

ARC2 High Voltage Precision Resistors



Designed for applications such as voltage dividers, medical and measuring equipment, electrostatic and current limiting devices where high stability, low TCR and high ohmic values are required

- Non Inductive, Thick Film
- Low TCR
- RoHS Compliant
- High Voltage to 54 kVdc
- Tolerance as low as $\pm 0.1\%$



Characteristics

Operating temperature:	-55°C to +225°C	
Tolerance (Code):	$\pm 0.1\%$ (B), $\pm 0.25\%$ (C), $\pm 0.5\%$ (D), $\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J), $\pm 10\%$ (K)	
Temperature Coefficient (Code):	$\pm 15\text{ppm}/^\circ\text{C}$ (A), $\pm 25\text{ppm}/^\circ\text{C}$ (E), $\pm 50\text{ppm}/^\circ\text{C}$ (F), $\pm 100\text{ppm}/^\circ\text{C}$ (S), $\pm 200\text{ppm}/^\circ\text{C}$ (L)	
	TCR stated is measure at +25°C and +85°C. For TCR outside this range, please contact ARCOL	
Insulation resistance:	> 10,000Mohm	500 Volts @ 25°C, 75% relative humidity
Dielectric strength:	> 1000 Volt	25°C, 75% relative humidity
Thermal shock:	$\Delta R/R$ 0.25% max	
Overload:	$\Delta R/R$ 0.25% max	1.5 x Pnom, 5 sec (do not exceed 1.5 x V max)
Moisture resistance:	$\Delta R/R$ 0.25% max	
Load life:	$\Delta R/R$ 0.5%, max	1000 hours at rated power

These resistors are tailored for operation in air and not aggressive atmospheres. For special applications (i.e. oil, casting, moulding, etc) please contact ARCOL.

Electrical Specifications

Type	Electrical data					
	P 40°C Watt	U kVdc	$\pm 0.1 - 5\%$ 15ppm/°C 25 ppm/°C	$\pm 0.25 - 10\%$ 50 ppm/°C	$\pm 0.5 - 10\%$ 100 ppm/°C	$\pm 1 - 10\%$ 200 ppm/°C
ARC2-2	3.8	9	60K - 50M	400R-1G	400R-1G	400R-10G
ARC2-3	5	12	80K-750M	500R-1G5	500R-1G5	500R-15G
ARC2-5	7.5	18	120K-1G	900R-2G	900R-2G	900R-20G
ARC2-7	10	24	180K-1G5	1K2-3G	1K2-3G	1K2-30G
ARC2-10	12.5	36	240K-2G	1K7-3G	1K7-4G	1K7-30G
ARC2-12	15	42	300K-2G	2K6-3G	2K6-5G	2K6-30G
ARC2-15	17	54	350K-2G	3K2-3G	3K2-6G	3K2-30G

For more information and ordering, please consult
www.arcolresistors.com

ARC2 High Voltage Precision Resistors



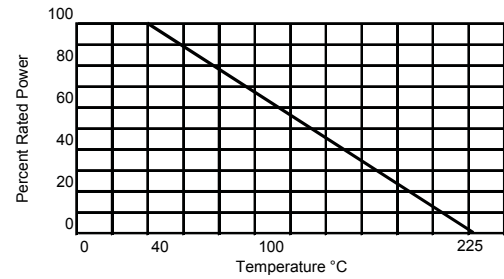
Ordering Procedure

Standard Resistor To specify standard: Series, Termination Style, Coating Type, Ohmic Value, Tolerance Code and Temperature Coefficient Code, e.g.: ARC2-3 20M D F

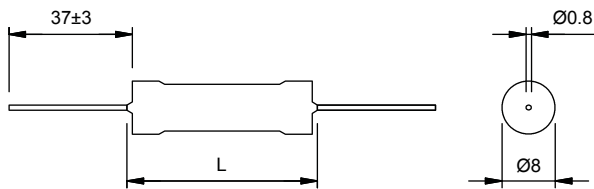
Tolerance (Code) $\pm 0.1\%$ (B), $\pm 0.25\%$ (C), $\pm 0.5\%$ (D), $\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J), $\pm 10\%$ (K)

Temperature Coefficient (Code) $\pm 15\text{ppm}/^\circ\text{C}$ (A), $\pm 25\text{ppm}/^\circ\text{C}$ (E), $\pm 50\text{ppm}/^\circ\text{C}$ (F), $\pm 100\text{ppm}/^\circ\text{C}$ (S), $\pm 200\text{ppm}/^\circ\text{C}$ (L)

Derating Curve



Dimensions (mm)



Type	L
ARC2-2	27 ± 1
ARC2-3	37 ± 1
ARC2-5	52 ± 1
ARC2-7	78 ± 1.5
ARC2-10	103 ± 1.5
ARC2-12	128 ± 2
ARC2-15	153 ± 2

Designed for applications such as voltage dividers, medical and measuring equipment, electrostatic and current limiting devices where high stability, low TCR and high ohmic values are required.

