

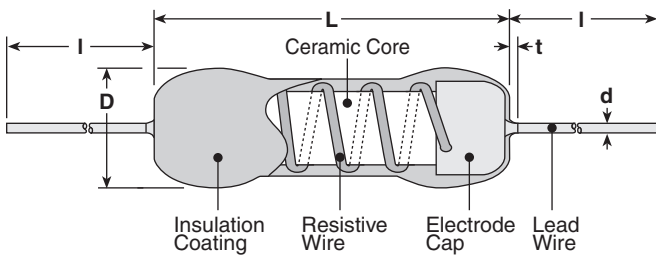
## coat insulated miniature precision power wirewound resistors



### features

- Resistors meeting MIL-R-26E (U and V characteristics) and surface temperature (hot spot) 350°C max.
- Resistors with a wide range of 0.1Ω ~ 62kΩ, covering applications from precision to power
- RW□N type resistors are non-inductive wound and can be used in high frequency applications.
- Marking: Black body color with alpha-numeric marking
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

### dimensions and construction



Type	Dimensions inches (mm)			
	L	D	d (nom.)	I
RW1/2, RW1/2N	.315±.039 (8.0±1.0)	.138 <sup>+.039</sup> <sub>-0</sub> (1.6 <sup>+1.0</sup> <sub>-0</sub> )	.020 (0.5)	1.50±.118 (38.0±3.0)
RW1, RW1N	.413±.039 (10.5±1.0)	.106±.039 (2.7±1.0)		
RW2, RW2N	.512±.039 (13.0±1.0)	.205±.039 (5.2±1.0)	.031 (0.8)	
RW3, RW3N	.650±.039 (16.5±1.0)	.252±.039 (6.4±1.0)		
RW5, RW5N	.866±.039 (22±1.0)	.307±.059 (7.8±1.5)	.039 (1.0)	
RW7, RW7N	1.24±.039 (31.5±1.0)			
RW10, RW10N	1.81±.059 (46.0±1.5)	.366±.089 (9.3±1.5)		

### ordering information

Pb Free Type

<b>RW</b>	<b>1/2</b>	<b>N</b>	<b>T</b>	<b>103</b>	<b>J</b>
Type	Power Rating	Winding Method	Termination Material	Nominal Resistance	Tolerance
	1/2: 0.5W 1: 1W 2: 2W 3: 3W 5: 5W 7: 7W 10: 10W	Nil: Standard winding N: Non-inductive winding	T: Sn	±3%, ±5%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω ±0.5%, ±1%: 3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω	D: ±0.5% F: ±1% H: ±3% J: ±5%

Packaging quantity:  
RW1/2 ~ RW1: 1,000 pieces  
RW2 ~ RW7: 500 pieces  
RW10: 300 pieces

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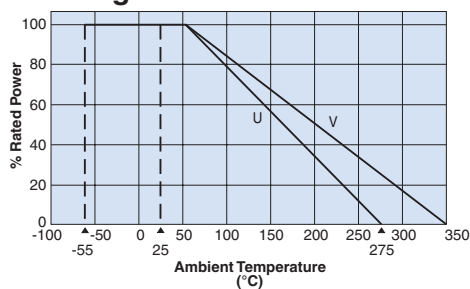
### applications and ratings

