



METAL FILM, GENERAL PURPOSE RESISTORS

SPECIFICATIONS

CONSTRUCTION

These resistors are constructed by depositing a precisely controlled thin film of metal alloy on a high purity ceramic core. After fitting the end caps and wires, the resistor is coated to protect the construction from environmental influences. The resistor is marked with IEC five colour resistor code.

APPLICATIONS

Suitable for General Purpose and Semi-precision applications. The availability of close tolerance (0.1%) and low Temp. Coeff. (25ppm) makes these resistors a cost effective alternative to the Precision Range of resistors

PERFORMANCE

ELECTRICAL

Resistance range R22-10M
see table
Standard tolerance 5% - 0.1%
see table
Power rating 0.4 or 0.6 watt -see table
Derating linearly 70°C to 155°C(0W)
Maximum working voltage 200-350V
see table
Insulation Resistance >10⁴M Ω
Insulation voltage 500V Min
Nonlinearity 110db
Current Noise R<10k: -25db
R>10k: -25 +8db / decade

ENVIRONMENTAL

Temperature range -55°C to 155°C
Reliability <10 X 10⁻⁹ /hour(490)
<5 X 10⁻⁹ /hour(491)
Damp heat 0.5%
Climatic Category 55/155/56

MECHANICAL

Terminal strength 30 - 40N
see table
Leads Solder plated copper,
Solderability <2.5 secs
(solder globule test)
Marking: IEC 5 colour bands

		490	491-0
L1	mm	3.3 $\pm$ 0.4	6.3 $\pm$ 0.5
D	mm	1.8 $\pm$ 0.3	2.3 $\pm$ 0.3
d	mm	0.5 $\pm$ 0.02	0.6 $\pm$ 0.02
Power Rating P ₇₀	W	0.4	0.6
Max. Cont. working voltage	V _{rms}	200	350
Terminal tensile strength	N	>30	>40

PACKING DATA

Normal Taped5000pcs
(Tol 0.1%) Taped1000pcs

ORDERING DATA

Specify part number, resistance value and tolerance.
Example: 491-0 127K 0.1%

Type	Resistance Range	Tolerance [%]	Temp. coeff. [p.p.m./°C]	Preferred Values
490	1R0 - 5M1 10R - 1M0 51R1 - 332K	$\pm$ 1 $\pm$ 0.5 $\pm$ 0.1	$\pm$ 50 $\pm$ 50 $\pm$ 25	E96 E96 E96*
491	R22 - R91 1R0 - 10M 10R - 1M5 5R1 - 1M0	$\pm$ 5 $\pm$ 1 $\pm$ 0.5 $\pm$ 0.1	$\pm$ 200 $\pm$ 50 $\pm$ 50 $\pm$ 25	E24 E96/E24 E96 E96

series GP

Tolerance to 0.1%

Low TCR

Non-standard values available

