#### 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.

#### **Features**

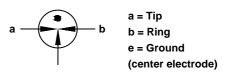
- Non-Radioactive
- u RoHS compliant
- u Low insertion loss
- Excellent response to fast rising transients
- Ultra low capacitance
- 20KA surge capability tested with 8/20μs pulse as defined by IEC 61000-4-5
- Available with thermal failsafe option (add 'F' suffix to part number)

#### **Applications**

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



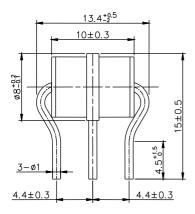
### **Schematic Symbol**



#### **Product Characteristics**

Materials	Nickel-plated with Tinplated wires				
Product Marking	-20KA				
Glow to Arc Transition Current	~1 Amps				
Glow Voltage	~70 Volts				
Storage and Operational Temperature	-40 to +90°C				
Weight	~2.0g				
Climatic category (IEC 60068-1)	40/ 90/ 21				

# Dimensions (Unit: mm)



# **Electrical Characteristics**

							Service Life			
Part Number	DC Spark-over Voltage		n Impulse er Voltage	Minimum Insulation Resistance	Maximum Capacitance	Arc Voltage	Nominal Impulse Discharge Current	Max Impulse Discharge Current	Nominal Alternating Discharge Current	Impulse Life
	@100V/S	@100V/µs	@1KV/μs		@1MHz	@1A	@8/20µs <sup>4)</sup> ±5 times	@8/20µs <sup>4)</sup> 1 time	@50Hz <sup>4)</sup> 1 Sec 10 times	@10/1000µs <sup>4)</sup> 300 times
K3RP075L-8	75V±20%	<500V	<600V	1 GΩ (at 25V)	<1.5pF	~15V	20KA	25KA	20A	200A
K3RP090L-8	90V±20%	<500V	<600V	1 GΩ (at 50V)	<1.5pF	~15V	20KA	25KA	20A	200A
K3RP150L-8	150V±20%	<500V	<600V	1 GΩ (at 50V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP230L-8	230V±20%	<600V	<700V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP250L-8	250V±20%	<600V	<700V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP300L-8	300V±20%	<800V	<900V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP350L-8	350V±20%	<800V	<900V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP420L-8	420V±20%	<900V	<1000V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP470L-8	470V±20%	<900V	<1000V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP600L-8	600V±20%	<1100V	<1200V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A
K3RP800L-8	800V±20%	<1200V	<1400V	1 GΩ (at 100V)	<1.5pF	~25V	20KA	25KA	20A	200A

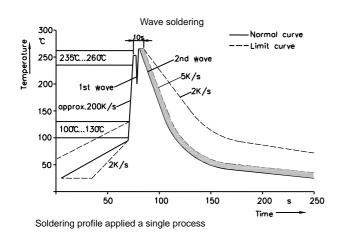
#### Notes:

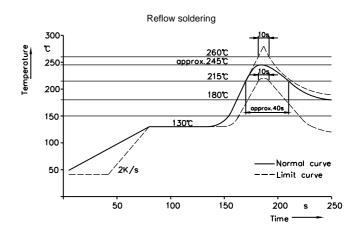
- 1). Terms in accordance with ITU-T K.12 and GB/T 9043-2008
- 2). At delivery AQL 0.65 level  $\,\,\mathrm{II}$  , DIN ISO 2859
- 3). Tip or ring electrode to center electrode
- 4). Total current through center electrode, half value through tip respectively ring electrode

# **Electrical Rating**

Item	Test Condition / Description	Requirement
DC Spark-over Voltage Impulse Spark-over Voltage	The voltage is measured with a slowly rate of rise dv / dt=100V/s  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.  1.0 0.9 0.5 8µsec 20µsec 30% Max T  Rated RMS value of AC current at 50Hz, 1 sec. 10 times. Intervals: 3min. The DC	To meet the specified value
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 $\pm 30\%$ of the nominal DC spark-over voltage. IR > $10^8$ ohms.	

# **Recommended Soldering Profile**





# **Soldering Parameters - Hand Soldering**

Solder Iron Temperature: 350°C +/-5°C

Heating Time: 5 seconds max.

# **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

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Other Similar products are found below:

PMT1023004 PMT1025001 RF3161-000 PMT1035004 PMT1040004 PMT809006 CG2250 CG2800 CG31.5L GT-SMD181240012-TR
WPGT-2N145B6L WPGT-2N230B6L WPGT-2N470B6L WPGT-2R470B6L WPGT-2RM230A6L WPGT-2RM350A6L WPGT2RM70A6L WPGT-2RM90A6L WPGT-2S145 WPGT-2S350 WPGT-2S470 WPGT-3R350CF WPGT-3R350G1 WPGT-3R90G1 WPGT3R75G1 WPGT-3R470G1 WPGT-3R250C WPGT-3R230G1 WPGT-2S230 WPGT-2RM470A6L WPGT-2RM145A6L WPGT-2R3000B8L
WPGT-2R2700B8L WPGT-2R1000B8L WPGT-2N90B6L WPGT-2N70B6L WPGT-2N350B6L WPGT-2N230B6L1 CG90 CG2230
CG2145 CG21000 GT-SMD181215012-TR B88069X6940B152 V20-1+NPE-280 V20-3+NPE+FS-280 SD09-V24 9 C50-0-255
SG24PA300 A9L40500