

Gas Discharge Tube (GDT) Data Sheet

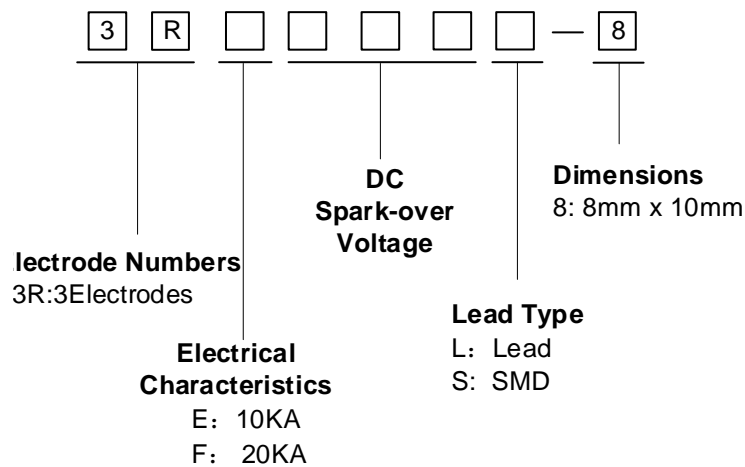
Features

- Provide ultra-fast response to surge voltage from slow-rising surge of 100V/s to rapid-rising surge of 1KV/μs
- Low capacitance ($\leq 2\text{pF}$)
- High insulation resistance
- High holdover voltage
- Stable breakdown voltage
- Large absorbing transient current capability
- Micro-Gap Design
- Operating and Storage Temperature : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Meets MSL Level 1, per J-STD-020

Applications

- Telephone Interface, Line cards
- Data communication equipment
- Line test equipment
- Repeaters, Modems

Part Number Code



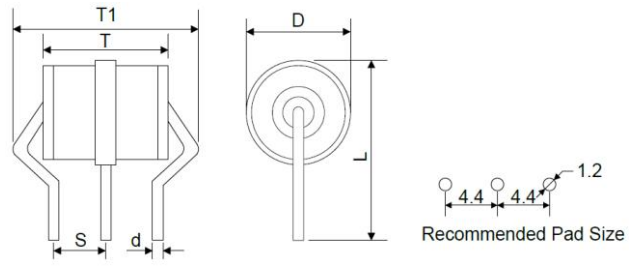
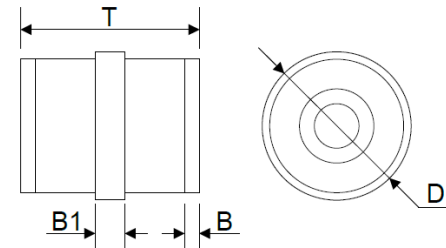
Electrical Characteristics

Part Number		DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Impulse Life Test	Minimum Insulation Resistance		Maximum Capacitance	Nominal Impulse Discharge Current	Alternating Discharge Current	Device Marking Code
		100V/S	1KV/us	10/1000us 100A	Test Voltage	(GΩ)	(1MHz 1V)	8/20us	50Hz,1S	
		(v)	(v)	(times)	DC(V)		(pF)	(KA)	(A)	
3RE075L-8	3RE075S-8	75±20%	700	300	25	1	2.0	10	10	3RE075-8
3RE090L-8	3RE090S-8	90±20%	700	300	50	1	2.0	10	10	3RE090-8
3RE150L-8	3RE150S-8	150±20%	700	300	100	1	2.0	10	10	3RE150-8
3RE200L-8	3RE200S-8	200±20%	700	300	100	1	2.0	10	10	3RE200-8
3RE230L-8	3RE230S-8	230±20%	700	300	100	1	2.0	10	10	3RE230-8
3RE350L-8	3RE350S-8	350±20%	850	300	100	1	2.0	10	10	3RE350-8
3RE400L-8	3RE400S-8	400±20%	850	300	100	1	2.0	10	10	3RE400-8
3RE470L-8	3RE470S-8	470±20%	950	300	250	1	2.0	10	10	3RE470-8
3RE600L-8	3RE600S-8	600±20%	1300	300	250	1	2.0	10	10	3RE600-8
3RE800L-8	3RE800S-8	800±20%	1500	300	250	1	2.0	10	10	3RE800-8

