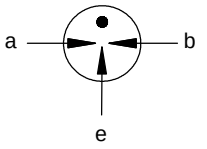
Description

GDT is placed in front of, and in parallel with, sensitive telecom equipment such as power lines, communication lines, signal lines and data transmission lines to help protect them from damage caused by transient surge voltages that may result from lightning strikes and equipment switching operations. These devices do not influence the signal in normal operation. However, in the event of an overvoltage surge, such as a lightning strike, the GDT switches to a low impedance state and diverts the energy away from the sensitive equipment.

Our GDT offer a high level of surge protection, a broad voltage range, low capacitance, and many form factors including new surface mount devices, which makes them suitable for applications such as Main Distribution Frame (MDF) modules, high data-rate telecom applications (e.g. ADSL, VDSL), and surge protection on power lines. Their low capacitance also results in less signal distortion. When used in a coordinated circuit protection solution with PolySwitch devices, they can help equipment manufacturers meet stringent safety regulatory standards.



Electrical symbol



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

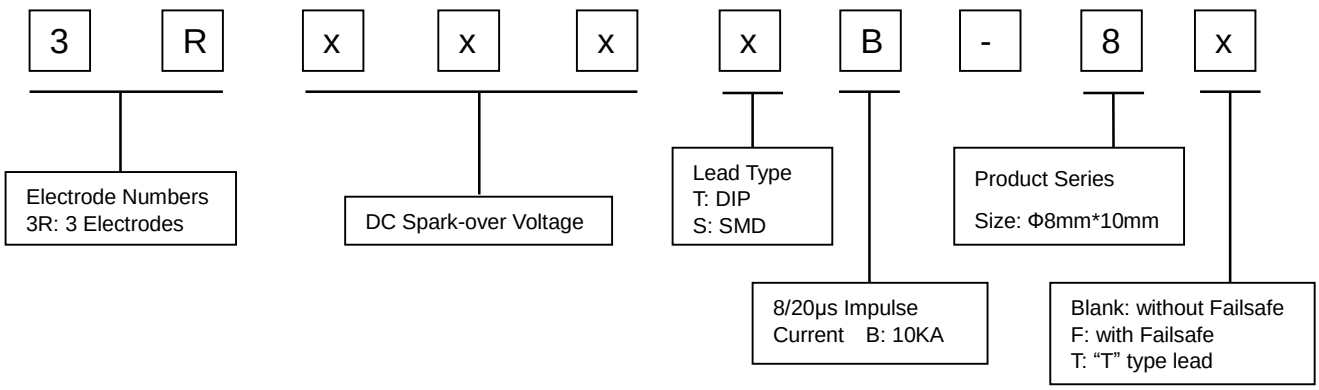
Features

- Excellent response to fast rising transients
- Stable breakdown voltage
- GHz working frequency
- 8/20μs Impulse current capability: 10KA
- Non-Radioactive
- Ultra Low capacitance (<1.5pF)
- High insulation resistance
- Lead-free and RoHS compliant
- UL 497B Recognized: E465335
- Size: Φ8mm*10mm
- Storage and operational temperature: -40~+90°C

Applications

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

Part Number Code



Electrical Characteristics

Part Number				DC Spark-over Voltage [1) 2) 3)] @100V/S	Impulse Spark-over Voltage [3)]		Insulation Resistance [4)]	Capacitance @1MHz	Life Ratings			
					100V/μS	1KV/μS			Impulse Discharge Current @8/20μs [5)]		AC Discharge Current @50Hz 1S [5)]	Impulse Life @10/1000μS 200A [5)]
					Max	Max	Min	Max	Nominal ±5 times	Max 1 time	Nominal 5 times	Min
DIP	SMD	DIP-F	DIP-T	V	V	V	GΩ	pF	KA	KA	A	Times
3R075TB-8	3R075SB-8	3R075TB-8F	3R075TB-8T	75±20%	500	600	1	1.5	10	15	10	300
3R090TB-8	3R090SB-8	3R090TB-8F	3R090TB-8T	90±20%	500	600	1	1.5	10	15	10	300
3R150TB-8	3R150SB-8	3R150TB-8F	3R150TB-8T	150±20%	500	600	1	1.5	10	15	10	300
3R200TB-8	3R200SB-8	3R200TB-8F	3R200TB-8T	200±20%	600	700	1	1.5	10	15	10	300
3R230TB-8	3R230SB-8	3R230TB-8F	3R230TB-8T	230±20%	600	700	1	1.5	10	15	10	300
3R250TB-8	3R250SB-8	3R250TB-8F	3R250TB-8T	250±20%	600	700	1	1.5	10	15	10	300
3R350TB-8	3R350SB-8	3R350TB-8F	3R350TB-8T	350±20%	800	900	1	1.5	10	15	10	300
3R400TB-8	3R400SB-8	3R400TB-8F	3R400TB-8T	400±20%	850	950	1	1.5	10	15	10	300
3R420TB-8	3R420SB-8	3R420TB-8F	3R420TB-8T	420±20%	850	950	1	1.5	10	15	10	300
3R470TB-8	3R470SB-8	3R470TB-8F	3R470TB-8T	470±20%	900	1000	1	1.5	10	15	10	300
3R600TB-8	3R600SB-8	3R600TB-8F	3R600TB-8T	600±20%	1100	1200	1	1.5	10	15	10	300
3R800TB-8	3R800SB-8	3R800TB-8F	3R800TB-8T	800±20%	1400	1500	1	1.5	10	15	10	300

