THICK FILM CHIP RESISTORS

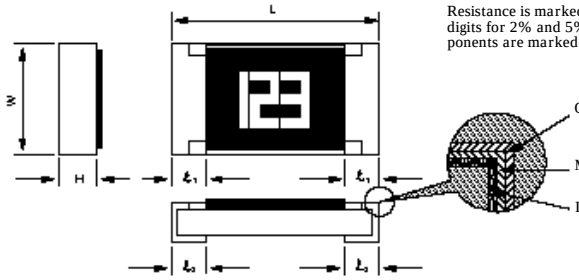
RMC 16S, 16, 10, 18, 14, 12, 01

Rugged and easy to use, Kamaya thick film chip resistors are suitable for a wide range of soldering methods and are ideal for use with high-speed automatic insertion machinery. They are best suited for commercial, industrial and automotive applications.

FEATURES

1. A wide range of values and power ratings for design flexibility.
2. Excellent solderability for all soldering methods due to superior termination composition/construction.
3. Thick film Ruthenium Oxide element for excellent stability.
4. Operating temperatures range from -55 to 125°C.

DIMENSIONS AND STRUCTURE



Resistance is marked on 0603 and larger sizes by three digits for 2% and 5% tolerances. 0805 and larger components are marked with four digits for 1% tolerance.

Outer Electrode: Sn/Pb

Middle Electrode: Ni

Inner Electrode: Ag/Pd

Unit = mm

Dimension \ Type (Size)	RMC 16S (0402)	RMC 16 (0603)	RMC 10 (0805)	RMC 18 (1206)	RMC 14 (1210)	RMC 12 (2010)	RMC 01 (2512)
L	1.0 ± 0.05	1.6 ± 0.1	2.0 ± 0.1	3.2 ± 0.15	3.2 ± 0.15	5.0 ± 0.15	6.3 ± 0.15
W	0.5 ± 0.05	0.8 $\pm^{0.1}_{0.05}$	1.25 ± 0.1	1.6 ± 0.15	2.5 ± 0.15	2.5 ± 0.15	3.2 ± 0.15
H	0.35 ± 0.05	0.45 ± 0.1	0.55 ± 0.1	0.55 ± 0.1	0.55 ±0.15	0.55 ± 0.15	0.55 ± 0.15
ℓ_1	0.20 ± 0.1	0.3 ± 0.1	0.4 ± 0.2	0.5 ± 0.25	0.5 ± 0.25	0.6 ± 0.2	0.6 ± 0.2
ℓ_2	0.25 $\pm^{0.05}_{0.1}$	0.3 ± 0.1	0.4 ± 0.2	0.5 ± 0.25	0.5 ± 0.25	0.6 ± 0.2	0.6 ± 0.2
Unit Weight	0.6 mg	2 mg	5 mg	9 mg	16 mg	25 mg	40 mg