Part Designation	Power Rating		Resistance Range ( $\Omega$ )				T.C.R. (ppm/ $^{\circ}$ C)	Max. Working Voltage	Max. Overload Voltage
	U	V	D $\pm$ 0.5% (E96)	F $\pm$ 1% (E96)	H $\pm$ 3% (E24)	J $\pm$ 5% (E24)			
RW1/2	0.5W	—	10 - 2.61k	10 - 2.61k	0.47 - 2.7k	0.47 - 2.7k	$\pm$ 20:R $\geq$ 10 $\Omega$ $\pm$ 50:1 $\Omega$ $\leq$ R <10 $\Omega$ $\pm$ 90:R<1 $\Omega$	80V	150V
RW1/2N			—	10 - 2.37k	10 - 2.4k	10 - 2.4k			
RW1	1.0W	—	1 - 5.11k	1 - 5.11k	0.1 - 5.1k	0.1 - 5.1k		130V	300V
RW1N			—	10 - 3.74k	10 - 3.6k	10 - 3.6k			
RW2	2.0W	3.0W	1 - 10k	1 - 10k	0.1 - 10k	0.1 - 10k		140V	500V
RW2N			—	15 - 10k	10 - 10k	10 - 10k			
RW3	3.0W	5.0W	1 - 15k	1 - 15k	0.1 - 15k	0.1 - 15k		200V	600V
RW3N			—	15 - 15k	15 - 15k	15 - 15k			
RW5	5.0W	7.0W	1 - 30.1k	1 - 30.1k	0.1 - 30k	0.1 - 30k		400V	700V
RW5N			—	20 - 29.4k	20 - 30k	20 - 30k			
RW7	7.0W	10W	1 - 45.3k	1 - 45.3k	0.1 - 47k	0.1 - 47k	600V	800V	
RW7N			—	36 - 44.2k	36 - 43k	36 - 43k			
RW10	10W	14W	1 - 60.4k	1 - 60.4k	0.1 - 62k	0.1 - 62k	1000V	1500V	
RW10N			—	62 - 49.9k	62 - 51k	62 - 51k			

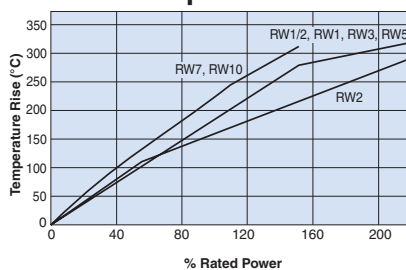
Operating Temperature Range: Characteristic U: -55 $^{\circ}$ C ~ +275 $^{\circ}$ C, V: -55 $^{\circ}$ C ~ +350 $^{\circ}$ C

### environmental applications

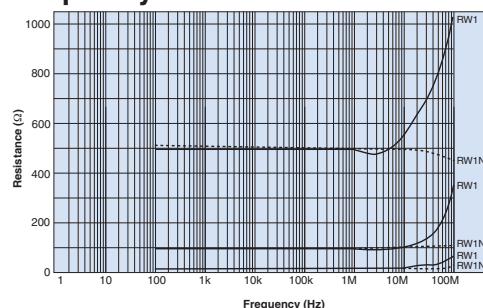
#### Derating Curve



#### Surface Temperature Rise



#### Frequency Characteristics



### Performance Characteristics

Parameter	Requirement $\Delta R \pm$ (% + 0.05 $\Omega$ )	Test Method
Resistance	Within regulated tolerance	25 $^{\circ}$ C
T.C.R.	Within specified T.C.R.	U: +25 $^{\circ}$ C/-55 $^{\circ}$ C, +25 $^{\circ}$ C/+125 $^{\circ}$ C and +25 $^{\circ}$ C/+275 $^{\circ}$ C V: +25 $^{\circ}$ C/-55 $^{\circ}$ C, +25 $^{\circ}$ C/+125 $^{\circ}$ C and +25 $^{\circ}$ C/+350 $^{\circ}$ C
Overload (Short time)	0.2: U	Rated power x 5 or Max. overload voltage, whichever is lower for 5 seconds
	2: V	Rated power x 10 or Max. overload voltage, whichever is lower for 5 seconds
Resistance to Solder Heat	0.1	350 $^{\circ}$ C $\pm$ 10 $^{\circ}$ C, 3 seconds $\pm$ 0.5 seconds or 260 $^{\circ}$ C $\pm$ 5 $^{\circ}$ C, 10 seconds $\pm$ 1 second
Moisture Resistance	0.2: U 2: V	Power rating x 1/10, 40 $^{\circ}$ C, 90 - 95% RH, 1000 hours, 1.5 hr ON/0.5 hr OFF cycle
Endurance @ 25 $^{\circ}$ C	0.5: U 3: V	25 $^{\circ}$ C, 2000 hours 1.5 hr ON/0.5 hr OFF cycle
	High Temperature Exposure	0.2: U
2: V		350 $^{\circ}$ C $^{+5}_{-0}$ , 250 hours