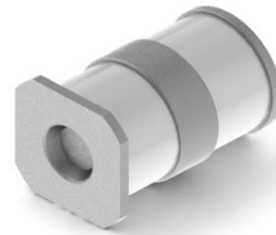


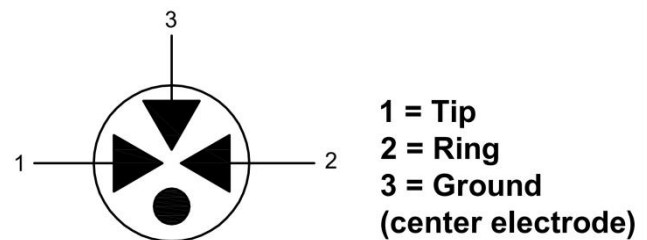
### Features

- Features non radioactive
- SMD type
- Low capacitance ( $\leq 1.0\text{pF}$ )
- High insulation resistance
- Size 5x7.6
- Storage and operating temperature:  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Material: RoHS compliant



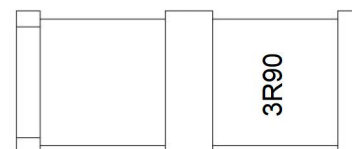
### Applications

- Communication industry
- Video surveillance
- Outdoor lighting igniter
- Signal line protection
- Signal line protection
- Civil circuit appliances



Marking: 3R90

Color: Blue



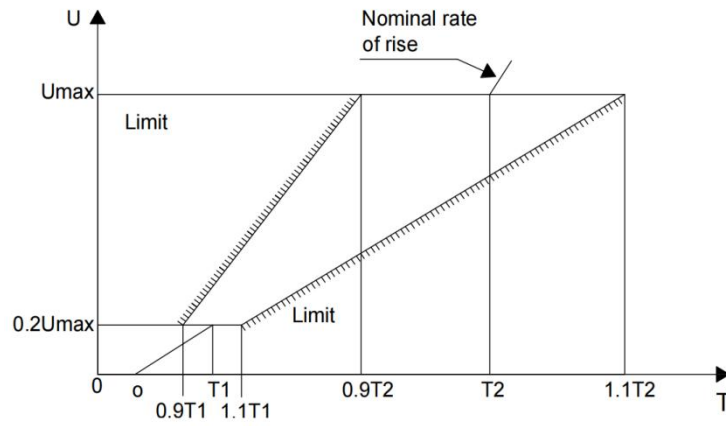
### Electrical Characteristics

Part Number	DC Spark-over Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20 $\mu\text{s}$ )	AC Discharge Current	Impulse Life (10/1000 $\mu\text{s}$ )	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/ $\mu\text{s}$	10 times	50Hz, 1S	100A	Test Voltage DC(V)	(G $\Omega$ )	(pF)
	V	V	KA	A	Times			
3R090-5S	90 $\pm$ 30%	600	5	5.0	300	50	1.0	1.0

