

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

3RLAB offers UR series for ultra high ohmic at reasonable prices  
Epoxy conformal coatings have very good humidity protection and voltage of coefficient.

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

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

Resistance tolerance: 0.5%, 1%, 2%, 5%, 10%, 20%

\* 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	**Max. Continuous Oper. Volt[kV]	Impulse Voltage[kV] 1.2/50uS	Resistance [ohm]		SMD type	Dimensions in millimeters (inches)		
				Min.	Max.		A	B	C
UR1	0.5	2	4	0.7G	50G	N/A	15.0+/-1.5 (0.590)	5.0+/-1.5 (0.197)	0.8
UR1.7	0.7	5	10	0.7G	1T	N/A	25.4+/-1.5 (0.984)	5.0+/-1.5 (0.197)	0.8
UR2	1.0	5	10	0.7G	1T	available	24.0+/-1.5 (0.940)	8.0+/-1.0 (0.314)	1.0
UR2.5	1.5	10	20	1.0G	10T	available	39.0+/-1.5 (1.535)	8.0+/-1.0 (0.314)	1.0
UR3	2.0	12	24	1.0G	10T	available	52.0+/-1.5 (2.047)	8.0+/-1.0 (0.314)	1.0

+ Custom dimensions & Ohmic Values available upon request (100TΩ available on UR3 as a custom requirement)

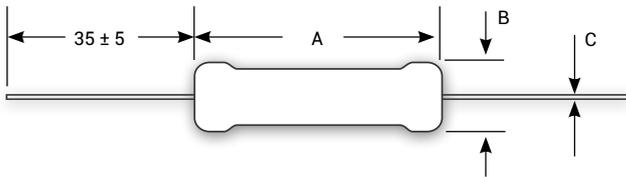
1) Wattage at 25 °C.

2) Vdc, Vrms.

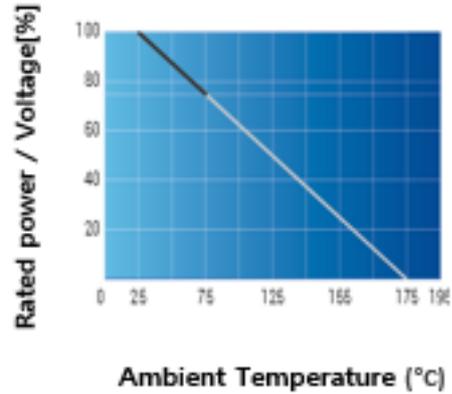
\*\* Single impulse standard.

Temperature Coefficient	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		
Voltage Coefficient	R-Range	10GΩ to 19GΩ	20GΩ to 100GΩ	200GΩ to 1TΩ	10TΩ		Measured at 100Vdc and 1000Vdc
	[%/V]	0.002	0.007	0.01	0.05		
Resistance Tolerance	R-Range	1GΩ	2GΩ to 10GΩ	20GΩ to 100GΩ	200GΩ to 1TΩ	10TΩ	Measured at 1000Vdc Standard
	Std.	+/-1%	+/-2%	+/-5%	+/-10%	+/-20%	
	Custom	+/-0.5%	+/-1%	+/-2%	+/-5%	+/-10%	

## DIMENSIONS [mm]



## DERATING CURVE



## SPECIFICATIONS

HARSH ENVIRONMENT ENDURANCE (TEMPERATURE)	-55°C to +195°C Max. Resistance breaks down at temperature of 600°C. (for 70 mins)
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.
TERMINATION CAP OF MATERIAL	Tinned Cap, tinned copper wire
ENCAPSULATION	Anti-humidity Epoxy conformal coating
RESISTIVE MATERIAL	Thick Film
CONTACT METHOD BETWEEN RESISTIVES AND TERMINATION CAPS	Individual Conductive Pad called "NCR" Non-contact resistance

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