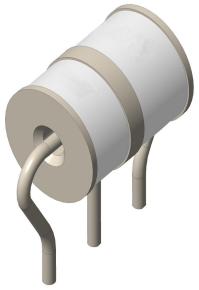
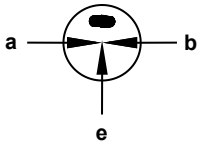
Description

Gas discharge Tubes (GDT) are classical components for protecting the installations of the telecommunications. It is essential that IT and telecommunications systems -with their high-grade but sensitive electronic circuits - be protected by arresters. They are thus fitted at the input of the power supply system together with varistors and at the connection points to telecommunication lines. They have become equally indispensable for protecting base stations in mobile telephone systems as well as extensive cable television (CATV) networks with their repeaters and distribution systems.

These protective components are also indispensable in other sectors, In AC power transmission systems, they are often used with current-limiting varistors, In customer premises equipment such as DSL modems, WLAN routers, TV sets and cable modems In air-conditioning equipment, the integral black-box concept offers graduated protection by combining arresters with varistors, PTC, diodes and inductor.



Schematic Symbol



a = Tip
b = Ring
e = Ground
(center electrode)

Features

- Non-Radioactive
- RoHS compliant
- Low insertion loss
- Excellent response to fast rising transients
- Ultra low capacitance
- 10KA surge capability tested with 8/20μs pulse as defined by IEC 61000-4-5

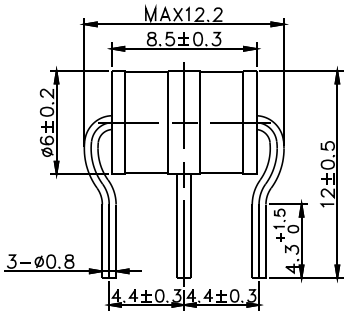
Applications

- Communication equipment
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Telecom SLIC protection
- Broadband equipment
- ADSL equipment, including ADSL2+
- XDSL equipment
- Satellite and CATV equipment
- Consumer electronics

Product Characteristics

Materials	Nickel-plated with Tinplated wires
Product Marking	10KA
Glow to Arc Transition Current	~1 Amps
Glow Voltage	~70 Volts
Storage and Operational Temperature	-40 to +90°C
Weight	~1.30g
Climatic category (IEC 60068-1)	40/ 90/ 21

Dimensions (Unit: mm)



