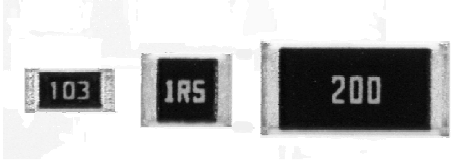
RMCF/RMCP Series

General Purpose Thick Film Standard Power and High Power Chip Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

Features:

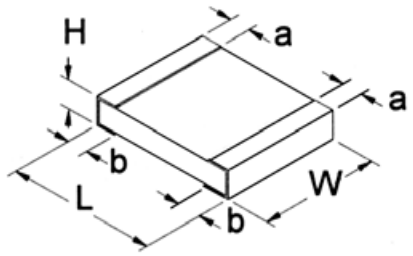
- RMCF – standard power ratings
- RMCP – high power ratings
- Nickel Barrier terminations standard
- Power derating from 100% at 70ºC to zero at +155ºC
- RoHS compliant



Electrical Specifications

Type / Code	Old Type Code	Power Rating (Watts) @ 70ºC	Maximum Working Voltage (1)	Maximum Overload Voltage	Maximum Current	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance (2)	
							1%	5%
RMCF0201	1/20	0.05W	25V	50V	1 Amp	± 400 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 10M	1 - 9.1 10 - 10M
RMCF0402	1/16S	0.063W	50V	100V	1 Amp	± 300 ppm/ºC ± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	0.2 - 0.59 0.604 - 9.76 10 - 1M 1.02M - 10M	0.2 - 0.56 0.62 - 9.1 10 - 1M 1.1M - 20M
RMCF0603	1/16	0.1W	50V	100V	1 Amp	± 600 ppm/ºC ± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	0.1 - 0.976 1 - 9.76 10 - 1M 1.02M - 10M	0.1 - 0.91 1 - 20M - -
RMCF0805	1/10	0.125W	150V	300V	2 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	0.1 - 9.76 10 - 1M 1.02M - 10M	0.1 - 20M - -
RMCF1206	1/8	0.25W	200V	400V	2 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	0.1 - 9.76 10 - 1M 1.02M - 10M	0.1 - 20M - -
RMCF1210	1/4	0.33W(3)	200V	400V	3 Amp	± 200 ppm/ºC ± 400 ppm/ºC ± 200 ppm/ºC ± 100 ppm/ºC	0.1 - 0.976 1 - 9.76 - 10 - 10M	0.1 - 0.91 1 - 9.1 10 - 20M -
RMCF2010	1/2	0.75W	200V	400V	3 Amp	± 200 ppm/ºC ± 400 ppm/ºC ± 200 ppm/ºC ± 100 ppm/ºC	0.1 - 0.976 1 - 9.76 - 10 - 10M	0.1 - 0.91 1 - 9.1 10 - 10M -
RMCF2512	1	1W	200V	400V	3 Amp	± 200 ppm/ºC ± 400 ppm/ºC ± 200 ppm/ºC ± 100 ppm/ºC	0.1 - 0.976 1 - 9.76 - 10 - 10M	0.1 - 0.91 1 - 9.1 10 - 10M -
RMCP0402	1/16S	0.1W	50V	100V	1 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 1M 1.02M - 10M	1 - 9.76 10 - 1M 1.02M - 10M
RMCP0603	1/16	0.125W	50V	100V	1 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 1M 1.02M - 10M	1 - 9.76 10 - 1M 1.02M - 10M
RMCP0805	1/10	0.25W	150V	300V	2 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 1M 1.02M - 10M	1 - 9.76 10 - 1M 1.02M - 10M
RMCP1206	1/8	0.33W	200V	400V	2 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 1M 1.02M - 10M	1 - 9.76 10 - 1M 1.02M - 10M
RMCP1210	1/4	0.5W	200V	400V	3 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 1M 1.02M - 10M	1 - 9.76 10 - 1M 1.02M - 10M
RMCP2010	1/2	1W	200V	400V	3 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 1M 1.02M - 10M	1 - 9.76 10 - 1M 1.02M - 10M
RMCP2512	1	2W	200V	400V	3 Amp	± 200 ppm/ºC ± 100 ppm/ºC ± 200 ppm/ºC	1 - 9.76 10 - 1M 1.02M - 10M	1 - 9.76 10 - 1M 1.02M - 10M