Glow Voltage at 10mA.....	~60V
Arc Voltage at 1A.....	~10V
Glow to Arc transition Current……..	~1A
Operation and storage temperature……..…..	-40~90°C
Climatic category (IEC60068-1)……..	40/090/21
Marking, Black……	**RUILON** **xxx B X** xxx -Nominal voltage B -Nominal Impulse Discharge Current X -Year of production
Weight……..	~2.15g
Surface treatment……...……	DIP -Nickel Plated SMD -Matte-tin plated

1) At delivery AQL 0.65 level II, DIN ISO 2859

2) In ionized mode

3) Tip or ring electrode to center electrode

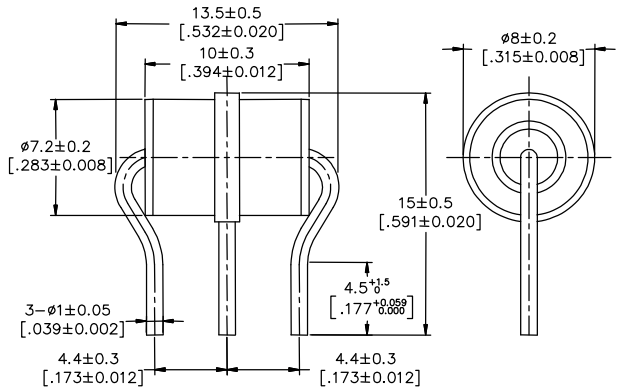
4) Insulation Resistance Measuring Voltage:
75V at DC 25V
90V~150V at DC 50V
Other at DC 100V

5) Total current through center electrode, half value through tip respectively ring electrode.

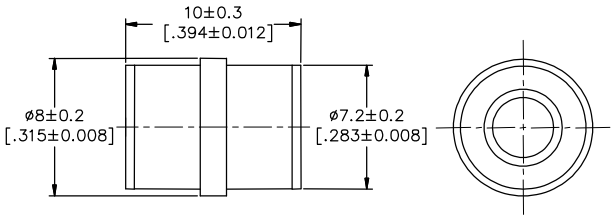
Terms in accordance with ITU-T Rec. K.12, IEC 61643-311, GB/T 9043.

Dimensions (Unit: mm/inch)

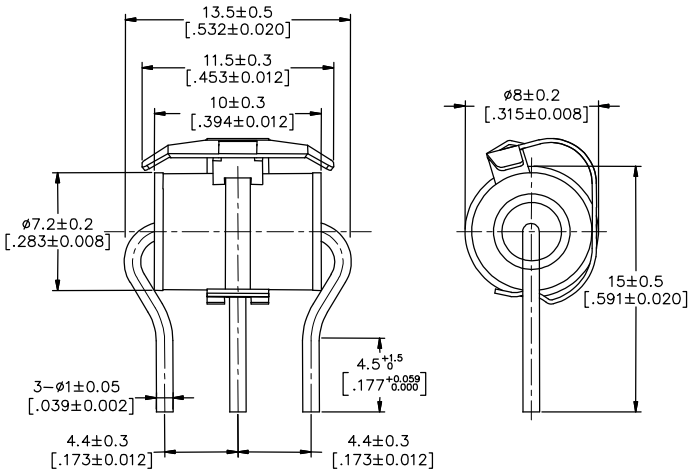
DIP Series (3RxxxTB-8)



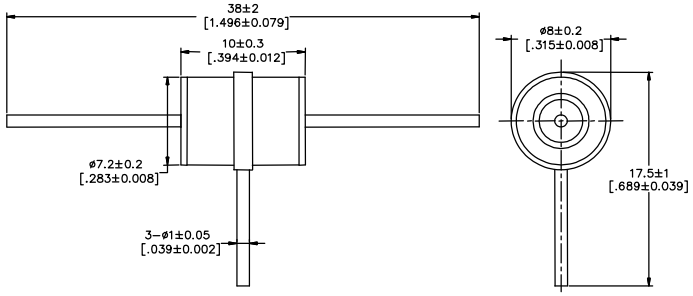
SMD Series (3RxxxSB-8)