#### 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

## DC Breakdown Voltage



8/20μs, Test wave

10/700μs, Test wave

10/1000μs, Test wave

T<sub>1</sub>=1.25T=8μs±20%

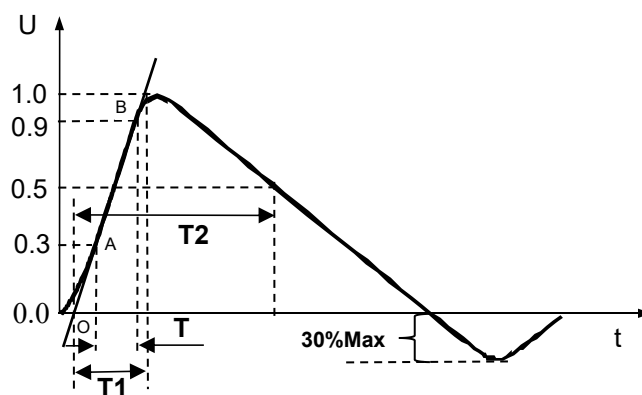
T<sub>1</sub>=1.67T=10μs±20%

T<sub>1</sub>=1.67T=10μs±20%

T<sub>2</sub>=20μs±20%

T<sub>2</sub>=700μs±20%

T<sub>2</sub>=1000μs±20%

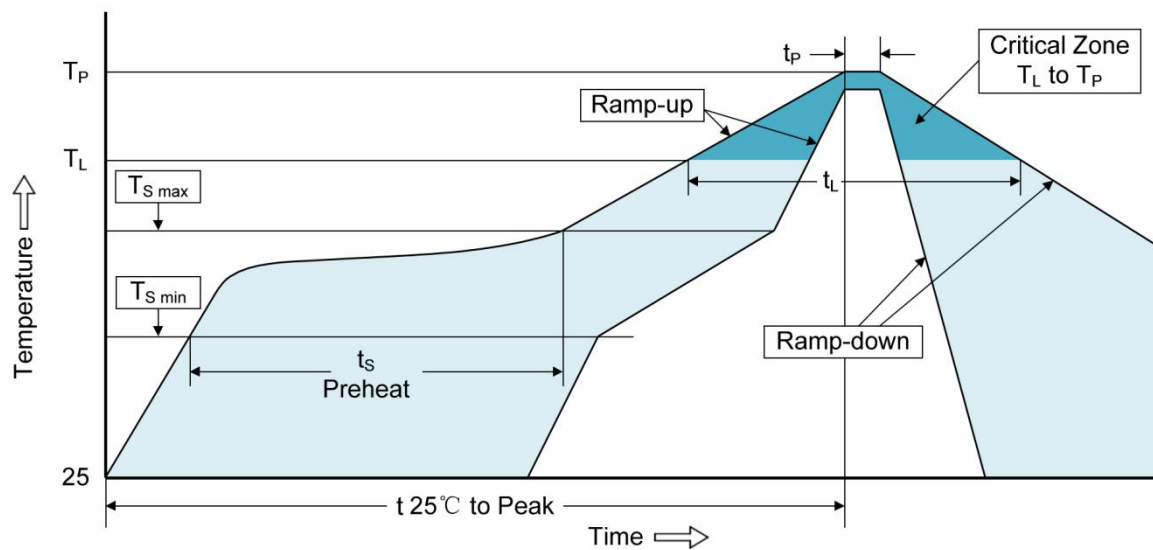


## Recommended Soldering Conditions

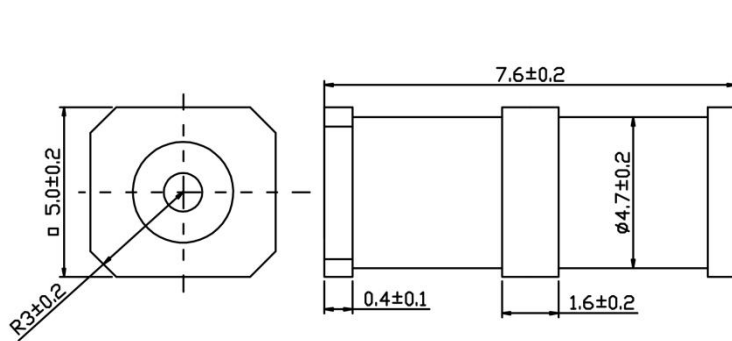
### ■ Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate ( $T_L$ to $T_P$ )	3°C/second max.
Preheat -Temperature Min ( $T_S$ min) -Temperature Max ( $T_S$ max) -Time (min to max) ( $t_s$ )	150°C 200°C 60-180 seconds
$T_S$ max to $T_L$ -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature ( $T_L$ ) -Time ( $t_L$ )	217°C 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.

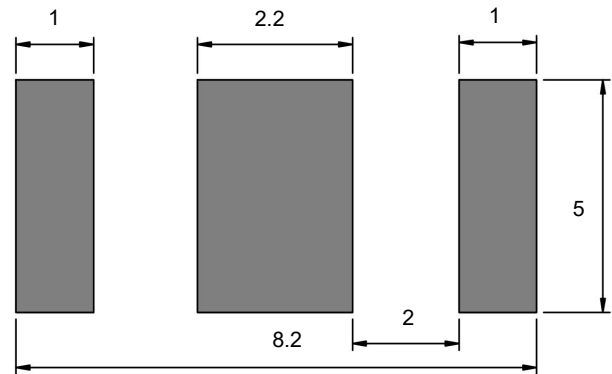
### ■ Reflow Soldering



Dimensions (unit: mm)

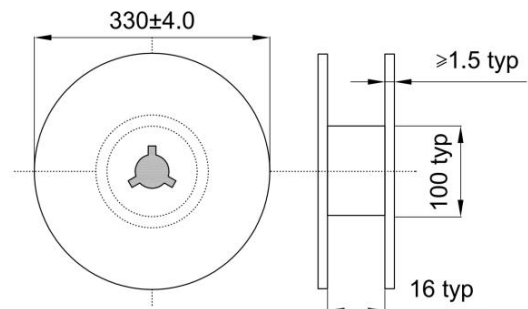


Tin-plated



Recommended Pad Size

Quantity: 1000pcs/reel  
Color: Dark Blue



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