

# Ceramic Case Resistors – Wirewound / Metal Oxide

## SQP Series

- 2 watts to 20 watts\*
- Resistance 0R1 to 100K
- High overload capability
- RoHS compliant



## Electrical Data

		SQP2	SQP3	SQP5	SQP7/7S	SQP10	SQP15	SQP20
Power rating at 70°C	watts	2	3	5	7	10	15	20
Resistance range	<b>Wirewound</b>	0R1-50R	0R1-100R	0R1-100R	0R1-100R <b>(7 &amp; 7S)</b>	0R1-200R	0R1-200R	0R1-500R
	<b>Metal Oxide</b> (Ohms)	51R-47K	100R-47K	110R-47K	110R-47K <b>(7 Only)</b>	220R-68K	220R-68K	510R-100K
Limiting element voltage	volts dc or ac rms	150	300	350	500 <b>(7S-350)</b>	750	1000	1000
Thermal impedance	°C/watt	50	45	30	28	23	16	13
Isolation voltage	volts	1000						
TCR	ppm/°C	WW types, <0R68, 1700ppm; ≥0R68, 200ppm: MO types all values 350ppm						
Resistance Tolerance	%	5(J)						
Standard Values		E24 preferred						
Ambient temperature range	°C	-55 to +155°C						

\* Other styles (radial/pluggable); sizes, and 30, 40, 50 W types are available to special order.

## Physical Data

Dimensions (mm) and weight (g)						
Type	L max.	W max.	H max.	f min.	d (±0.1)	Wt. nom.
SQP2	19	8	8	23	0.70	2.2
SQP3	23	9	9	27	0.70	3.5
SQP5	23	11	10	27	0.75	5.0
SQP7	36	11	10	30	0.75	8.2
SQP7S	26	10	10	30	0.75	6.0
SQP10	50	11	11	30	0.75	11.0
SQP15	50	13.5	13.5	30	0.75	17.4
SQP20	61	15.5	14.5	30	0.75	25.0

## Packaging

Our standard packaging for SQP Series is bulk pack

### General Note

TT electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT electronics' own data and is considered accurate at time of going to print.

**Construction**

A high purity ceramic rod, with force fit end caps onto which is wound a wire element: or a deposited metal oxide film (depending on value). The element is fitted into a ceramic case with fireproof insulation cement.

**Termination Details**

**Material** The tinned copper lead wires are internally welded to the resistance element end caps.

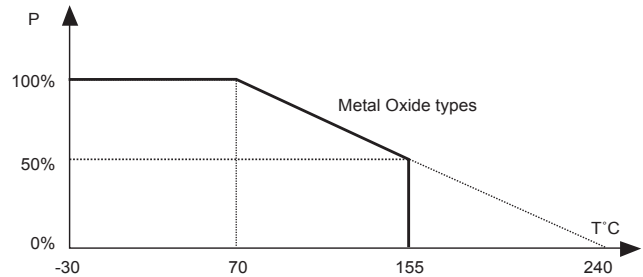
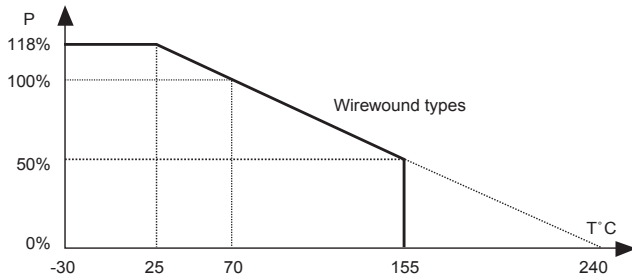
**Solderability** The terminations meet the requirements of IEC 115-1 Clause 4.17.3.2

**Strength** The terminations meet the requirements of IEC 86.2.21

**Performance Data**

		Maximum
Load at rated power (1000hrs at 70°C)	ΔR%	5% +0.05Ω
Derating from rated power at 70° C		See Graph
Short term overload *	ΔR%	2% +0.05Ω
Damp heat steady state (56 days, 40°C, ≥90% RH)	ΔR%	2% +0.05Ω
Temperature rapid change	ΔR%	2% +0.05Ω
Resistance to solder heat	ΔR%	1% +0.05Ω
Pulse handling		Data available by request

\*(Wirewound:: the lower of 5x rated power, or 2.5x LEV for 5 secs. Metal Oxide:: the lower of 6.25x rated power, or 2.5x LEV for 5 secs)



**Marking**

Type reference, resistance value and tolerance are legend marked onto the upper surface.

**Flammability**

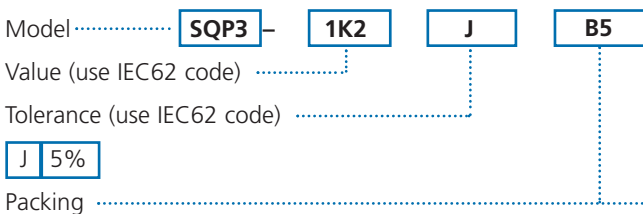
The resistor will not burn or emit incandescent particles under any condition of applied temperature or overload.

**Solvent resistance**

The body protection and marking are resistant to all normal industrial solvents suitable for printed circuits.

**Ordering Procedure**

Example: 5,000 SQP3 at 1.2 kilohms and 5% tolerance in standard bulk pack option-



CODE		Family	Qty/ Carton
B5		SQP2,3,5	5000
B15	Bulk	SQP7,10	1500
B1	Pack	SQP15,20	1000

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