

## Gas Discharge Tube in DIP package

### Description

GDTs of RDSEMI are designed compliant with industrial specification of ITU-T K.12 2000 and national standards of GB/T 9043 2002, could meet over voltage transients protection requirements of lightning strikes, power cross and induction in both telecommunication equipments and power lines.

### Features

- 3-electrode arrester
- Very small size
- Extremely fast response time
- Stable performance over life
- Extremely low capacitance (<1pF)
- High insulation resistance



### Mechanical Data

- **Case:**  $\phi 8 \times 10$ mm(plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Application

- Modem
- Splitter
- Base stations

**Specifications (@25°C)**

Part number	DC Spark-over Voltage 1) 2)	Maximum Impulse Spark-over Voltage	Service Life 3)	Insulation resistance	Capacitance
	100V/s	1kv/μs	8/20μs 10times	@ 100V <sub>DC</sub>	@ 1 MHz
	(V)	(V)	(KA)	(MΩ)	(pF)
CG3R075-T8	75±30%	600	10	> 1000	< 1.0
CG3R090-T8	90±30%	600	10	> 1000	< 1.0
CG3R150-T8	150±20%	650	10	> 1000	< 1.0
CG3R230-T8	230±20%	700	10	> 1000	< 1.0
CG3R300-T8	300±20%	750	10	> 1000	< 1.0
CG3R350-T8	350±20%	750	10	> 1000	< 1.0
CG3R400-T8	400±20%	900	10	> 1000	< 1.0
CG3R420-T8	400±20%	900	10	> 1000	< 1.0
CG3R470-T8	420±20%	1000	10	> 1000	< 1.0
CG3R600-T8	600±20%	1100	10	> 1000	< 1.0
CG3R800-T8	800±20%	1200	10	> 1000	< 1.0

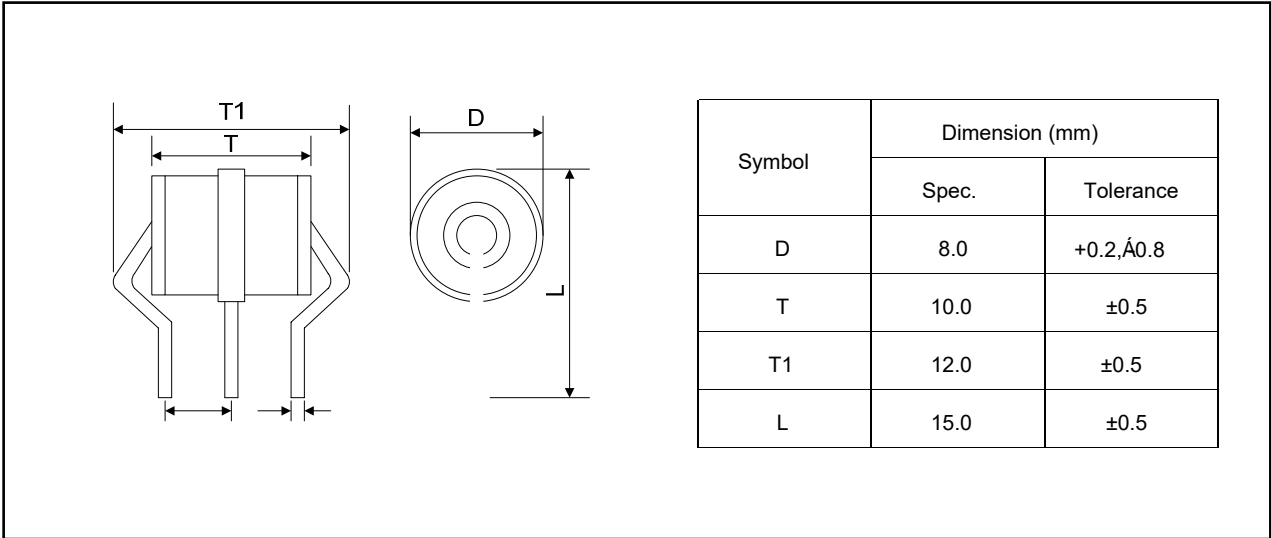
1) At delivery AQL 0.65 level II, DIN ISO 2859.

2) In ionized mode.

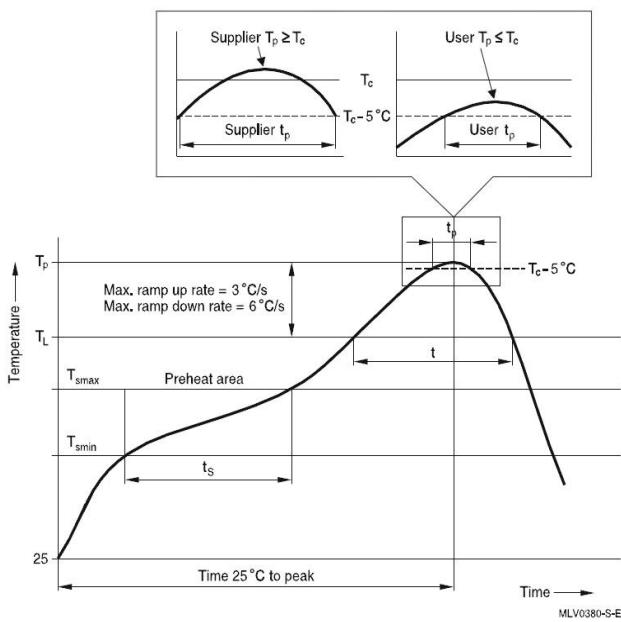
3) Tests according to ITU-T Rec. K. 12 and UL 497B.

Terms and current waveforms in accordance with: ITU-T Rec. K.12; IEC 61643-21 and DIN 57845/VDE0845.

## Package Dimensions



## Recommended wave soldering profile



Reflow profile features		Sn- Pb eutectic assembly	Pb-free assembly
Preheat and soak - Temperature min - Temperature max - Time	$T_{smin}$ $T_{smax}$ $t_{smin}$ to $t_{smax}$	100 °C 150 °C 60 ... 120 s	150 °C 200 °C 60 ... 180 s
Average ramp-up rate	$T_{smax}$ to $T_p$	max. 3 °C/ s	max. 3 °C/ s
Liquidous temperature Time at liquidous	$T_L$ $t_L$	183 °C 60 ... 150 s	217 °C 60 ... 150 s
Peak package body temperature *, Classification temperature **	$T_p, T_c$	220 ... 235 °C **	245 ... 260 °C **
Time ( $t_p$ ) ** within 5 °C of the specified classification temperature ( $T_c$ )		20 s ***	30 s ***
Average ramp-down rate	$T_p$ to $T_{smax}$	max. 6 °C/ s	max. 6 °C/ s
Time 25 °C to peak temperature		max. 6 min	max. 8 min

\* = Tolerance for peak profile temperature ( $T_p$ ) is defined as a supplier minimum and a user maximum.  
 \*\* = For details please refer to JEDEC J-STD-020D.  
 \*\*\* = Tolerance for time at peak profile temperature ( $t_p$ ) is defined as a supplier minimum and a user maximum.

## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CG3Rxxx-T8 Series			500pcs / Box	EIA STD RS-481

## Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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