

**RoHS
Compliant**



Description

The resistors are constructed in a high grade low resistive metal body. The structure applies no trimming configuration to provide excellent heat dissipation and inrush withstand capability. The resistive layer is covered with a protective coat and printed a resistance marking code over it. Finally, the two external end terminations are added. For ease of soldering the outer layer of these end terminations is a Lead free terminations.

Features

- Ultra low and stable TCR performance
- High power rating and compact size
- High reliability and stability
- Reduced size of final equipment
- Excellent Heat dissipation and inrush withstand
- Lead free products

Application

- Power supply
- PDA, Digital meter and Computer
- Automotive and Battery charger
- DC-DC power converter

Quick Reference Data

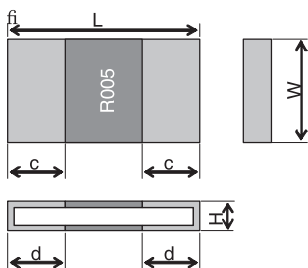
Item	General Specification	
Series No.	MCWW12X	
Size code	2512 (6432)	
Resistance Tolerance	±5%, ±1%	
Resistance Range	1mΩ	2mΩ ~ 15mΩ
TCR (ppm/°C)	±75ppm/°C	±100ppm/°C
Max. Dissipation @ Tamb = 70°C	1W	
Max. Operation Current (DC or RMS)	31.6A ~ 8.16A	
Climatic category (IEC 60068)	55/155/56	

Note:

1. Max. Operation Voltage : So called RCWV (Rated Continuous Working Voltage) is determined by

$$RCWV = \sqrt{\text{Rated Power} \times \text{Resistance Value}}$$
or Max. RCWV listed above, whichever is lower.

Mechanical Data



Type	Size (inch)	Resistance	L (mm)	W (mm)	H (mm)	C (mm)	D (mm)
WW25Q	2512	1m	6.3 ±0.25	3.2 ±0.25	0.38 ±0.15	2.2 ±0.25	
		2m				1.1 ±0.25	
		3m		3.1 ±0.25	0.48 ±0.15	1.1 ±0.25	
		4m			0.37 ±0.15	2.2 ±0.25	
		5m			0.34 ±0.15	1.95 ±0.25	
		6m				1.75 ±0.25	
		7m				1.4 ±0.25	
		8m				1.1 ±0.25	

Type	Size (inch)	Resistance	L (mm)	W (mm)	H (mm)	C (mm)	D (mm)
WW25Q	2512	9m	6.3 ±0.25	3.1 ±0.25	0.34 ±0.15	0.9 ±0.25	
		10m			0.23 ±0.15	1.75 ±0.25	
		11m				1.55 ±0.25	
		12m				1.35 ±0.25	
		13m				1.25 ±0.25	
		14m				1.05 ±0.25	
		15m				0.95 ±0.25	

Marking

Each resistor is marked with a four-digit code on the protective coating to designate the nominal resistance value.

Example:

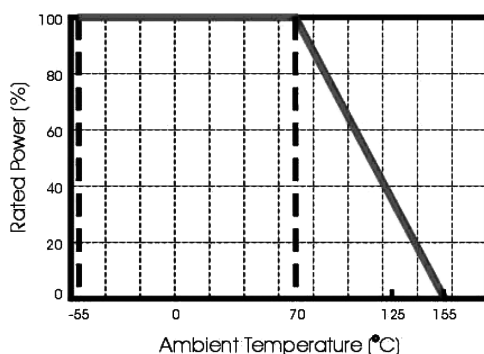
R005 = 0.005Ω

R010 = 0.010Ω

Functional Description

Derating curve

The power that the resistor can dissipate depends on the operating temperature.



**Max. Dissipation in percentage of rated power
As a function of the ambient temperature**

Mounting

Due to their rectangular shapes and small tolerances, Surface Mountable Resistors are suitable for handling by automatic placement systems.

Chip placement can be on ceramic substrates and printed-circuit boards (PCBs).

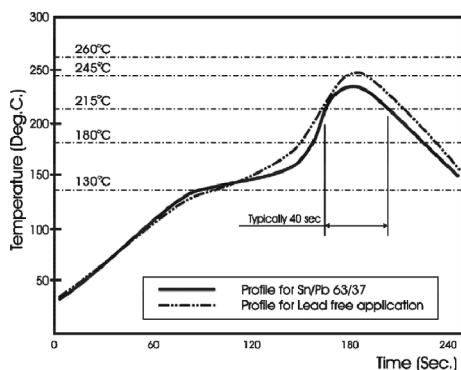
Electrical connection to the circuit is by individual soldering condition.

The end terminations guarantee a reliable contact.

Soldering Condition

The robust construction of chip resistors allows them to be completely immersed in a solder bath of 260°C for 10 seconds. Therefore, it is possible to mount Surface Mount Resistors on one side of a PCB and other discrete components on the reverse (mixed PCBs).

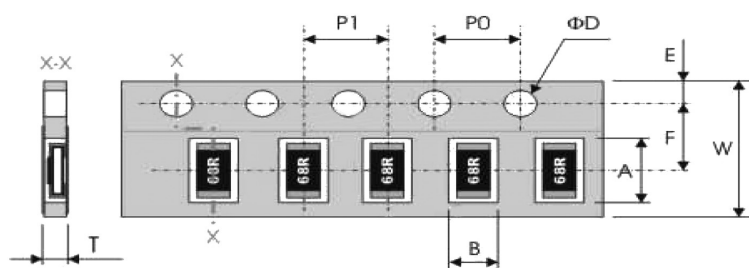
Surface Mount Resistors are tested for solderability at 235°C during 2 seconds within lead-free solder bath. The test condition for no leaching is 260°C for 30 seconds. Typical examples of soldering processes that provide reliable joints without any damage are given in figure.



Infrared soldering profile for Chip Resistor

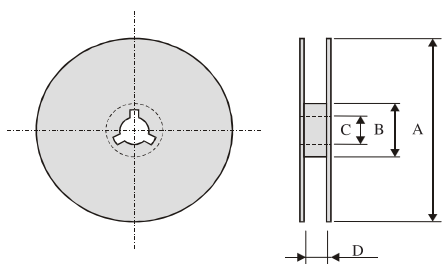
Packaging

Plastic Tape specifications



Series No.	A	B	W	F	E	P1	P0	D	T
WW12X	6.9 ± 0.2	3.6 ± 0.2	12 ± 0.3	5.5 ± 0.05	1.75 ± 0.1	4 ± 0.1	4 ± 0.1	Ø1.5 ^{+0.1} ₋₀	1.1 ± 0.15

Reel dimensions



A	B	C	D
Ø180 ± 1.5	Ø60 ± 1	13 ± 0.2	13 ± 1

Dimensions : Millimetres

Part Number explanation

The resistors have a catalogue number starting with

WW25	Q	R005	J	T	L
Size code WW25 : 2512	Type code Q : 1W	Resistance code "R" is first digit followed by 3 significant digits. e.g: 0.010Ω = R010 0.005Ω = R005	Tolerance J : ±5% F : ±1%	Packaging Code T : 7" Reel taping	Termination Code L = Sn base (Lead free)

Reeled tape packaging : 12mm width embossed taping 4,000pcs per reel.

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