NMCT Series

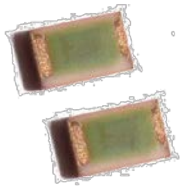
Non-Magnetic Chip Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

Features:

- NMCT series provides standard wrap-around termination, with solderable 100% matte tin plating
- Parts are marked with a white dot only
- Zero ohm jumper available (max. 0.05Ω)
- RoHS compliant



Electrical Specifications

Type / Code	Package Size	Power Rating (Watts) @70ºC	Maximum Working Voltage(1)	Maximum Overload Voltage	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance 1% and 5%
NMCT0402	0402	0.063W	50V	100V	±200 ±100 ±200	1 - 9.76 10 - 1M 1.02M - 10M
Jumper		1A			-	0Ω (<50mΩ)
NMCT0603	0603	0.1W	50V	100V	±200 ±100 ±200	1 - 9.76 10 - 1M 1.02M - 10M
Jumper		1A			-	0Ω (<50mΩ)
NMCT0805	0805	0.125W	150V	300V	±200 ±100 ±200	1 - 9.76 10 - 1M 1.02M - 10M
Jumper		2A			-	0Ω (<50mΩ)
NMCT1206	1206	0.25W	200V	400V	±200 ±100 ±200	1 - 9.76 10 - 1M 1.02M - 10M
Jumper		2A			-	0Ω (<50mΩ)
NMCT1210	1210	0.33W	200V	400V	±200 ±100 ±200	1 - 9.76 10 - 1M 1.02M - 10M
Jumper		2.5A			-	0Ω (<50mΩ)
NMCT2010	2010	0.75W	200V	400V	±200 ±100 ±200	1 - 9.76 10 - 1M 1.02M - 10M
Jumper		3.5A			-	0Ω (<50mΩ)
NMCT2512	2512	1W	250V	500V	±200 ±100 ±200	1 - 9.76 10 - 1M 1.02M - 10M
Jumper		4A			-	0Ω (<50mΩ)

Operating Voltage = √(P*R) or maximum operating voltage listed above, whichever is lower.
Overload Voltage = 2.5√(P*R) or maximum overload voltage listed above, whichever is lower.
(1) Lesser of √PR or maximum working voltage.

How to Order

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

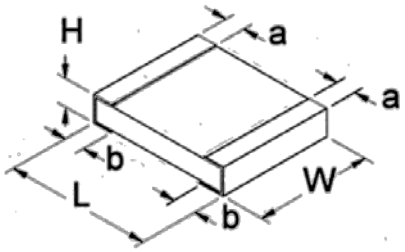
Product Series	
NMCT	Wrap-around Solderable Termination

Size	Power
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	SPQ	MOQ
T	7" Reel - Paper Tape	0402	10,000	20,000
		0603, 0805 1206, 1210	5,000	
	7" Reel - Plastic Tape	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 9.76 ohm = 9R76 1.02 Mohm = 1M02 10 Mohm = 10M0 Zero ohm jumper = 0R00



Mechanical Specifications

Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Unit
NMCT0402	0.039 ± 0.002 1.00 ± 0.05	0.020 ± 0.002 0.50 ± 0.05	0.014 ± 0.002 0.35 ± 0.05	0.008 ± 0.004 0.20 ± 0.10	0.008 ± 0.004 0.20 ± 0.10	inches mm
NMCT0603	0.063 ± 0.004 1.60 ± 0.10	0.031 ± 0.004 0.80 ± 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
NMCT0805	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 ± 0.008 0.35 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
NMCT1206	0.126 ± 0.008 3.20 ± 0.20	0.063 ± 0.006 1.60 ± 0.15	0.022 ± 0.006 0.55 ± 0.15	0.020 ± 0.010 0.50 ± 0.25	0.020 ± 0.008 0.50 ± 0.20	inches mm
NMCT1210	0.126 ± 0.008 3.20 ± 0.20	0.098 ± 0.008 2.50 ± 0.20	0.022 ± 0.006 0.55 ± 0.15	0.020 ± 0.010 0.50 ± 0.25	0.020 ± 0.008 0.50 ± 0.20	inches mm
NMCT2010	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 ± 0.010 0.60 ± 0.25	0.020 ± 0.008 0.50 ± 0.20	inches mm
NMCT2512	0.248 ± 0.008 6.30 ± 0.20	0.126 ± 0.008 3.20 ± 0.20	0.022 ± 0.006 0.55 ± 0.15	0.024 ± 0.010 0.60 ± 0.25	0.020 ± 0.008 0.50 ± 0.20	inches mm

Performance Characteristics

Item	Requirement			Test Method
	1%	5%	Jumper	
Short Time Overload	± (1% + 0.05Ω)	± (2% + 0.05Ω)	< 50mΩ	JIS C 5201-1 4.13; IEC 60115-1 4.13 2.5 times RCWV or max. overload voltage for 5 seconds
Insulation Resistance	≥ 10G			JIS C 5201-1 4.6; IEC 60115-1 4.6 Max. overload voltage for 1 minute
Endurance (Rated Load)	± (2% + 0.1Ω)	± (3% + 0.1Ω)	< 100mΩ	JIS C 5201-1 4.25; IEC 60115-1 4.25.1 70±2ºC, Max. working voltage for 1,000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	± (2% + 0.1Ω)	± (3% + 0.1Ω)	< 100mΩ	JIS C 5201-1 4.24 40±2ºC, 90-95% R.H., Max. working voltage for 1,000 hrs with 1.5 hrs "ON and 0.5 hrs "OFF"
Dry Heat	± (1% + 0.05Ω)	± (1.5% + 0.1Ω)	< 50mΩ	JIS C 5201-1 4.23.2; IEC 60115-1 2.23.2 at +155ºC for 1,000 hrs
Solderability	95% min. coverage			JIS-C-5201-1 4.17; IEC-60115-1 4.17 245±5ºC for 3 seconds
Resistance to Soldering Heat	± (0.5% + 0.05Ω)	± (1% + 0.05Ω)	< 50mΩ	JIS-C-5201-1 4.18; IEC-60115-1 4.18 260±5ºC for 10 seconds
Rapid change of Temperature	± (0.5% + 0.05Ω)	± (1% + 0.05Ω)	< 50mΩ	JIS-C-5201-1 4.19; IEC 60115-1 4.19 -55ºC to +155ºC, 5 cycles
Voltage Coefficient	± 100 (ppm/V)			1/10 rated voltage for 3 sec. max, then rated voltage for 3 sec. max.
Robustness of Termination	± (1% + 0.05Ω)			Bend of 3mm for 5 ± 1 sec.

Operating Temperature Range: -55ºC ~ +155ºC