications

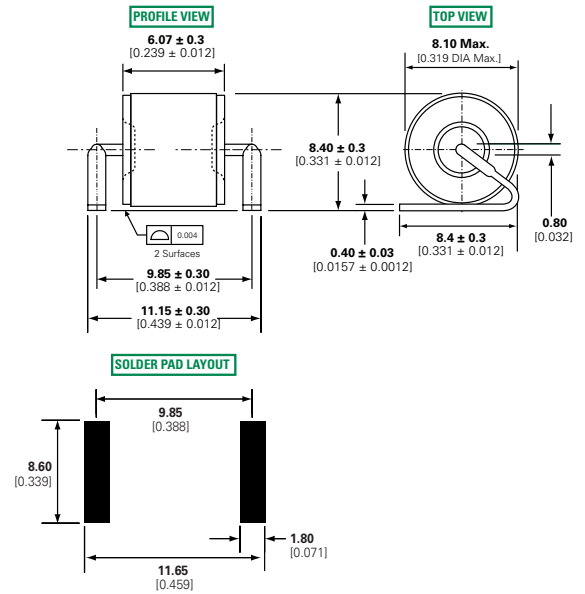
- Communication lines and equipment
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Instrumentation circuits
- Medical electronics
- ADSL equipment
- Telecom SLIC protection

Device Dimensions

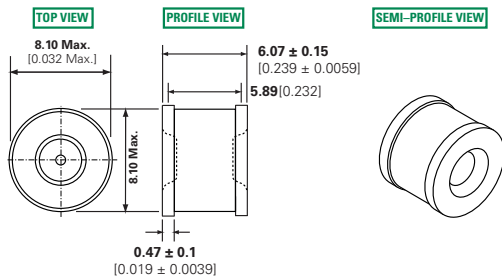
Leaded 'L' Type Straight Axial Devices



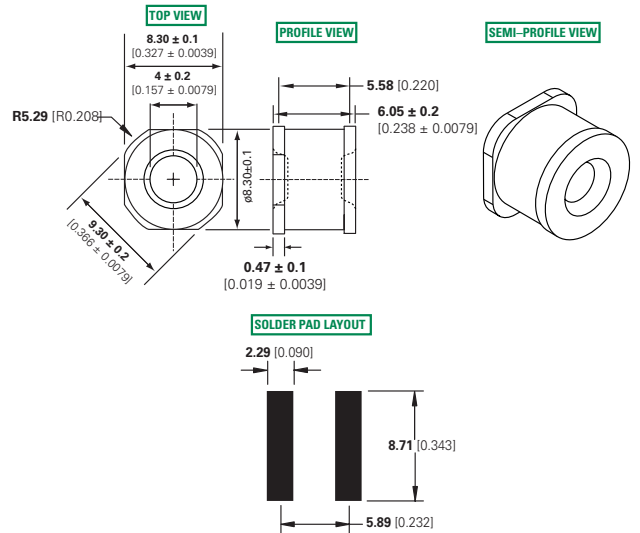
Leaded 'LS' Type Shaped Lead Devices



Core Devices

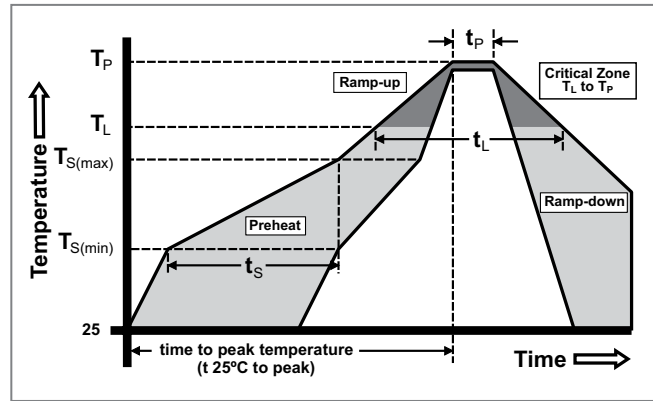


'MS' Type Devices

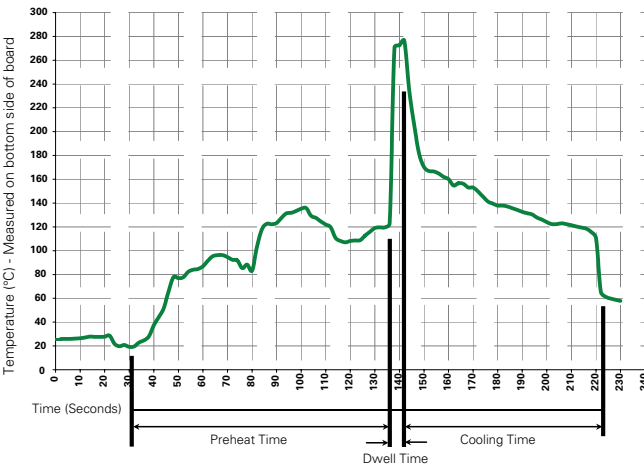


Soldering Parameters - Reflow Soldering (Surface Mount Devices)

Reflow Condition		Pb – Free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (Min to Max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		5°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		10 – 30 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



Soldering Parameters - Wave Soldering (Thru-Hole Devices)



Recommended Process Parameters:

