

Cylindrical Ultra High Ohmic  
Resistors, Thick film, Non-Inductive

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## Ultra High Ohmic High Voltage High Frequency Resistors GΩ,TΩ

3RLAB offers UR - series to Ultra High Ohmic of requirements at reasonable prices,  
An epoxy conformal coat , which is very good humidity protection , good Voltage of Coefficient.

## UR Precision High OHmic Resistor, the main usage ;

UR-series of resistors are desinged to help provide current pulse limiting, detection of trickle current .

Tolerance : 0.5% 1% 2% 5% 10%

\* Resistance rating : 1GΩ to 100TΩ

\* NCR design : Non-contact resistance design between resistives and termination cap ,there is 3RLab's unique of conductive pad.

Model Nr.	1) Wattage	2) Max. Continuous Oper. Volt[kV]	**Impulse Voltage 1.2/50μSec	Resistance [ ohm ] Min. Max.	SMD type	Dimensions in millimeters (inches)		
						A	B	C
UR1	0.5	2.0	4.0	0.7G 50G	N/A	15+/-1.5 (.590)	5.0+/-1.5 (.197)	0.8
UR1.7	0.7	5.0	10.0	0.7G 1T	N/A	25.4+/-1.5 (1.0)	5.0+/-1.5 (.197)	0.8
UR2	1.0	5.0	10.0	0.7G 1T	available	24.0+/-1.5 (.944)	8.0+/-1.0 (.314)	1.0
UR2.5	1.5	10.0	20.0	1G 10T	available	39.0+/-1.5 (1.50)	8.0+/-1.0 (.314)	1.0
UR3	2.0	12.0	24.0	1G 10T	available	52.0+/-1.5 (2.04)	8.0+/-1.0 (.314)	1.0

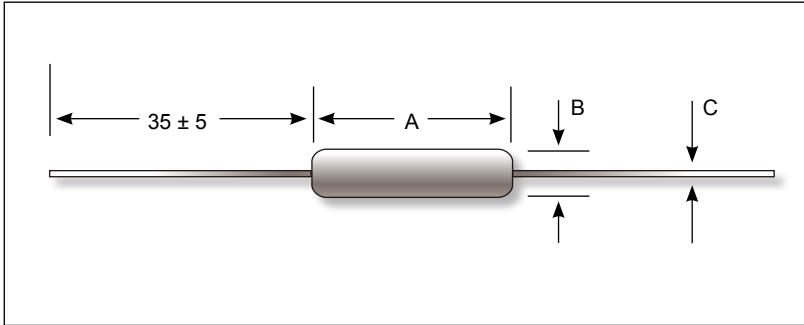
+ Custom dimension & Ohmic Value available upon request (100TΩ available on UR3 as custom requirement)

1) wattage in 25 °C

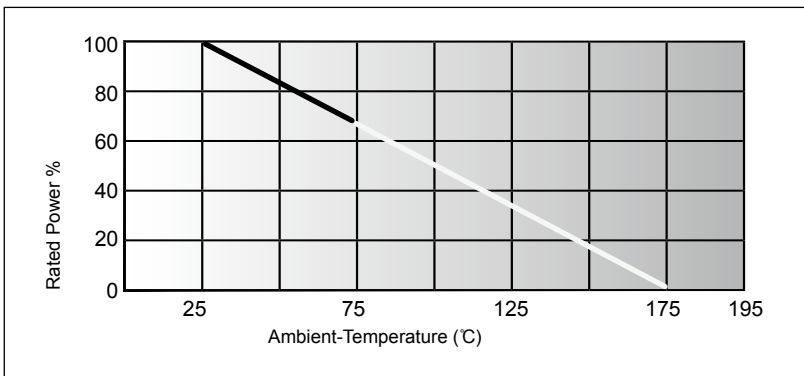
2) Vdc, Vrms

\*\* Single impulse standard

## DIMENSIONS [mm]



## DERATING CURVE



## SPECIFICATIONS

### Endurable Harsh to Environment

#### (Temperature) :

-55°C to +195°C Max.  
broken temperature of  
resistives is 600°C (for 70min.)

#### Thermal Shock :

Mil-Std-202, Method- 107, Cond.  
C, ΔR 0.50% max.

#### Load Life :

1.000 hours at rated power ΔR 0.7% max.

#### Insulation Resistance :

10,000MΩ Min.

#### Cap & Lead of Material:

Tinned Cap., tinned copper wire

#### Encapsulation :

Anti-humidity Epoxy conformal.coat

#### Resistive Material :

Thick Film.

Contact method between Resistives and

#### Termination Caps :

Individual Conductive Pads .

So , called "NCR" Non-contact resistance.

<b>Temperature Coefficient</b>	R-Range	1GΩ to 9GΩ	10GΩ to 300GΩ	400GΩ to 1TΩ	1.1TΩ to 10TΩ		ΔR taken at 25°C and 70°C
	[ppm/°C]	200	300	1000	1500		
<b>Voltage Coefficient</b>	R-Range	10GΩ to 19GΩ	20GΩ to 100GΩ	200GΩ to 1TΩ	10TΩ		Measured at 100vdc and 1000vdc
	VCR	0.002%/V	0.007%/V	0.01%/V	0.05%/V		
<b>Resistance Tolerance [%]</b>	R-Range	1GΩ	2GΩ ~10GΩ	20GΩ ~ 100GΩ	200GΩ~1TΩ	10TΩ	Measured at 1000vdc Standard
	Std.	+/-1%(F)	+/-2%(G)	+/-5%(J)	+/-10%(K)	+/-20%	
	Custom	+/-0.5	+/-1%	+/-2%	+/-5%	+/-10%	

cf.: The described specifications & dimensions subject to change without notice.