- Non Inductive, Thick Film
- Low TCR
- RoHS Compliant
- High Voltage to 96 kVdc
- Tolerance as low as $\pm 0.1\%$



Characteristics

Operating temperature:	-55°C to +225°C	
Tolerance (Code):	$\pm 0.1\%$ (B), $\pm 0.25\%$ (C), $\pm 0.5\%$ (D), $\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J), $\pm 10\%$ (K)	
Temperature Coefficient (Code):	$\pm 15\text{ppm}/^\circ\text{C}$ (A), $\pm 25\text{ppm}/^\circ\text{C}$ (E), $\pm 50\text{ppm}/^\circ\text{C}$ (F), $\pm 100\text{ppm}/^\circ\text{C}$ (S), $\pm 200\text{ppm}/^\circ\text{C}$ (L)	
	TCR stated is measure at +25°C and +85°C. For TCR outside this range, please contact ARCOL	
Insulation resistance:	> 10,000Mohm	500 Volts @ 25°C, 75% relative humidity
Dielectric strength:	> 1000 Volt	25°C, 75% relative humidity
Thermal shock:	$\Delta R/R$ 0.25% max	
Overload:	$\Delta R/R$ 0.25% max	1.5 x Pnom, 5 sec (do not exceed 1.5 x V max)
Moisture resistance:	$\Delta R/R$ 0.25% max	
Load life:	$\Delta R/R$ 0.5% max	1000 hours at rated load

Conformal silicone coating as standard for operation in air. For oil and potted applications, ARCOL would suggest polyimide coating. Please contact ARCOL for further details.

Electrical Specifications

Type	Electrical data		Resistance range available at Tolerance / TCR					
	P Watt 40°C	U kV dc	$\pm 0.1\text{-}10\%$ 15 ppm/°C	$\pm 0.1\text{-}10\%$ 25 ppm/°C	$\pm 0.5\text{-}10\%$ 50 ppm/°C	$\pm 0.5\text{-}10\%$ 100 ppm/°C	$\pm 2\text{-}10\%$ 150 ppm/°C	$\pm 2\text{-}10\%$ 200 ppm/°C
ARC3-11	11	24	50K-500M	50K-500M	500R-1G	500R-1G	500R-5G	500R-5G
ARC3-23	23	48	100K-1G	100K-1G	700R-1G	700R-1G	700R-10G	700R-10G
ARC3-54	54	48	100K-1G	100K-1G	2R-1G	2R-1G	2R-10G	2R-10G
ARC3-71	71	64	100K-1G5	100K-1G5	20R-1G5	20R-1G5	20R-15G	20R-15G
ARC3-105	105	96	150K-2G	150K-2G	80R-2G	80R-2G	80R-25G	80R-25G

ARCOL UK Limited,
Threemilestone Ind. Estate,
Truro, Cornwall, TR4 9LG, UK.
T +44 (0) 1872 277431
F +44 (0) 1872 222002
E sales@arcolresistors.com

www.arcolresistors.com

The information contained herein does not form part of a contract and is subject to change without notice. ARCOL operate a policy of continual product development, therefore, specifications may change.

It is the responsibility of the customer to ensure that the component selected from our range is suitable for the intended application. If in doubt please ask ARCOL.

Ordering Procedure

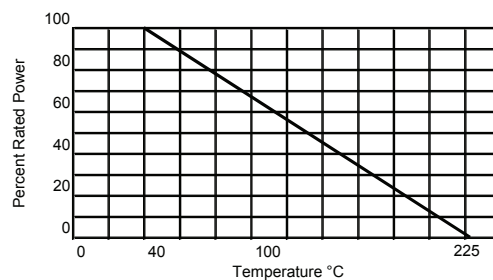
Standard Resistor To specify standard: Series, Termination Style, Coating Type, Ohmic Value, Tolerance Code and Temperature Coefficient Code, e.g.: ARC3-23 20M D E

Tolerance (Code) $\pm 0.1\%$ (B), $\pm 0.25\%$ (C), $\pm 0.5\%$ (D), $\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J), $\pm 10\%$ (K)

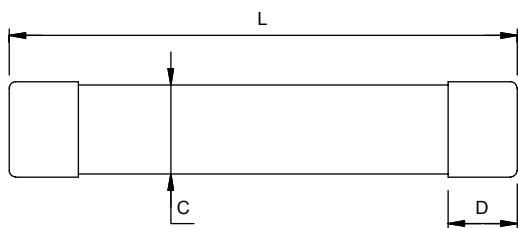
Temperature Coefficient (Code) $\pm 15\text{ppm}/^\circ\text{C}$ (A), $\pm 25\text{ppm}/^\circ\text{C}$ (E), $\pm 50\text{ppm}/^\circ\text{C}$ (F), $\pm 100\text{ppm}/^\circ\text{C}$ (S), $\pm 200\text{ppm}/^\circ\text{C}$ (L)

For Polyimide coating add DP: e.g.: ARC3-23 DP 20M D E

Derating Curve



Dimensions (mm)



Type	L	B	C	D	G
ARC3-11	81 ± 1	14.5 ± 0.2	13.5 ± 0.5	10.0 ± 0.2	M4
ARC3-23	156 ± 2	14.5 ± 0.2	13.5 ± 0.5	10.0 ± 0.2	M4
ARC3-54	160 ± 2	31.5 ± 0.2	30.5 ± 0.5	18.0 ± 0.2	M8
ARC3-71	210 ± 2.5	31.5 ± 0.2	30.5 ± 0.5	18.0 ± 0.2	M8
ARC3-105	308 ± 3.5	31.5 ± 0.2	30.5 ± 0.5	18.0 ± 0.2	M8