(1) Lesser of √PR or maximum working voltage.
(2) Contact factory for extended ohmic values.
(3) Power rating is 0.5W for ohmic values below 1Ω



Mechanical Specifications						
Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Unit
RMCF0201	0.024 ± 0.001 0.60 ± 0.03	0.012 ± 0.001 0.30 ± 0.03	0.009 ± 0.0004 0.23 ± 0.01	0.006 ± 0.002 0.15 ± 0.05	0.006 ± 0.002 0.15 ± 0.05	inches mm
RMCF0402 RMCP0402	0.039 ± 0.004 1.00 ± 0.10	0.020 ± 0.002 0.50 ± 0.05	0.012 ± 0.004 0.30 ± 0.10	0.008 ± 0.004 0.20 ± 0.10	0.010 ± 0.006 0.25 ± 0.15	inches mm
RMCF0603 RMCP0603	0.061 ± 0.006 1.55 ± 0.15	0.031 ± 0.006 / -0.004 0.80 + 0.15 / -0.10	0.018 ± 0.004 0.45 ± 0.10	0.012 ± 0.008 0.30 ± 0.20	0.012 ± 0.008 0.30 ± 0.20	inches mm
RMCF0805 RMCP0805	0.079 ± 0.008 2.00 ± 0.20	0.049 ± 0.004 1.25 ± 0.10	0.020 ± 0.006 0.50 ± 0.15	0.014 ± 0.010 0.35 ± 0.25	0.014 ± 0.010 0.35 ± 0.25	inches mm
RMCF1206 RMCP1206	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.006 1.60 ± 0.15	0.022 ± 0.006 0.55 ± 0.15	0.020 ± 0.012 0.50 ± 0.30	0.020 ± 0.012 0.50 ± 0.30	inches mm
RMCF1210 RMCP1210	0.126 ± 0.010 3.20 ± 0.25	0.098 ± 0.010 2.50 ± 0.25	0.022 ± 0.006 0.55 ± 0.15	0.020 ± 0.012 0.50 ± 0.30	0.020 ± 0.012 0.50 ± 0.30	inches mm
RMCF2010 RMCP2010	0.197 ± 0.008 5.00 ± 0.20	0.098 ± 0.008 2.50 ± 0.20	0.022 ± 0.006 0.55 ± 0.15	0.024 ± 0.012 0.60 ± 0.30	0.024 ± 0.014 0.60 ± 0.35	inches mm
RMCF2512 RMCP2512	0.248 ± 0.008 6.30 ± 0.20	0.126 ± 0.010 3.20 ± 0.25	0.022 ± 0.006 0.55 ± 0.15	0.024 ± 0.012 0.60 ± 0.30	0.024 ± 0.014 0.60 ± 0.35	inches mm

Performance Characteristics		
Test	Test Conditions (JIS C 5202)	Test Results
Short Time Overload	2.5x rated voltage for 5 seconds	± (2% + 0.1Ω)
Dielectric Withstanding Voltage	100 VAC, 1 minute	± (1% + 0.05Ω)
Resistance to Soldering Heat	260ºC ±5ºC, for 10 sec. ±0.5 sec. (Solder Bath)	± 1%
Solderability	235ºC ±5ºC, for 2 sec. ±0.5 sec. (Colophonium flux)	95% coverage, minimum
Temperature Cycle	-65ºC: 30 min. 25ºC: 2 to 3 min. 155ºC: 30 min. 25ºC: 2 to 3 min. (5 Cycles)	±(1% + 0.05Ω) Jumper (<0.05Ω)
Endurance (Damp load)	40ºC ± 2ºC, 90% RH, Rated Load 90 min. On, 30 min. Off for 1,000 hrs. -0hrs./+48hrs.	±(3% + 0.1Ω) Jumper (<0.05Ω)
Endurance (Rated load)	70ºC ± 2ºC, Rated Load 90 min. On, 30 min. Off for 1,000 hrs. -0hrs./+48hrs.	±(3% + 0.1Ω) Jumper (<0.05Ω)
Voltage Coefficient	1/10 rated voltage for 3 sec. max. then rated voltage for 3 sec. max.	±100 (ppm/V)
Robustness of Termination	Bend of 3mm for 5 ± 1 sec.	± (1% + 0.05 Ohm)

