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PRODUCT DATASHEET

Gas Discharge Tubes

JTA28 Series Gas Discharge Tubes

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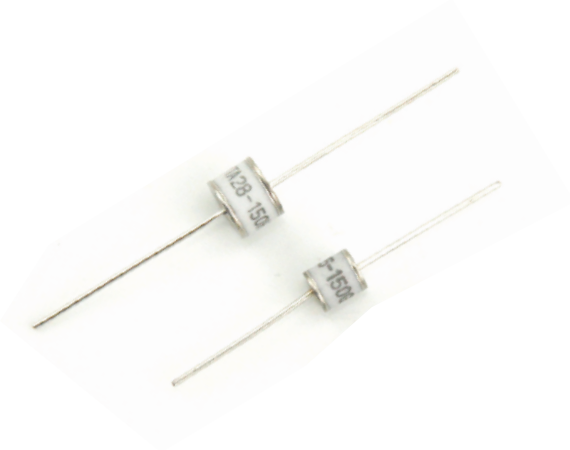


Description

Gas discharge tubes (GDT) use noble gasses enclosed in ceramic tubes to provide an alternate circuit path for voltage spikes.The ceramic envelope and with nickel connectors allow for high loads.The breakdown voltages of the devices have a wide range (up to 20% olerance). Major applications are high requency telecommunication lines,stations, security systems,HID and high quality Surge Protection Devices .

Applications

- Communication equipment
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Telecom SLIC protection
- Telecommunications

Features

- RoHS & HF compliant
- Low Capacitance
- Micro-Gap Design
- Stable breakdown voltage
- High insulation resistance
- High holdover voltage
- Large absorbing transient current capability

Electriacl Characteristics

Part No.	DC Spark-over Voltage 100V/S(V)	Max.Impulse Spark-over Voltage 1KV/μs(V)	Nominal Discharge Current(L) 1s,50Hz(A)	Nominal Impulse Discharge Current 8x20μs(kA)	Insulation Resistance min. (GΩ)/ (Vdc)	Max. Capacitance C 1MHz(pF)
JTA28-075K	75±30%	600	20	20	1GΩ/50Vdc	1.5
JTA28-090K	90±20%	600	20	20	1GΩ/50Vdc	1.5
JTA28-150K	150±20%	600	20	20	1GΩ/50Vdc	1.5
JTA28-200K	200±20%	700	20	20	1GΩ/100Vdc	1.5
JTA28-230K	230±20%	700	20	20	1GΩ/100Vdc	1.5
JTA28-250K	250±20%	700	20	20	1GΩ/100Vdc	1.5
JTA28-350K	350±20%	1000	20	20	1GΩ/100Vdc	1.5
JTA28-420K	420±20%	1000	20	20	1GΩ/100Vdc	1.5
JTA28-470K	470±20%	1200	20	20	1GΩ/100Vdc	1.5
JTA28-500K	500±20%	1200	20	20	1GΩ/100Vdc	1.5
JTA28-600K	600±20%	1400	20	20	1GΩ/100Vdc	1.5
JTA28-800H	800±20%	1600	10	10	1GΩ/250Vdc	1.5
JTA28-900H	900±20%	1700	10	10	1GΩ/250Vdc	1.5
JTA28-1000H	1000±20%	2000	10	10	1GΩ/250Vdc	1.5
JTA28-1500D	1500±20%	2800	3	3	1GΩ/500Vdc	1.5
JTA28-2000D	2000±20%	3000	3	3	1GΩ/500Vdc	1.5
JTA28-2500D	2500±20%	3600	3	3	1GΩ/500Vdc	1.5
JTA28-3000D	3000±20%	4500	3	3	1GΩ/1000Vdc	1.5

Electrical Performance

Item	Testing condition and method	Performance
DC Spark-over Voltage(Vs)	Measure starting discharge voltage (Vs) by gradualy increasing applied DC voltage.Test current is 1mA max. and test period is 1 second max. and the DC voltage ascend up within 100v/second.	Meet specified value
Insulation Resistance(IR)	Measure the insulation resistance across the terminal at regulated voltage But The test voltage doesn't over the DC spark-over voltage with 50Vdc/100Vdc/250Vdc/500Vdc.	1GΩ or over
Capacitance	Measure the electrostatic capacitance by applying a voltage of less than 6V (at 1MHz)between terminals.	1.5pF or less

The testing condition shall be subject to the following items:
1、Ambient Temp.:-40°C~125°C; Relative Humidity:＜95%(40°CH）;
2、Atmospheric Pressure 8.6×10⁴Pa~1.06×10⁴Pa.