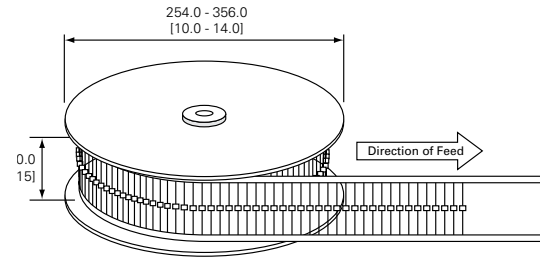
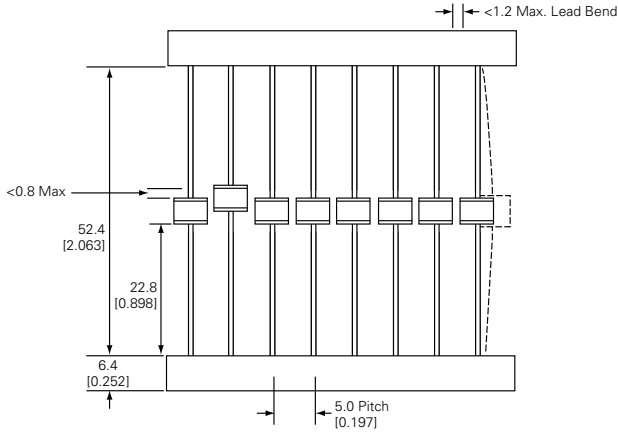
Wave Parameter	Lead-Free Recommendation
Preheat: (Depends on Flux Activation Temperature) (Typical Industry Recommendation)	
Temperature Minimum:	100° C
Temperature Maximum:	150° C
Preheat Time:	60-180 seconds
Solder Pot Temperature:	280° C Maximum
Solder Dwell Time:	2-5 seconds

Soldering Parameters - Hand Soldering

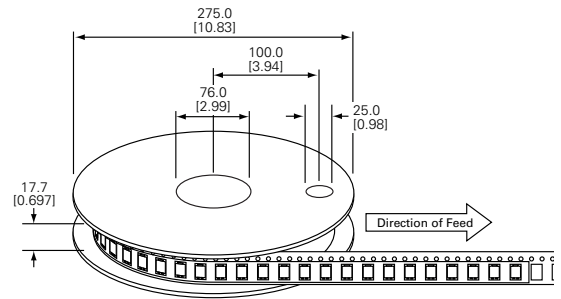
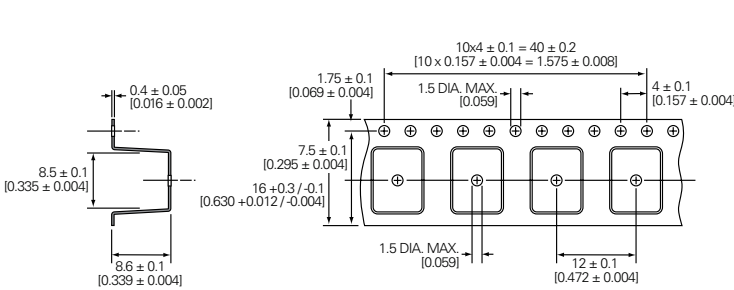
Solder Iron Temperature: 350° C +/- 5°C
Heating Time: 5 seconds max.

Packaging Dimensions

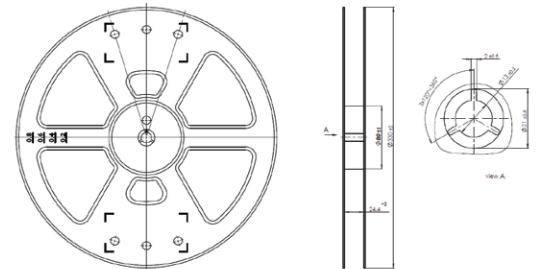
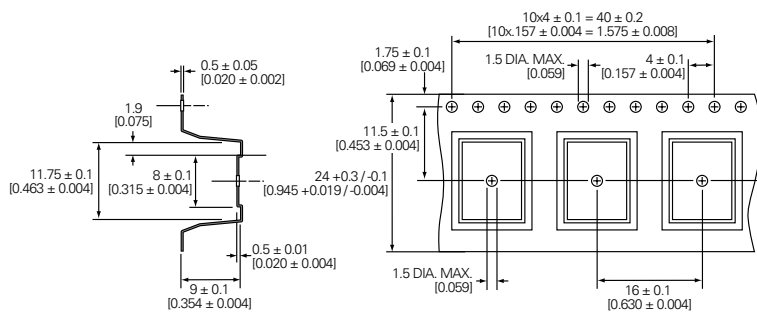
For 'L' Type Axial Lead Items



Core and 'MS' Type Items



For 'LS' Type Shaped Lead Items



Part Numbering System and Ordering Information

CG2 XXX XX * XX

Series

CG – for 75, 90, or 110V
CG2 – for 145V to 1000V

Breakdown Voltage

75	300
90	350
110	470
145	600
230	800
250	1000

Lead Option Code

(Blank) = No Leads / Core
L = Straight Leads
LS = Shaped Leads
MS = Surface Mount

Option Code*

SN = may have different DC Breakover Voltage Limit. Please refer to Electrical Characteristics table for additional information.

Packaging Option Code

(Blank) = No Leads / Core, Bulk Bag - 400 pcs
 L(Blank) = Straight Lead, Tray - 50 pcs
LTR = Straight Lead, Tape & Reel per EIA RS-296-E - 500 per reel
 LS(Blank) = Shaped Lead (see LS dimensions), Tape & Reel - 500 per reel

Examples:

- CG75** – A non-leaded 75V device
- CG2230L** – A leaded 230V device
- CG2800LTR** – A leaded 800V device, tape-and-reel (per EIA standard RS-296-D)

Notes:

CG/CG2 devices with other breakdown voltages in the 75-1000 V range are available upon request.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View CG2800MS on WIN SOURCE](#)

 [Littelfuse Inc. Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management