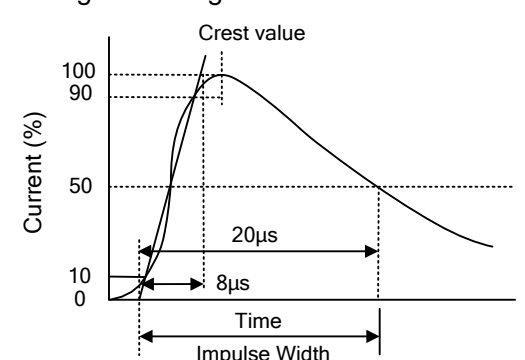
Electrical Characteristics

Part Number		DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Impulse Life Test	Minimum Insulation Resistance		Maximum Capacitance	Nominal Impulse Discharge Current	Alternating Discharge Current	Device Marking Code
		100V/S	1KV/us	10/1000us 100A	Test Voltage	(GΩ)	(1MHz 1V)	8/20us	50Hz,1S	
		(v)	(v)	(times)	DC(V)		(pF)	(KA)	(A)	
3RF075L-8	3RF075S-8	75±20%	700	300	25	1	2.0	20	20	3RF075-8
3RF090L-8	3RF090S-8	90±20%	700	300	50	1	2.0	20	20	3RF090-8
3RF150L-8	3RF150S-8	150±20%	700	300	100	1	2.0	20	20	3RF150-8
3RF200L-8	3RF200S-8	200±20%	700	300	100	1	2.0	20	20	3RF200-8
3RF230L-8	3RF230S-8	230±20%	700	300	100	1	2.0	20	20	3RF230-8
3RF350L-8	3RF350S-8	350±20%	850	300	100	1	2.0	20	20	3RF350-8
3RF400L-8	3RF400S-8	400±20%	850	300	100	1	2.0	20	20	3RF400-8
3RF470L-8	3RF470S-8	470±20%	950	300	250	1	2.0	20	20	3RF470-8
3RF600L-8	3RF600S-8	600±20%	1300	300	250	1	2.0	20	20	3RF600-8
3RF800L-8	3RF800S-8	800±20%	1500	300	250	1	2.0	20	20	3RF800-8

Dimensions

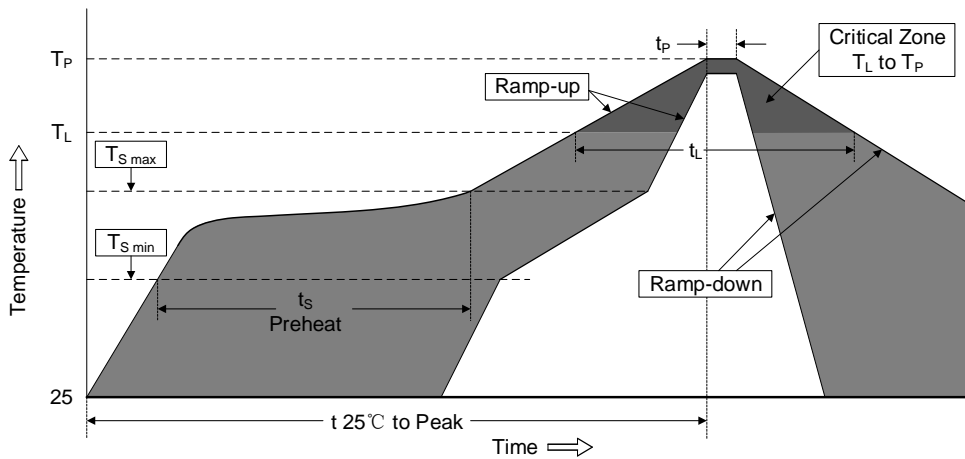
L Type		Symbol	Dimension (mm)
		D	8.00±0.80
		T	10.00±0.50
		T1	12.00±0.50
		L	15.00±0.50
		S Type	
		T	10.00±0.50
		B	0.50±0.10
		B1	1.50±0.20
Notes: This type is not suitable for PCB soldering.			