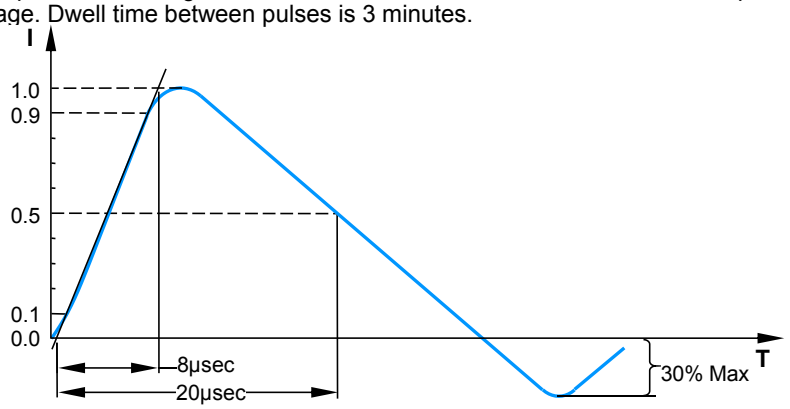
Electrical Characteristics

Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage		Minimum Insulation Resistance	Maximum Capacitance	Arc Voltage	Service Life			
							Nominal Impulse Discharge Current	Max Impulse Discharge Current	Nominal Alternating Discharge Current	Impulse Life
	@100V/S	@100V/μs	@1KV/μs		@1MHz	@1A	@8/20μs [4] ±5 times	@8/20μs [4] 1 time	@50Hz [4] 1 Sec 10 times	@10/1000μs [4] 300 times
K3RM075L-6	75V±20%	＜500V	＜600V	1 GΩ (at 25V)	＜1.5pF	~15V	10KA	20KA	10A	200A
K3RM090L-6	90V±20%	＜500V	＜600V	1 GΩ (at 50V)	＜1.5pF	~15V	10KA	20KA	10A	200A
K3RM150L-6	150V±20%	＜500V	＜600V	1 GΩ (at 50V)	＜1.5pF	~20V	10KA	20KA	10A	200A
K3RM230L-6	230V±20%	＜600V	＜700V	1 GΩ (at 100V)	＜1.5pF	~20V	10KA	20KA	10A	200A
K3RM250L-6	250V±20%	＜600V	＜700V	1 GΩ (at 100V)	＜1.5pF	~20V	10KA	20KA	10A	200A
K3RM300L-6	300V±20%	＜800V	＜900V	1 GΩ (at 100V)	＜1.5pF	~20V	10KA	20KA	10A	200A
K3RM350L-6	350V±20%	＜800V	＜900V	1 GΩ (at 100V)	＜1.5pF	~20V	10KA	20KA	10A	200A
K3RM420L-6	420V±20%	＜900V	＜1000V	1 GΩ (at 100V)	＜1.5pF	~20V	10KA	20KA	10A	200A
K3RM470L-6	470V±20%	＜900V	＜1000V	1 GΩ (at 100V)	＜1.5pF	~20V	10KA	20KA	10A	200A
K3RM600L-6	600V±20%	＜1100V	＜1200V	1 GΩ (at 100V)	＜1.5pF	~20V	10KA	20KA	10A	200A

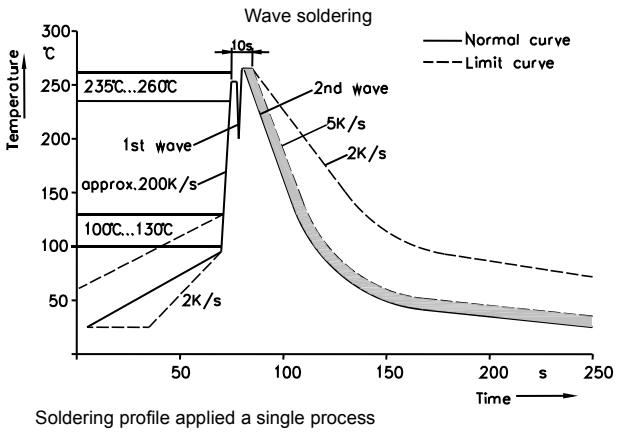
Notes:

1). Terms in accordance with ITU-T K.12 and GB/T 9043-2008
2). At delivery AQL 0.65 level Ⅱ, DIN ISO 2859
3). Tip or ring electrode to center electrode
4). Total current through center electrode, half value through tip respectively ring electrode

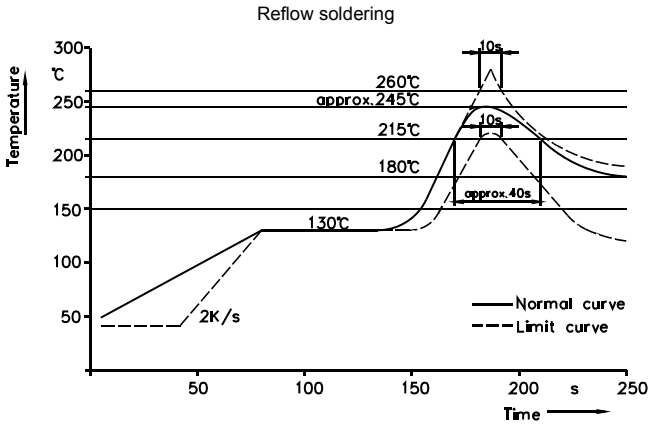
Electrical Rating

Item	Test Condition / Description	Requirement
DC Spark-over Voltage	The voltage is measured with a slowly rate of rise dv / dt=100V/s	To meet the specified value
Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with a rise time of dv / dt=100V//μs or 1KV/μs	
Insulation Resistance	The resistance of gas tube shall be measured each terminal each other terminal, please see above spec.	
Capacitance	The capacitance of gas tube shall be measured each terminal to each other terminal. Test frequency :1MHz	
Nominal Impulse Discharge Current	The maximum current applying a waveform of 8/20μs that can be applied across the terminals of the gas tube. One hour after the test is completed, re-testing of the DC spark-over voltage does not exceed ±30% of the nominal DC spark-over voltage. Dwell time between pulses is 3 minutes. 	
Nominal Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. 10 times. Intervals: 3min. The DC spark-over voltage does not exceed ±30% of the nominal DC spark-over voltage. IR > 10^8ohms.	

Recommended Soldering Profile



Soldering profile applied a single process



Soldering Parameters - Hand Soldering

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