DIP-F Series (3RxxxTB-8F)

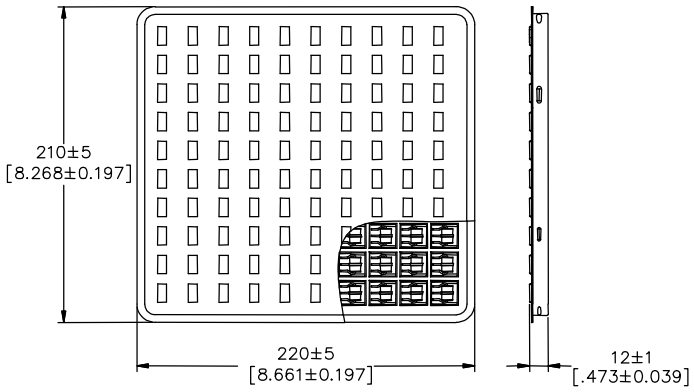


DIP-T Series (3RxxxTB-8T)

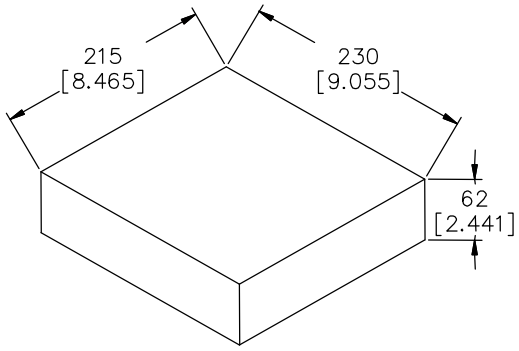


Packaging Information (Unit: mm/inch)

"DIP Series" and "DIP-F Series" Packaging (Bulk)