Electrical Ratings

Items	Test Condition/Description	Requirement
DC spark-over voltage	The voltage is measured with voltage ramp $dv/dt=100V/s$.	To meet the Specified value
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000V/\mu s$.	
Insulation Resistance	The resistance of gas tube shall be measured between two electrodes.	
Capacitance	The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz	
Impulse Discharge Current	<p>Maximum 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time, without causing the DC spark-over voltage to change more than 25% from its initial value.</p> 	
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min. DC spark-over voltage shall not change more than $\pm 25\%$ from its initial value. $IR > 10^8$ ohms (-20%, +30% for 70~90V).	

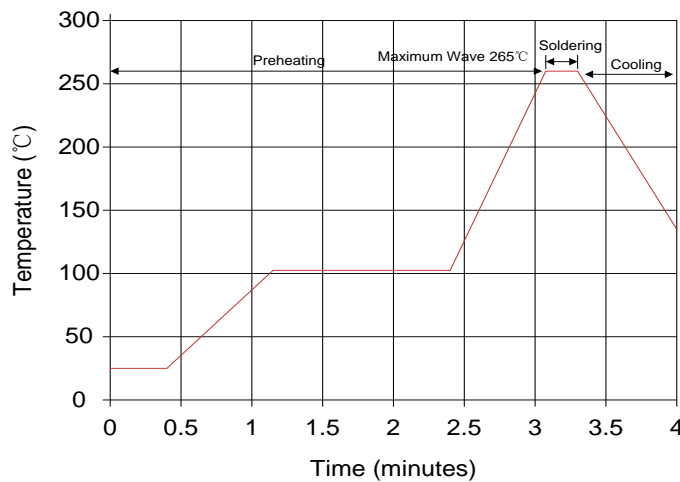
Soldering Recommendation

Reflow Soldering



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max)(t _S)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Wave Soldering

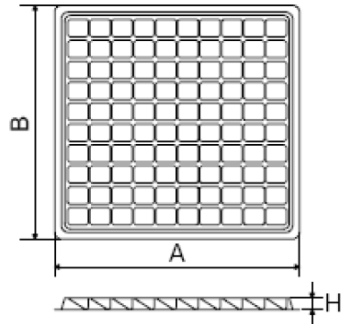


Item	Conditions
Peak Temperature	265°C
Dipping Time	10 seconds(max.)
Soldering	1 time

