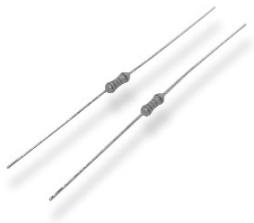
Type R Series



The resistive element comprises a thin film of nickel-chrome alloy evaporated onto a high thermal conductivity ceramic element. Metal end caps are force fitted to the element prior to spiralling to value. Tinned copper lead wires are welded to the end caps and the components are then coated. One coat of phenolic resin is followed by three coats of epoxy resin. All resistors are tested for value and tolerance.

Key Features

- **Precision metal film resistors with tolerance to 0.1% and temperature coefficients to 15ppm.**
- **Metal film resistors have excellent stability under load and severe environmental conditions. They exhibit very low noise current and voltage coefficients. Precision metal film resistors are particularly suitable in all applications where long-term stability is important.**

Characteristics - Electrical

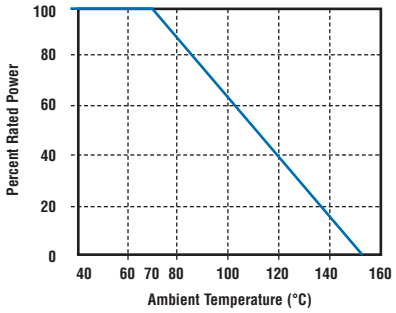
	YR8	ER8	CR8	YR1	ER1	CR1	YR2	ER2	CR2
Rated Power @ 70 °C (W)	0.125			0.25			0.5		
Resistance Range (ohms) Min	51R1			10R			10R		
Max	511K			1M0			1M0		
Tolerance (%)	0.1			0.25		0.5			
Code Letter	B			C		D			
Temperature Coefficient (ppm/°C)	± 15	± 25	± 50	± 15	± 25	± 50	± 15	± 25	± 50
Selection Series	E96								
Limiting Element Voltage - Nominal (V)	200			250			350		
Maximum Overload Voltage (V)	400			500			700		
Operating Temperature Range (°C)	-65 to +155								
Dielectric Strength (V)	500								
Insulation Resistance Min Dry (Mohms)	10,000								
Voltage Coefficient Max (ppm/V)	5								

Dimensions

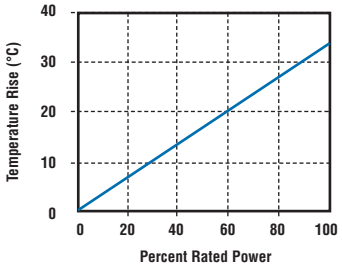
Style	L*	D	d nom
R8	3.3 ± 0.1	1.7 ± 0.2	0.45
R1	6.3 ± 0.3	2.3 ± 0.2	0.6
R2	9.5 ± 0.5	3.5 ± 0.5	0.6

* Length is measured in accordance with IEC 294

Derating Curve



Surface Temperature Vs Load



Mounting

The resistors are suitable for processing on automatic insertion equipment and cutting and bending machines.

Marking

The resistors are marked with a five-band colour code in accordance with IEC 62.

Packaging

R series colour coded resistors are normally supplied taped in 'ammo' boxes of 1000 pieces.
All tape specifications are in accordance with IEC286-1.

Performance Characteristics

Evaluation of the performance characteristics is carried out with reference to IEC specifications QC 400 000 and QC 400 100.

TEST REF	Long Term Tests ±(1% + 0.05 ohm)
4.23	Climatic sequence
4.24	Damp heat, steady state
4.25.1	Endurance at 70 °C
4.25.3	Endurance at 125 °C
TEST REF	**Short Term Tests ±(0.25% + 0.05 ohm)**
4.13	Overload
4.16	Robustness of terminations
4.18	Resistance to soldering heat
4.19	Rapid change of temperature
4.22	Vibration

How to Order

Orders for these components should include the following information:-
Type, tolerance code letter and value e.g. **YR1 B 24K3**