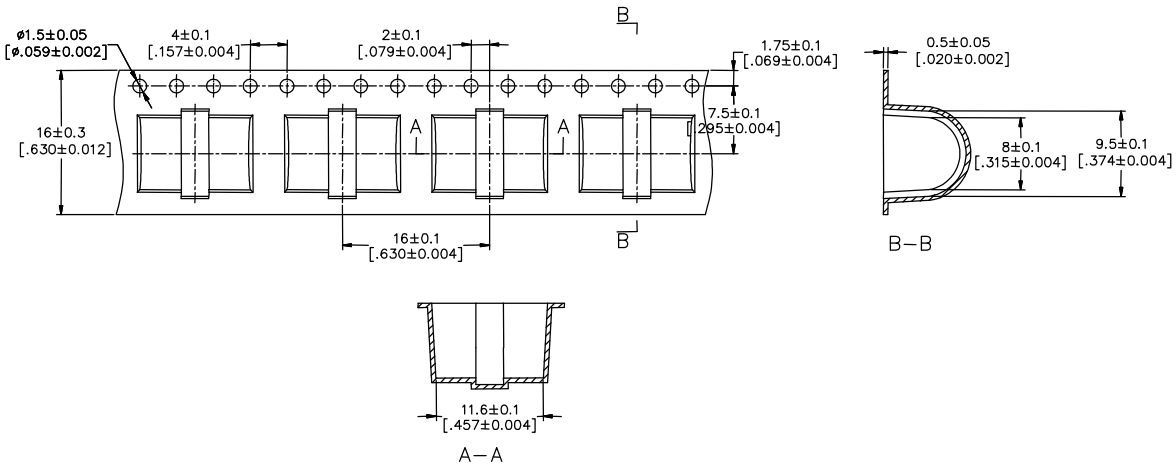


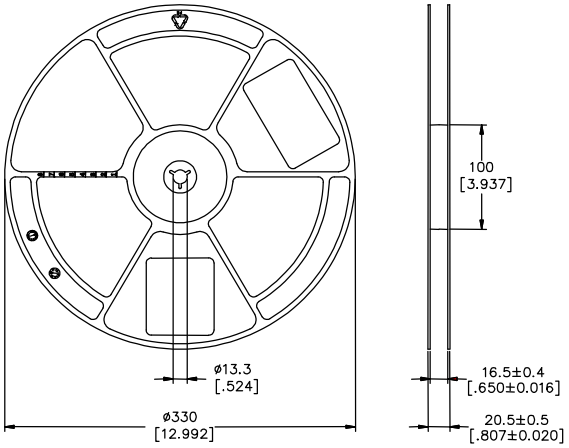
100PCS/ Plastic Tray



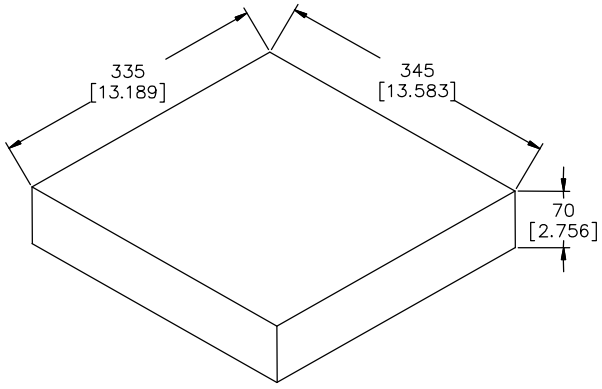
500PCS, 5 Plastic Trays / Inner Box

"SMD Series" Packaging (Tape & Reel)



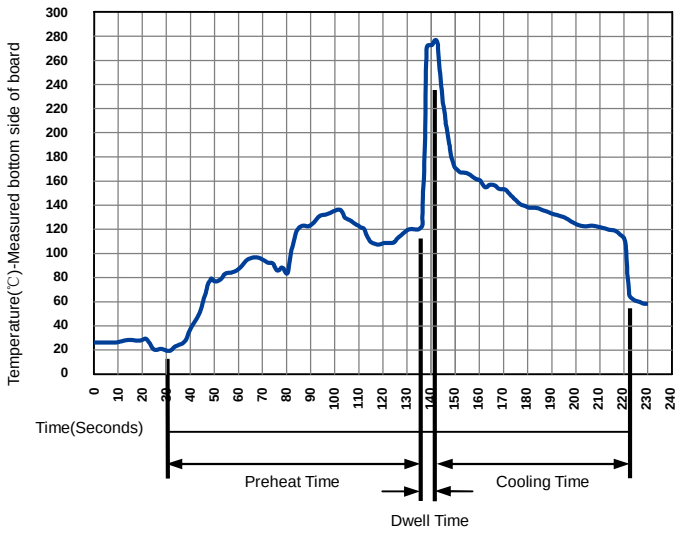


300PCS / Reel



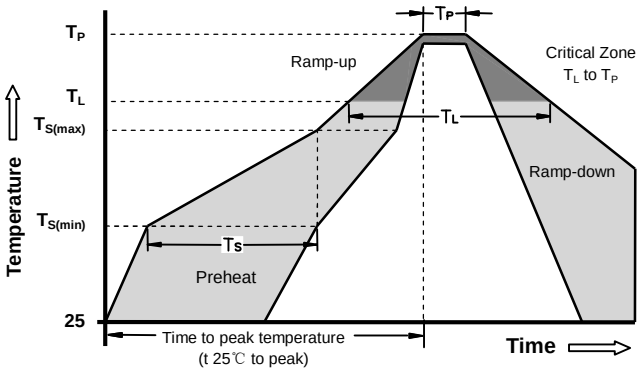
900PCS, 3 Reels / Inner Box

Soldering Parameters - Wave soldering (Thru-Hole Devices)



Wave Soldering Condition		Pb-Free assembly
Preheat	Temperature Min	100°C
	Temperature Max	150°C
	Time (Min to Max)	60-180 Seconds
Solder Pot Temperature		280°C Max
Solder Dwell Time		2-5 Seconds

Soldering Parameters - Reflow Soldering (Surface Mount Devices)



Reflow Condition		Pb - Free assembly
Preheat	-Temperature Min ($T_{s(min)}$)	150°C
	-Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 -180 Seconds
Average ramp up rate (Liquids Temp T_L) to peak		3°C/second max
$T_{S(max)}$ to TL - Ramp-up Rate		5°C/second max
Reflow	- Temperature (T_L) (Liquids)	217°C
	- Time (min to max) (t_s)	60 -150 Seconds
Peak Temperature (T_P)		260 +0/-5°C
Time within 5°C of actual peak Temperature (t_p)		10 - 30 Seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max
Do not exceed		260°C

Unikeyic Electronics

Global Electronic Components Distributor

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RUILON:

RLVR240-100 SMD0805P075TF 10D820K RL0603E005M500K RLVR240-012 RLVR240-200 SMD1812P125TF 1.5KE36CA ES2D NTC12D-7 P6KE100A RL60-185 RLST23A032V SMD3216-400N GR5M 20D561K SMD1812P030TF SMFJ30A 5KP36A RL30-200 RLSO8A2.84LV SMD1206P035TF SMD1210P075TF SMD1812P300TF/16 5KP24CA RL0603E005M100K RL16-600 RLM102-201M 10D102K 14D390K