

RMCF Series

General Purpose Thick Film Chip Resistor

Stackpole Electronics, Inc.
Resistive Product Solutions

- Features:
- Nickel Barrier terminations standard
 - Power derating from 100% at 70°C to zero at +155°C
 - Zero ohm available (max resistance 0.05Ω)
 - RoHS compliant



Electrical Specifications								
Type / Code	Package Type	Power Rating (Watts) @ 70°C	Maximum Working Voltage (1)	Maximum Overload Voltage	Maximum Current	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance (2)	
							1%	5%
RMCF 1/20	0201	0.05W	25V	50V	1 Amp	± 600 ppm/°C ± 300 ppm/°C	1 - 24.9 25 - 10M	1 - 24.9 25 - 10M
RMCF 1/16S	0402	0.063W	50V	100V	1 Amp	± 500 ppm/°C ± 200 ppm/°C ± 100 ppm/°C	1 - 9.76 10 - 97.6 100 - 1M	1 - 9.1 10 - 91 100 - 1M
RMCF 1/16	0603	0.1W	50V	100V	1 Amp	± 600 ppm/°C ± 200 ppm/°C ± 100 ppm/°C ± 200 ppm/°C	0.1 - 0.499 0.5 - 32.4 33.2 - 1M 1.1M - 10M	0.1 - 0.499 0.5 - 20M - -
RMCF 1/10	0805	0.125W	150V	300V	2 Amp	± 500 ppm/°C ± 200 ppm/°C ± 100 ppm/°C ± 200 ppm/°C	0.1 - 0.976 1 - 32.4 33.2 - 1M 1.1M - 22.1M	0.1 - 0.910 1 - 22M - -
RMCF 1/8	1206	0.25W	200V	400V	2 Amp	± 500 ppm/°C ± 200 ppm/°C ± 100 ppm/°C ± 200 ppm/°C	0.1 - 0.976 1 - 32.4 33.2 - 1M 1.1M - 10M	0.1 - 0.910 1 - 22M - -
RMCF 1/4	1210	0.33W(3)	200V	400V	3 Amp	± 400 ppm/°C ± 200 ppm/°C ± 100 ppm/°C ± 200 ppm/°C	0.1 - 9.76 10 - 32.4 33.2 - 1M 1.1M - 10M	0.1 - 9.1 - - 10 - 20M
RMCF 1/2	2010	0.75W(3)	200V	400V	3 Amp	± 500 ppm/°C ± 400 ppm/°C ± 200 ppm/°C ± 100 ppm/°C	0.1 - 0.499 0.5 - 9.76 - 10 - 10M	0.1 - 0.499 0.5 - 9.1 10 - 10M -
RMCF 1	2512	1W	200V	400V	3 Amp	± 500 ppm/°C ± 400 ppm/°C ± 200 ppm/°C ± 100 ppm/°C	0.1 - 0.499 0.5 - 9.76 - 10 - 10M	0.1 - 0.499 0.5 - 9.1 10 - 10M -

(1) Lesser of \sqrt{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
RMCF 1/20	0.024 ± 0.001 0.60 ± 0.03	0.011 ± 0.001 0.30 ± 0.03	0.010 ± 0.002 0.25 ± 0.05	0.005 ± 0.01 0.12 ± 0.3	0.006 ± 0.002 0.15 ± 0.05	inches mm
RMCF 1/16S	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
RMCF 1/16	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
RMCF 1/10	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
RMCF 1/8	0.126 ± 0.008 3.20 ± 0.20	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
RMCF 1/4	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
RMCF 1/2	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
RMCF 1	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	260°C ±5°C, for 10 sec. ±0.5 sec. (Solder Bath)	± 1%
Solderability	235°C ±5°C, for 2 sec. ±0.5 sec. (Colophonium flux)	95% coverage, minimum
Temperature Cycle	-65°C: 30 min. 25°C: 2 to 3 min. 155°C: 30 min. 25°C: 2 to 3 min. (5 Cycles)	±(1% + 0.05Ω) Jumper (<0.05Ω)
Endurance (Damp load)	40°C ± 2°C, 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)	70°C ± 2°C, 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: -55°C to +125°C (0201 size)
-55°C to +155°C (all others)

How to Order

SEI Type		Code			Nominal Resistance	Tolerance		Packaging			
RMC		1/16			4.7K	5%		R			
Type	Description	Code	Wattage	Size	Tolerance		Values	SEI Types	Pkg Qty	Description	Code
RMC	Standard	1/20	0.05W	0201	1%		E96, E24	1/20	15,000	7" reel - paper tape	R
RMCF	RoHS	1/16S	0.063W	0402	5%		E24	1/16S	10,000	10" reel - paper tape	G
		1/16	0.1W	0603				1/16, 1/10, 1/8	10,000	7" reel - paper tape	R
		1/10	0.125W	0805					5,000	bulk	A
		1/8	0.25W	1206				1,000			
		1/4	0.33W	1210				1/4, 1/2, 1	4,000	7" reel - plastic tape	R
		1/2	0.75W	2010							
		1	1W	2512							

New part number format starting January 3rd, 2011:

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		Size	Power	Tolerance		Packaging				Resistance Value
RMCF	Thick Film Chip Resistors	0201	0.05W	Code	Tol	T	7" reel - paper tape	0201	15,000	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
		0402	0.063W	F	1%			0402	10,000	
		0603	0.1W	J	5%	7" reel - plastic tape	0603, 0805, 1206	5,000		
		0805	0.125W				1210, 2010, 2512	4,000		
		1206	0.25W	G	10" reel - paper tape	0603, 0805, 1206	10,000			
		1210	0.33W			B	Bulk	0603, 0805, 1206	1,000	
		2010	0.75W							
		2512	1W							