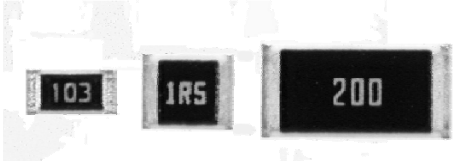
RMCF Series

General Purpose Thick Film Chip Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

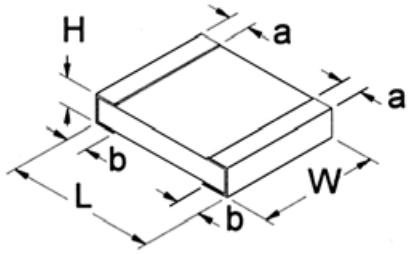
Features:

- Nickel Barrier terminations standard
- Power derating from 100% at 70ºC to zero at +155ºC
- Zero ohm available (max resistance 0.05Ω)
- 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 ~ 0.590 0.604 ~ 9.76 10.0 ~ 1M 1.02M ~ 10M	0.2 ~ 0.56 0.62 ~ 9.1 10.0 ~ 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(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 ~ 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 -

(1) Lesser of √PR or maximum working voltage. (2) Contact factory for extended ohmic values. (3) Power rating is 0.500W for ohmic values below 1Ω



Mechanical Specifications						
Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Units
RMCF0201	0.024 ± 0.001 0.60 ± 0.03	0.011 ± 0.001 0.30 ± 0.03	0.010 ± 0.002 0.25 ± 0.05	0.006 ± 0.002 0.15 ± 0.05	0.006 ± 0.002 0.15 ± 0.05	inches mm
RMCF0402	0.039 ± 0.004 1.00 ± 0.10	0.020 ± 0.002 0.50 ± 0.05	0.011 ± 0.004 0.30 ± 0.10	0.008 ± 0.004 0.20 ± 0.10	0.010 ± 0.004 0.25 ± 0.10	inches mm
RMCF0603	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	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	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.006 1.60 ± 0.15	0.021 ± 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	0.126 ± 0.010 3.20 ± 0.25	0.098 ± 0.008 2.50 ± 0.20	0.021 ± 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	0.197 ± 0.008 5.00 ± 0.20	0.098 ± 0.008 2.5 ± 0.20	0.021 ± 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	0.248 ± 0.008 6.30 ± 0.20	0.126 ± 0.008 3.20 ± 0.20	0.021 ± 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

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
F	1%
J	5%
Z	jumper

Packaging			
Code	Description	Size	Quantity
T	7" reel - paper tape	0201	15,000
		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

Legacy Part Number (before January 3, 2011):

SEI Type	Code	Nominal Resistance	Tolerance	Packaging
RMC	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	15,000	7" reel - paper tape	R
0402	10,000		
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