Packaging

Axial Packing

Skiving packing



Symbol	Dimension (mm)
--------	----------------

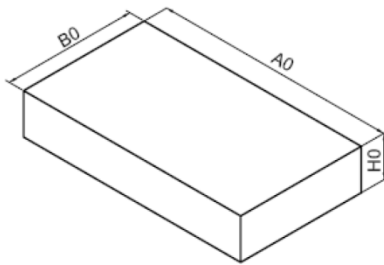
A	217 ± 2.0
---	---------------

B	207 ± 2.0
---	---------------

H	10.3 ± 0.5
---	----------------

Quantity: 100pcs

Inner box



A0	225 ± 2.0
----	---------------

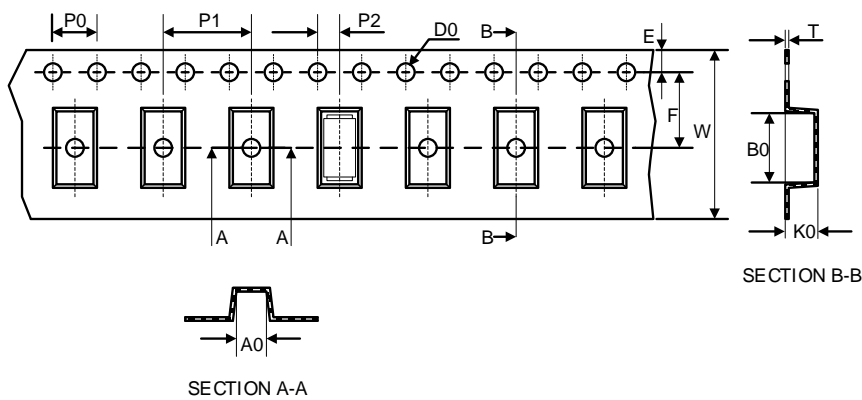
B0	210 ± 2.0
----	---------------

H0	60 ± 2.0
----	--------------

Quantity: 500pcs

SMD packing

Tape



Symbol	Dimension (mm)
--------	----------------

W	16.00 ± 0.20
---	------------------

P0	4.00 ± 0.10
----	-----------------

P1	16.00 ± 0.10
----	------------------

P2	2.00 ± 0.10
----	-----------------

D0	$\Phi 1.55 \pm 0.05$
----	----------------------

E	1.75 ± 0.10
---	-----------------

F	7.50 ± 0.10
---	-----------------

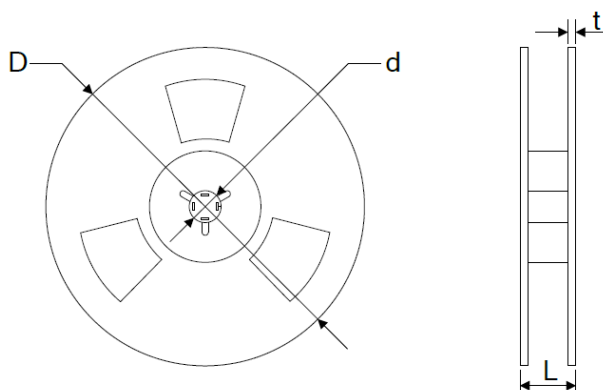
A0	11.60 ± 0.1
----	-----------------

B0	10.00 ± 0.1
----	-----------------

K0	8.90 ± 0.1
----	----------------

T	0.50 ± 0.05
---	-----------------

Reel



D	330.0 ± 2.0
---	-----------------

d	13.0 ± 0.5
---	----------------

L	20.0 ± 2.0
---	----------------

t	2.0 ± 0.2
---	---------------

Quantity: 300PCS

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Gas Discharge Tubes - GDTs / Gas Plasma Arrestors](#) category:

Click to view products by [FTR manufacturer](#):

Other Similar products are found below :

[PMT1023004](#) [PMT1025001](#) [PMT1035004](#) [PMT1040004](#) [PMT809006](#) [CG2250](#) [CG2800](#) [CG31.5L](#) [GT-SMD181240012-TR](#) [WPGT-2N145B6L](#) [WPGT-2N230B6L](#) [WPGT-2N470B6L](#) [WPGT-2R470B6L](#) [WPGT-2RM230A6L](#) [WPGT-2RM350A6L](#) [WPGT-2RM70A6L](#) [WPGT-2RM90A6L](#) [WPGT-2S145](#) [WPGT-2S350](#) [WPGT-2S470](#) [WPGT-3R350CF](#) [WPGT-3R350G1](#) [WPGT-3R90G1](#) [WPGT-3R75G1](#) [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](#) [T61-C350X](#) [9071.99.0547 \(73_Z-0-0-547\)](#) [B88069X6940B152](#) [9071.99.0052\(73_Z-0-0-52\)](#)
[B88069X1973T902](#) [A9L15692](#) [C50-0-255](#) [A9L16294](#)