

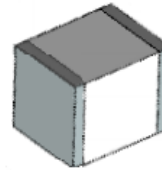
# TGD-4532 Series

Gas Discharge Tubes

TOP-EMC

## FEATURES

- Surface Mounted Gas Arrester
- Micro-Gap Design
- Fast response time
- MaxSurgecurrentcapacity 2000A@8/20 $\mu$ s
- Accord with ITU-TK.21 standard 6KV 10/700 $\mu$ s
- Low capacitance ( $\leq 1.0$ pF).
- High insulation resistance.
- Storage and operational temperature: -40 $^{\circ}$ C ~ +90 $^{\circ}$ C



SMD



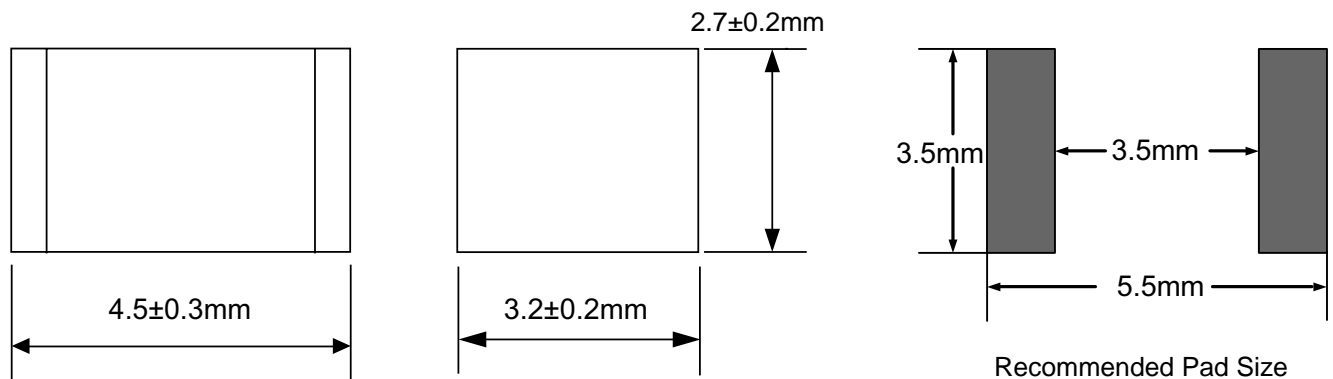
## MECHANICAL DATA

- Mounting Position: Any
- Polarity: Bilateral and symmetrical.

## APPLICATIONS

- For data communication equipment: Telephone, Fax, Modem
- Equipment with Antenna or Antenna/signal circuits: Radio, Amplifier, Alarm and Sensor

## DIMENSIONS



CHARACTERISTICS			
PARAMETER	SYMBOL	VALUE	UNIT
DC Spark-over voltage	Vs	63-780	V
Minimum Insulation Resistance	IR	1000	MΩ
Maximum Capacitance(1MHz-0.5Vmax)	C	1.0	PF
Surge current capacity(8/20us)	Isc	2000	A

## ELECTRICAL CHARACTERISTICS

Part Number	DC Spark-over Voltage	Impulse Spark-over Voltage	Minimum Insulation Resistance		Maximum Capacitance	Nominal Impulse Discharge Current	Impulse Discharge Voltage
	100V/s	1000V/μs	Test Voltage	(MΩ)	(1MHz)	8/20μs	10/700us
	(V)	(V)	DC(V)		(pF)	(A)	(V)
TGD091N-4532	90±30%	<650	50	1000	1	2000	6kV
TGD151N-4532	150±30%	<750	50	1000	1	2000	
TGD201N-4532	200±30%	<800	100	1000	1	2000	
TGD301N-4532	300±30%	<750	100	1000	1	2000	
TGD401N-4532	400±30%	<950	100	1000	1	2000	
TGD601N-4532	600±30%	<1200	100	1000	1	2000	

## PART NUMBER CODE

T
GD
091
N -
4532  
①
②
③
④
⑤

- ① Company Name: TOP-EMC
- ② Product Name: Gap Discharge Tubes
- ③ DC Spark-Over Voltage: 091=90V
- ④ N: ±30% for accuracy
- ⑤ Size: 4.5mm x 3.2mm

## Cautions and warnings

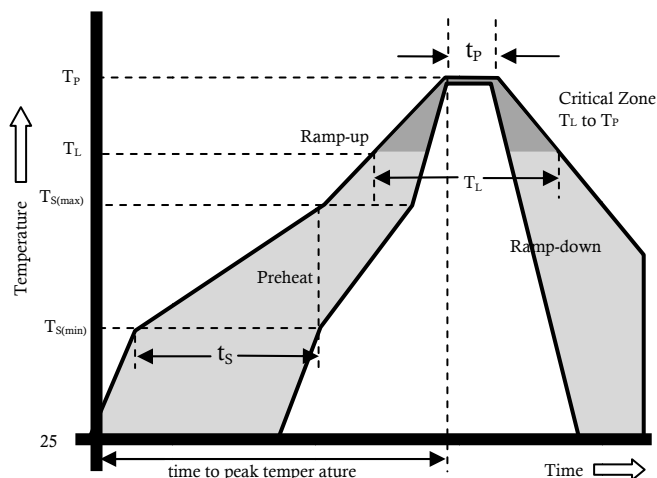
- Gas Discharge Tubes must not be operated directly in power supply networks.
- Gas Discharge Tubes may become hot in case of longer periods of current stress (danger of burning).
- Gas Discharge Tubes may be used only within their specified values. In case of overload, the head contacts may fail or the component may be destroyed.
- Damaged Gas Discharge Tubes must not be re-used.
- Operation beyond the rated voltage or current may result in rupture electrical arcing or flame.

## RELIABILITY INSPECTIONS

Items	Test Condition / Description	Requirement
High Temperature Storage Test	Temperature:90°C Time:2H	Meets the preset value
Low Temperature Storage Test	Temperature:-40 °C Time:2H	
Vibration	Frequency:10-500Hz Amplitude:0.15mm Time:45mins	
Resistance of soldering heat	Temperature:260±5 °C Time of dip soldering:10s,1time	
Solderability	Solder Pot Temperature:245±5 °C Solder Dwell Time:4-6 seconds	

## Reflow Profile

Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (min to max)	60 – 180 secs
Average ramp up rate (Liquids) T <sub>amp</sub> (T <sub>L</sub> ) to T <sub>p</sub>		3°C/second max
T <sub>S</sub> (max) to T <sub>L</sub> - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T <sub>L</sub> ) (Liquids)	217°C
	- Temperature (T <sub>p</sub> )	60 – 150 seconds
Peak Temperature (T <sub>p</sub> )		260+0/-5 °C
Time within 5°C of actual peak Temperature (t <sub>p</sub> )		8 – 20 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T <sub>p</sub> )		8 minutes Max.
Do not exceed		260°C



## Contact Information

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