Physical and Solderability Characteristics

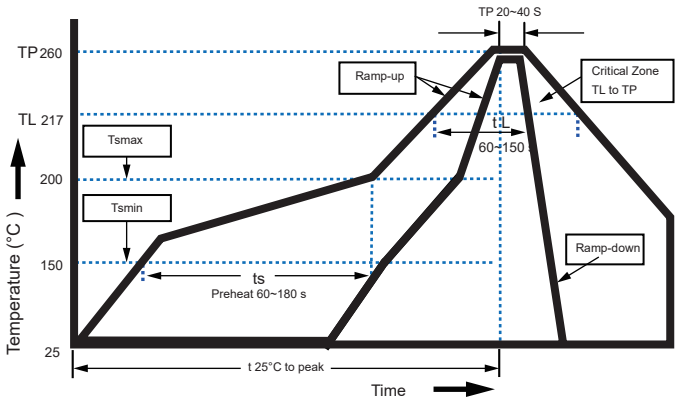
Item	Testing condition and method	Performance
Lead wire pull strength	Gradually applying the load 0.5Kg and keeping the unit fixed for 10±1sec.	Meet DC spark-over voltage tolerance Not pull out and break the lead wire.
Lead wire bending Strength	The unit shall be secured with its lead wire kept vertical and the 0.25kg weight below be applied in the axial direction.The lead wire shall gradually be bend by 90 in onedirection at the point of 3mm from the body along the radius of curvature (0.75mm~0.8mm),and again back the original position. The procedure shall be repeat 2times for 30sec.	Meet DC spark-over voltage tolerance.
Solderability	After dipping the lead wire to a depth of 2mm from the body in a soldering bath of 260±5°C for 10±1 sec.	Over 95% of the lead wire should be covered with new solder.
Resistance to soldering heat	After dipping the lead wire to a depth of 2mm from the body in a soldering bath of 260±5°C for 10±1 sec.	Meet DC spark-over voltage tolerance.

Environmental Characteristics

Item	Testing condition and method	Performance
Resistance to cold	The specimen shall be subjected to - 55±3°C for 1000 hours without load and then stored at room temperature and humidity for 4 hours.	Meet specified value.
Resistance to heat	The specimen shall be subjected to 125±2°C for 1000 hours without load and then stored at room temperature and humidity for 4 hours.	Meet specified value.
Resistance to humidity	The specimen shall be subjected to 85±2°C 85%R.H.for 1000 hours without load and then stored at room temperature and humidity for 4 hours.	Meet specified value.
Surge life	Apply a impulse current (8/20μs of 20KA/10A/3KA) for 10 times at 60 seconds intervals,Thereafter, the characteristics of times Vs,IR and C shall be measured(EN61000-4-5).	No cracks or failures after applying current
Heat cycle	Repeat the temperature cycle shown below 200 times then store parts at room temperature and humidity for 4 hours:	Meet specified value
Temperature range	Operating temp range :-55°C to +125°C Storage temp range :-40°C to +85°C	

Step	1	2	3	4
Temperature	-55±3°C	Room Temp	125±2°C	Room Temp
Perild	30min	30min	30min	30min

Soldering Parameters

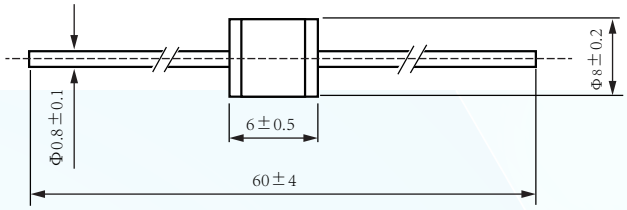


- Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free.
- Recommended maximum paste thickness is 0.25mm Devices can be cleaned using standard industry methods and solvents.
- Note 1:All temperature refer to topside of the package, measured on the package body surface.
- Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Ts max to T p)	3°C/second mac.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max

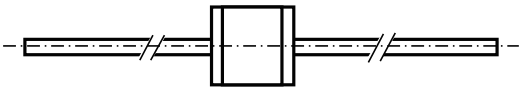
Storage And Handling:	
Storage conditions	0°C~ 35°C,30% ~60%R.H.
Devices may not meet specified performance if storage conditions are exceeded.	

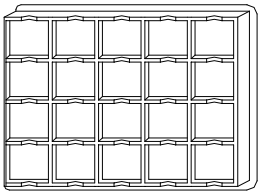
Dimensions and Structure(mm)



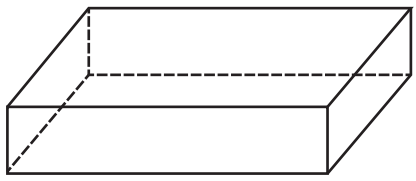
Packaging

No.	Quantity &Packaging Code
JTA28	100 pcs/pvc

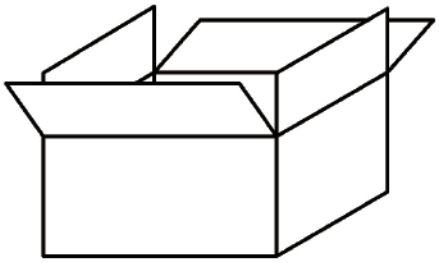




100 pcs/pvc



500 pcs/box



6000pcs/carton

Part Number System

JT A 2 8 - 075 □

Surge Rating

Blank=0.5kA, B=2kA, D=3kA,G=5kA,H=10kA, K=20kA, M=40kA, P=60kA

075 = DC Spark-over Voltage 75V

2=2 electrode device

8=8mm diameter

A=Axial Leads,N=No Leads,S=Surface Mount,T=T-shaped Leads

JT = JDT Gas Discharge Tube