



MAR SERIES ~ Thin Film Chip Resistors



FEATURES

- Thin film passivity NiCr Resistor and Wide R-value range
- Very tight tolerance from $\pm 0.01\%$ to 1% ; Extremely Low TCR from ± 5 to ± 50 PPM/ .
- Products with Lead Free terminations meet RoHS Compliant .

PART NUMBERING SYSTEM

MAR	0402	-	102F	-	LF
TYPE	DIMENSIONS		IMPEDANCE		LEAD FREE

SHAPES AND DIMENSIONS

UNIT : mm

TYPE	DIMENSIONS	EIA	RESISTANCE TOLERANCE
MCR0402	1.00x0.50	0402	T $\pm 0.01\%$; B $\pm 0.1\%$; C $\pm 0.25\%$; D $\pm 0.5\%$; F $\pm 1\%$
MCR0603	1.60x0.80	0603	T $\pm 0.01\%$; B $\pm 0.1\%$; C $\pm 0.25\%$; D $\pm 0.5\%$; F $\pm 1\%$
MCR0805	2.00x1.25	0805	T $\pm 0.01\%$; B $\pm 0.1\%$; C $\pm 0.25\%$; D $\pm 0.5\%$; F $\pm 1\%$
MCR1206	3.10x1.55	1206	T $\pm 0.01\%$; B $\pm 0.1\%$; C $\pm 0.25\%$; D $\pm 0.5\%$; F $\pm 1\%$
MCR2010	5.00x2.50	2010	T $\pm 0.01\%$; B $\pm 0.1\%$; C $\pm 0.25\%$; D $\pm 0.5\%$; F $\pm 1\%$
MCR2512	6.30x3.20	2512	T $\pm 0.01\%$; B $\pm 0.1\%$; C $\pm 0.25\%$; D $\pm 0.5\%$; F $\pm 1\%$

DIMENSIONS

TYPE	L	W	T	D1	D2
MCR0402	1.00 ± 0.10	0.50 ± 0.05	0.30 ± 0.05	0.20 ± 0.10	0.20 ± 0.10
MCR0603	1.55 ± 0.10	0.80 ± 0.10	0.45 ± 0.10	0.30 ± 0.20	0.30 ± 0.20
MCR0805	2.00 ± 0.15	1.25 ± 0.10	0.55 ± 0.10	0.30 ± 0.20	0.40 ± 0.25
MCR1206	3.05 ± 0.20	1.55 ± 0.15	0.55 ± 0.10	0.42 ± 0.20	0.35 ± 0.25
MCR2010	4.90 ± 0.20	2.40 ± 0.15	0.55 ± 0.10	0.60 ± 0.30	0.50 ± 0.25
MCR2512	6.30 ± 0.20	3.10 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.50 ± 0.25



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TCR AND RESISTANCE CODE

TCR CODE	TCR TYPE	RESISTANCE CODE	RESISTANCE TYPE
S	±5 PPM/°C	101	100
B	±10 PPM/°C	102	1000
N	±15 PPM/°C	103	10000
C	±25 PPM/°C	221	220
D	±50 PPM/°C	222	2200
		223	22000

STANDARD ELECTRICAL SPECIFICATION TABLE

TYPE	Power Rating @ 70°C	Operating Temp. Range	Max Operating Voltage	Max Overloading Voltage	Resistance Tolerance	Resistance Range	TCR (PPM/°C)
MAR0402C	1/16W	-55 to +155°C	25V	50V	±0.1% ±0.25% ±0.5%	10 to 1K	±25
MAR0402D	1/16W	-55 to +155°C	25V	50V	±0.1% ±0.25% ±0.5%	10 to 1K	±50
MAR0603C	1/16W	-55 to +155°C	50V	100V	±0.1% ±0.25% ±0.5%	10 to 332K	±25
MAR0603D	1/16W	-55 to +155°C	50V	100V	±0.1% ±0.25% ±0.5%	10 to 332K	±50
MAR0805C	1/10W	-55 to +155°C	100V	200V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±25
MAR0805D	1/10W	-55 to +155°C	100V	200V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±50



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STANDARD ELECTRICAL SPECIFICATION TABLE

TYPE	Power Rating @ 70°C	Operating Temp. Range	Max Operating Voltage	Max Overloading Voltage	Resistance Tolerance	Resistance Range	TCR (PPM/°C)
MAR1206C	1/8W	-55 to +155°C	150V	300V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±25
MAR1206D	1/8W	-55 to +155°C	150V	300V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±50
MAR2010C	1/4W	-55 to +155°C	150V	300V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±25
MAR2010D	1/4W	-55 to +155°C	150V	300V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±50
MAR2512C	1/2W	-55 to +155°C	150V	300V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±25
MAR2512D	1/2W	-55 to +155°C	150V	300V	±0.1% ±0.25% ±0.5%	4.7 to 1M	±50

Coilmaster is capable to manufacture the following options based on customer's requirement .

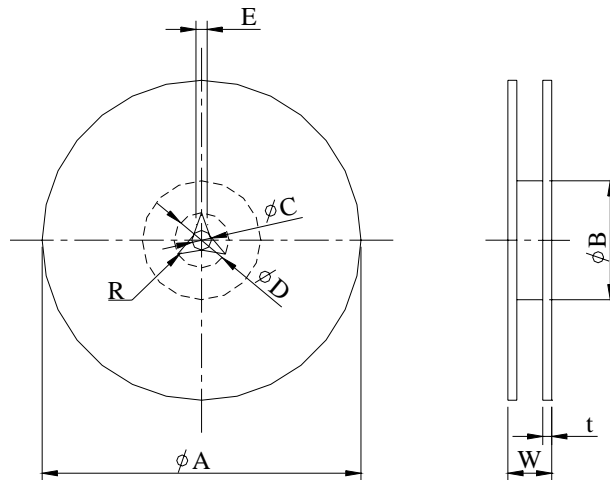
Tighter tolerance : ±0.05% , ±0.01% ; Lower Resistance : 1 to 10 ohm .

Lower TCR : 5 PPM/°C , 10 PPM/°C , 15 PPM/°C ; High Power Rating .



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PACKAGING SPECIFICATION



TYPE	A	B	C	W	T	Paper Tape (EA)	Embossed Tape(EA)
MCR0402	178±2	60±1	13±0.2	9±0.5	11.4±1.0	10,000	—
MCR0603	178±2	60±1	13±0.2	9±0.5	11.4±1.0	5,000	—
MCR0805	178±2	60±1	13±0.2	9±0.5	11.4±1.0	5,000	—
MCR1206	178±2	60±1	13±0.2	9±0.5	11.4±1.0	5,000	—
MCR1210	178±2	60±1	13±0.2	9±0.5	11.4±1.0	5,000	—
MCR2010	178±2	60±1	13±0.2	13.2±1.5	16.0±1.0	—	4,000
MCR2512	178±2	60±1	13±0.2	13.2±1.5	16.0±1.0	—	4,000