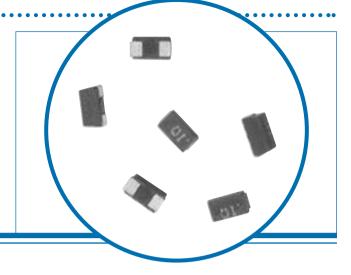
Moulded Surface Mount Wirewound Resistors



WSM Series

- Ideal for automatic pick and place
- Direct replacement for Axial resistors
- All welded construction



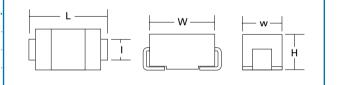
Flectrical Data

| | | WSM1 | WSM2 | WSM3 |
|---------------------------|--------|------------------------|---------------|-------------------------|
| Power rating at 70°C | watts | 1 | 2 | 3 |
| Resistance range | ohms | 0R01 to 1K | 0R01 to 2K | 0R01 to 3K |
| Limiting element voltage | volts | | 100 | |
| TCR | ppm/°C | < 1 Ω : 100 | < 1 Ω : 100 | ≤.03 Ω 700 ≤0.1 Ω : 200 |
| | | \geq 1 Ω : 20 | ≥ 1 Ω : 20 | ≤10R 100 >10R 20 |
| Resistance tolerance | % | | *1, 2, 5, 10 | |
| Standard values | | | E24 preferred | |
| Ambient temperature range | °C | | -55 to 155 | |

^{*}Note 5% or 10% preferred below 0.1 ohms

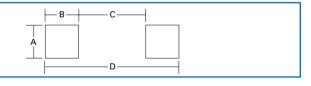
Physical Data

| Dimensio | ns (mm) | | | | Jay H May | | | | | | | |
|----------|---------|-------|-------|-------|-----------|--|--|--|--|--|--|--|
| Туре | L max | l Nom | W Max | w Max | Н Мах | | | | | | | |
| WSM1 | 7.9 | 2.54 | 7 | 4.2 | 3.94 | | | | | | | |
| WSM2 | 12 | 3.1 | 10.5 | 6.6 | 5.5 | | | | | | | |
| WSM3 | 18 | 3.1 | 16 | 7 | 6.5 | | | | | | | |



Recommended Pad Sizes

| Туре | А | В | С | D |
|------|-----|-----|-----|-----|
| WSM1 | 2.9 | 2.6 | 2.8 | 8.1 |
| WSM2 | 3.4 | 4.0 | 6 | 14 |
| WSM3 | 3.4 | 4.5 | 11 | 20 |



Construction

A high purity ceramic substrate is assembled with interference fit end caps to which are welded the terminations. The resistive element is wound on the substrate and welded to the caps. The unit is then moulded.

Flammability

The resistor coating is a flame retardant epoxy to UL 94.

Marking

WSM resistors are legend marked with type value and

WSM1 Resistors are marked with value and tolerance.

Solvent Resistance

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

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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Moulded Surface Mount Wirewound Resistors

WSM Series



Physical Data

| Dimensio | Dimensions (mm) | | | | | | | |
|----------|-----------------|-------|------|----|----|------|---------|--------------------|
| | Ao | Во | Ko | W | Р | t | Ро | , Ao, , P , Ko , . |
| WSM1 | 4.2 | 7.62 | 4.2 | 16 | 8 | 0.36 | 4 ± 0.1 | |
| WSM2 | 6.75 | 11.95 | 5.22 | 24 | 12 | 0.36 | 4 ± 0.1 | 1 |
| WSM3 | 7.3 | 18.3 | 6.7 | 32 | 12 | 0.4 | 4 ± 0.1 | |

All other dimensions as per EIA481 standard

Performance Data

| | | WSM1 | WSM2 | WSM3 | | |
|--------------------------------------|------|------------------------|---------------------|----------------------|--|--|
| Load at rated power: 1000 hrs @ 70°C | ∆R% | $2 \pm 0.001\Omega$ | 2 ± 0.001Ω | $3 \pm 0.001 \Omega$ | | |
| Dry heat 1000 hrs @ 155°C | ΔR% | 2 ± 0.001Ω | 2 ± 0.001Ω | 3 ± 0.001Ω | | |
| Short term overload | ΔR% | 2 ± 0.001Ω | | | | |
| Derating from rated power @ 70°C | | zero at 155°C | | | | |
| Moisture | ∆R% | $1 \pm 0.001\Omega$ | $1 \pm 0.001\Omega$ | 1.5 ± 0.001Ω | | |
| Temperature cycling | ΔR% | 1 ± 0.001Ω | | | | |
| Resistance to solder heat | ΔR% | 1 ± 0.001Ω | | | | |
| Isolation voltage | V | 1,000 | | | | |
| Insulation resistance | ohms | >1000M | | | | |
| Substrate bend | ∆R% | $0.2 \pm 0.001 \Omega$ | | | | |

Note: The power ratings to be applied depend upon the board used and the ambient temperature.