Operating Temperature Range: -55ºC to +125ºC (0201 size)
-55ºC to +155ºC (all others)

How to Order - RMCF

1	2	3	4	5	6	7	8	9	10	11	12	13	14
R	M	C	F	0	6	0	3	J	T	4	K	7	0

Product Series	
RMCF	Thick Film Chip Resistors

Size	Power
0201	0.05W
0402	0.063W
0603	0.1W
0805	0.125W
1206	0.25W
1210	0.33W
2010	0.75W
2512	1W

Tolerance		
Code	Tol	Value
F	1%	E96, E24
J	5%	E24
Z	jumper	

Packaging			
Code	Description	Size	Quantity
T	7" Reel - Paper Tape	0201, 0402	10,000
		0603, 0805, 1206	5,000
	7" Reel - Plastic Tape	1210, 2010, 2512	4,000
G	10" Reel - Paper Tape	0603, 0805, 1206	10,000
B	Bulk	0603, 0805, 1206	1,000

Resistance Value
Four characters with the multiplier used as the decimal holder.
0.1 ohm = R100
4.70 ohm = 4R70
10.0 Kohm = 10K0
1 Mohm = 1M00
Zero ohm jumper = 0R00

How to Order – RMCP

1	2	3	4	5	6	7	8	9	10	11	12	13	14
R	M	C	P	0	6	0	3	J	T	4	K	7	0

Product Series	
RMCP	High Power

Size	Power Rating
0402	0.1W
0603	0.125W
0805	0.25W
1206	0.33W
1210	0.5W
2010	1W
2512	2W

Tolerance		
Code	Tol	Value
F	1%	E96, E24
J	5%	E24

Packaging			
Code	Description	Size	Quantity
T	7" Reel Paper Tape	0402	10,000
		0603, 0805 1206, 1210	5,000
		2010, 2512	4,000
G	10" Reel Paper Tape	0603, 0805 1206, 1210	10,000

Resistance Value
Four characters with the multiplier used as the decimal holder.
1 ohm = 1R00
10 Kohm = 10K0
1 Mohm = 1M00

Legacy Part Number (before January 3, 2011):

SEI Type	Code	Nominal Resistance	Tolerance	Packaging
RMCF	1/16	4.7K	5%	R

Type	Description
RMC	Standard
RMCF	RoHS

Code	Wattage	Size
1/20	0.05W	0201
1/16S	0.063W	0402
1/16	0.1W	0603
1/10	0.125W	0805
1/8	0.25W	1206
1/4	0.33W	1210
1/2	0.75W	2010
1	1W	2512

Tolerance	Values
1%	E96,E24
5%	E24

SEI Types	Pkg Qty	Description	Code
0201, 0402	10,000	7" reel - paper tape	R
0603, 0805, 1206	10,000	10" reel - paper tape	G
	5,000	7" reel - paper tape	R
	1,000	bulk	A
1210, 2010, 2512	4,000	7" reel - plastic tape	R

SEI Type	Code	Nominal Resistance	Tolerance	Packaging
RMCP	0603	4.7K	5%	R

Type	Description
RMCP	High Power

Code	Wattage	Size
0402	0.1W	0402
0603	0.125W	0603
0805	0.25W	0805
1206	0.33W	1206
1210	0.5W	1210
2010	1W	2010
2512	2W	2512

Tolerance	Values
1%	E96,E24
5%	E24

SEI Types	Pkg Qty	Description	Code
0402	10,000	7" reel - paper tape	R
0603, 0805, 1206, 1210	10,000	10" reel - paper tape	G
0603, 0805, 1206, 1210	5,000	7" reel - paper tape	R
2010, 2512	4,000		