Ceramic Case Resistors – Wirewound / Metal Oxide

TT electronics
Welwyn Components

SQP Series

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



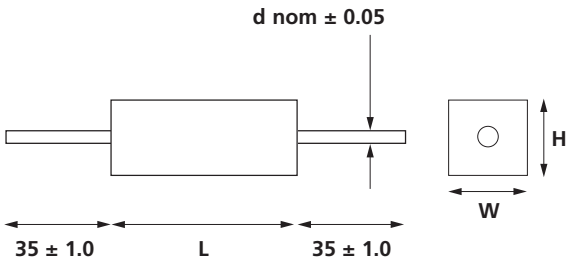
Electrical Data

		SQP2	SQP3	SQP5	SQP7/7S	SQP10	SQP15	SQP20
Power rating at 70˚C	watts	2	3	5	7	10	15	20
Resistance range	**Wirewound**	0R1-50R	0R1-100R	0R1-100R	0R1-100R **(7 & 7S)**	0R1-200R	0R1-200R	0R1-500R
	Metal Oxide (Ohms)	51R-47K	100R-47K	110R-47K	110R-47K **(7 Only)**	220R-68K	220R-68K	510R-100K
Limiting element voltage	volts dc or ac rms	150	300	350	500 **(7S-350)**	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

Type	L Max	W Max	H Max	d Nom	Weight gm
SQP2	18.5	7.5	7.5	0.75	2.2
SQP3	22.5	8.5	8.5	0.75	3.5
SQP4	22.5	10	10	0.75	5.0
SQP5	22.5	10	10	0.75	5.0
SQP7	36.0	10	10	0.75	8.2
SQP7S	26.0	10	10	0.75	6.0
SQP10	50.0	10	10	0.75	11.0
SQP15	50.0	13.5	13.5	0.75	17.4
SQP20	61.0	14.5	14.5	0.75	25.0



Min bend radius, all types 1.6 mm

Packaging

Our standard packaging for SQP Series is bulk pack

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

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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.

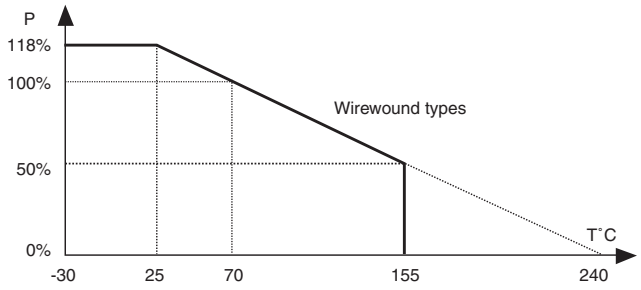
Solderability The terminations meet the requirements of IEC 115-1 Clause 4.17.3.2

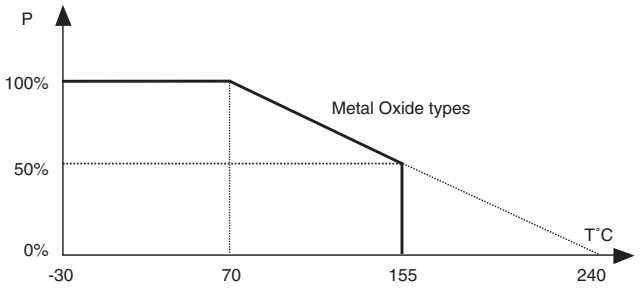
Strength The terminations meet the requirements of IEC 86.2.21

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-

Model ..... **SQP3** – **1K2** **J** **B5**

Value (use IEC62 code) .....

Tolerance (use IEC62 code) .....

J	5%

Packing .....

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

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