RATINGS

Type (Size)	Rated Power @ 70°C W	Maximum Working Voltage V	Maximum Overload Voltage V	Resistance Temp. Coefficient ppm/°C	Resistance Range And Tolerance ± 1% (F) E_{96} Series	± 2% (G) E_{24} Series	± 5% (J) E_{24} Series
RMC 16S (0402)	0.063	50	100	± 100	100 Ω to 1 MΩ	—	—
				± 200	10Ω to 97.6Ω	10 Ω to 1 MΩ	10 Ω to 5.6 MΩ
				+ 500/- 200	—	—	1 Ω to 9.1 Ω
RMC 16 (0603)	0.063	50	100	± 100	100 Ω to 1 MΩ	—	—
				± 200	10Ω to 97.6Ω	10 Ω to 1 MΩ	10 Ω to 10 MΩ
				+ 500/- 200	—	—	1 Ω to 9.1 Ω
RMC 10 (0805)	0.10 / 0.125	150	300	± 100	10 Ω to 1 MΩ	—	—
				± 200	1.02 MΩ to 10 MΩ	10 Ω to 10 MΩ	10 Ω to 22 MΩ
				+ 500/- 200	—	1 Ω to 9.1 Ω	1 Ω to 9.1 Ω
RMC 18 (1206)	0.125 / 0.25	200	400	± 100	10 Ω to 1 MΩ	—	—
				± 200	1.02 MΩ to 10 MΩ	10 Ω to 10 MΩ	10 Ω to 22 MΩ
				+ 500/- 200	1 Ω to 9.76 Ω	1 Ω to 9.1 Ω	1 Ω to 9.1 Ω
RMC 14 (1210)	0.25	200	400	± 100	10 Ω to 1 MΩ	—	—
				± 200	—	10 Ω to 1 MΩ	10 Ω to 20 MΩ
				+ 500/- 200	—	—	1 Ω to 9.1 Ω
RMC 12 (2010)	0.50	200	400	± 100	10 Ω to 1 MΩ	—	—
				± 200	—	10 Ω to 1 MΩ	10 Ω to 20 MΩ
				+ 500/- 200	—	—	1 Ω to 9.1 Ω
RMC 01 (2512)	1.0	200	400	± 100	10 Ω to 1 MΩ	—	—
				± 200	—	10 Ω to 1 MΩ	10 Ω to 20 MΩ
				+ 500/- 200	—	—	1 Ω to 9.1 Ω

1) T.C.R. less than 100 ppm and resistance tolerances less than 1% available in RGC and RNC series.
2) Resistance values less than 1.0 Ω available in RLC series.
3) For use as jumper, RMC 16S and RMC 16 rated at 1.0 amp maximum, all others 2 amps maximum. Maximum DCR of 50 mΩ.
4) RMC 10 can be operated up to 1/8 watt @ 70°C and RMC 18 can be operated up to 1/4 watt @ 70°C provided the surface temperature of the resistor does not exceed 125°C.

PERFORMANCE CHARACTERISTICS

DESCRIPTION	PERFORMANCE	TEST METHOD JIS C5202	
Resistance Temperature Coefficient	As specified in table	**section 5.2**	Measuring temperature +25°C/-55°C/+25°C/+125°C
Short-time Overload	± 1.0% maximum	**section 5.5**	Rated voltage x2.5, 5 seconds
Terminal Strength	± 1.0% maximum	**section 6.1.4**	Install a sample on the board and bend board 5/45mm for 10 seconds (1/2 and 1 are 3/45mm)
Solder-Heat Resistance	± 1.0% maximum	**section 6.10**	Dip into 260°C solder bath for 10 seconds
Solderability	95% minimum coverage	**section 6.11**	After dipping into flux dip into 235°C solder bath for 2 seconds
Temperature Cycle	± 1.0% maximum	**section 7.4**	Cycle between -55°C and + 125°C for 5 cycles
Load Life in Moisture	± 2.0% maximum	**section 7.9**	Rated voltage 1.5 hours "ON" 0.5 hours "OFF" 40°C 95%RH 1,000 Hours
Load Life	± 2.0% maximum	**section 7.10**	Rated voltage 1.5 hours "ON" 0.5 hours "OFF" 70°C. 1,000 Hours

PART NUMBER SYSTEM

RMC **10** - **XXX or XXXX** **J** **T**

Product Type
RMC = Thick Film Chip Resistor

Wattage (size)
16S = 1/16 watt (0402)
16 = 1/16 watt (0603)
10 = 1/10 watt (0805)
18 = 1/8 watt (1206)
14 = 1/4 watt (1210)
12 = 1/2 watt (2010)
01 = 1.0 watt (2512)

Resistance Value
2 significant digits plus multiplier
102 = 1.0 KΩ
1R0 = 1.0 Ω
"000" for jumper

3 significant digits plus multiplier for 1% tolerance
1002 = 10.0 KΩ
10R0 = 10.0 Ω

Tolerance
F = ± 1%
G = ± 2%
J = ± 5%

Packaging
B = Bulk
T = Tape and Reel (paper)
TP = Tape and Reel (plastic)
TH = Tape and Reel (paper, 2 mm pitch) (0402)
BA = Bulk Cartridge