

### Description

The PG2D18 Series is a series of square GDT devices in a standard 1812 footprint (4.5x3.2x2.7mm) which is the smallest GDT in the market. PG2D18 series GDT's feature an ultra low capacitance (< 1pF) and are able to withstand high surge currents without destruction.



### Features

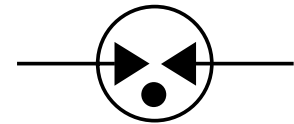
- RoHS compliant and Lead-free
- Small size 4.5x 3.2x 2.7mm
- Excellent stability on multiple pulse duty cycle
- Excellent response to fast rising transients.
- Ultra Low Insertion Loss
- Low capacitance (<1pF)
- Voltage Ranges 75V to 600V
- 2.0KA surge capability tested with 8/20<sup>μ</sup>S pulse as defined by IEC 61000-4-5

### Applications

- Communication equipment
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Telecom SLIC protection
- Set top box protection
- Broadband equipment ADSL equipment, including ADSL2+
- XDSL equipment
- Satellite and CATV equipment
- General telecom equipment



1812 (4.5x3.2x2.7mm)  
Surface Mount



**Bi-Electrode**

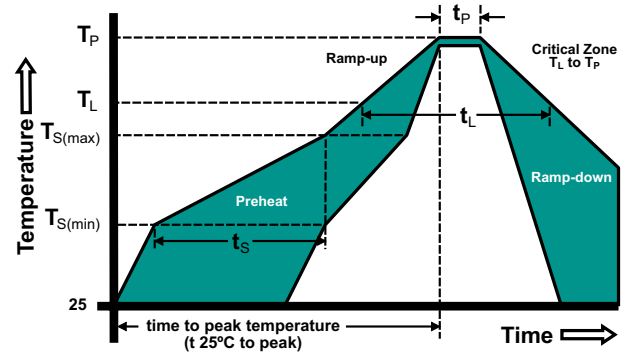
### Electrical Characteristics

Part No.	DC Breakdown in Volts (@100V/s)	Impulse Breakdown in Volts (@1kV/μs) Max.(V)	Insulation Resistance		Capacitance (@1KHz)	Nominal AC Discharge Current (1s @50Hz)	Nominal Impulse Discharge Current (@8/20μs)	Nominal Impulse Discharge Current (@10/700μs)
			Min.	DC	Max.			
PG2D18R075N	75±30%	500	100MΩ	50V	<1.0 pf	2.0A	2.0kA	4.0kV
PG2D18R090N	90±30%	600		50V	<1.0 pf			
PG2D18R150N	150±30%	600		100V	<1.0 pf			
PG2D18R200N	200±20%	600		100V	<1.0 pf			
PG2D18R350N	350±20%	800		100V	<1.0 pf			
PG2D18R470N	470±20%	900		100V	<1.0 pf			
PG2D18R600N	600±20%	1000		100V	<1.0 pf			

\*Devices test at ambient temperature of 25°C

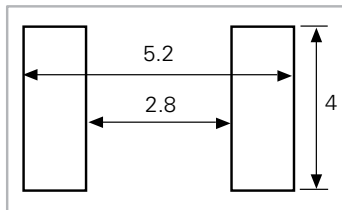
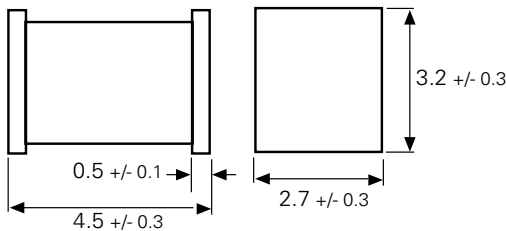
### Soldering Parameters - Reflow Soldering

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 <sup>+0/-5</sup> °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



### Device Dimensions

Unit/mm

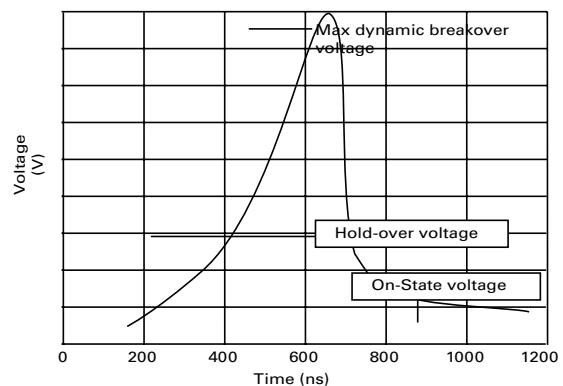


Recommended Soldering Pad Layout

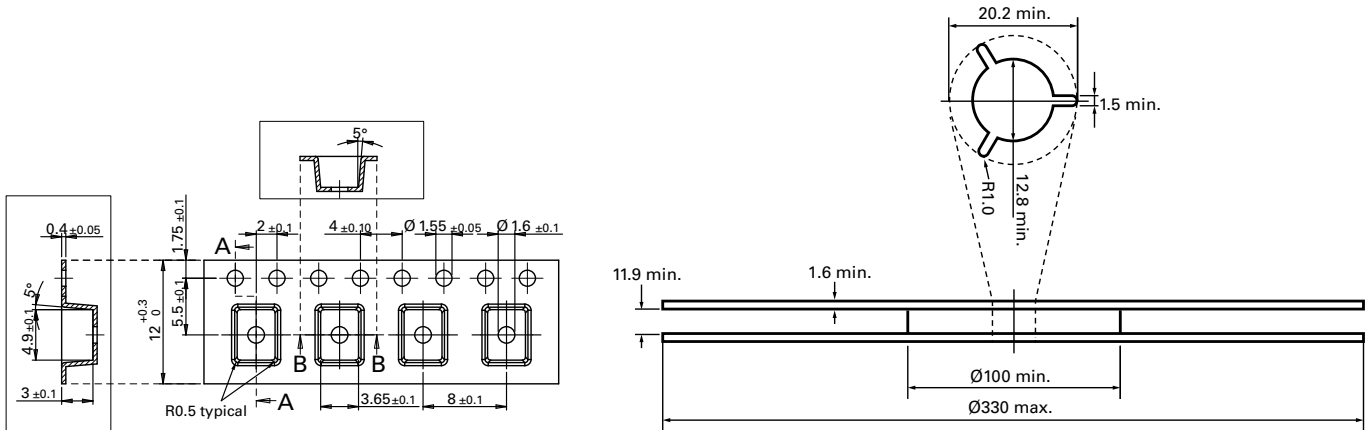
### Product Characteristics

<b>Materials</b>	Element: Silver or Silver Ceramic Body / End plate Metallization of ceramic body High temperature solder preform End termination overcoat: Nickel Flash, Tin/Lead
<b>Storage and Operational Temperature</b>	-40 to +90 °C

### Voltage vs. Time Characteristic



**Tape and Reel Dimensions** (Unit/mm)



**Packaging** (Tape and Reel)

Quantity: 2,000pcs