

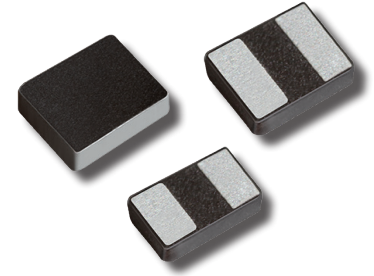
NPMS Series

Miniaturized Molded Chip Power Inductors



FEATURES

- 0605, 0805, 0806 AND 1008 CASE SIZES
- METAL MATERIAL FOR LARGE CURRENT AND LOW LOSS
- VINYL THERMAL SPRAY, BETTER SURFACE COMPACTNESS
- CLOSED MAGNETIC CIRCUIT DESIGN REDUCES LEAKAGE



SPECIFICATIONS

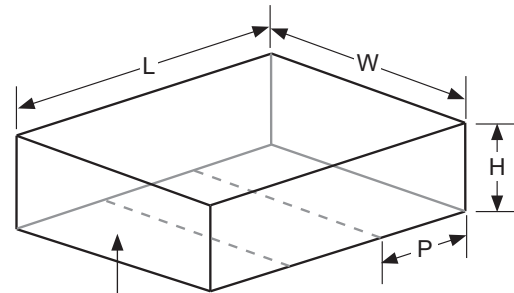
Specifications	Case Size			
	0605	0805	0806	1008
Inductance Range	0.24uH ~ 0.47uH	0.11uH ~ 2.2uH	0.24uH ~ 4.7uH	0.24uH ~ 10uH
Inductance Tolerance	±20% (M), ±30% (N)			
Operating Temperature Range	-40°C ~ +125°C (including self-heating)			
Self Resonant Frequency, DC Resistance, Rated DC Current and Inductance Tolerance	See Standard Values and Specifications Table			

Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.

DIMENSIONS (mm) & COMPOSITION

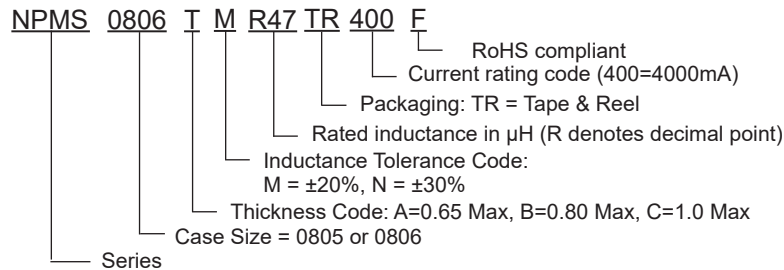
Case Size	L	W	H*	P
NPMS0605	1.4 ± 0.20	1.20 ± 0.20	0.65 Max	0.4 ± 0.15
			0.8 Max	
NPMS0805	2.0 ± 0.20	1.20 ± 0.20	0.8 Max	0.6 ± 0.20
			1.0 Max	
NPMS0806	2.0 ± 0.20	1.60 ± 0.20	0.8 Max	0.6 ± 0.20
			1.0 Max	
NPMS1008	2.5 ± 0.20	2.0 ± 0.20	0.8 Max	0.8 ± 0.20
			1.0 Max	

*See specifications tables for individual part thickness



Termination Material:
Cu over Ni over Sn

PART NUMBER SYSTEM



NPMS Series

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NPMS0605 SERIES (0605 Size Code, 1.4 x 1.2 mm)

NIC P/N	'L' Inductance (uH)	Tolerance	"L" Test Frequency (MHz)	SRF MHz (min.)	DCR (ohms)	Isat Max. (A)	Irms Max. (A)	Thickness (mm)
NPMS0605A_R33TR350F	0.33	±20% (M), ±30% (N)	1	120	0.028	5.4	3.5	0.65 Max
NPMS0605A_R47TR290F	0.47	±20% (M), ±30% (N)	1	115	0.036	3	2.9	
NPMS0605B_R24TR490F	0.24	±20% (M), ±30% (N)	1	135	0.02	6.5	4.9	0.8 Max
NPMS0605B_R33TR380F	0.33	±20% (M), ±30% (N)	1	130	0.023	5.2	3.8	
NPMS0605B_R47TR320F	0.47	±20% (M), ±30% (N)	1	110	0.028	4	3.2	

NPMS0805 SERIES (0805 Size Code, 2.0 x 1.2 mm)

NIC P/N	'L' Inductance (uH)	Tolerance	"L" Test Frequency (MHz)	SRF MHz (min.)	DCR (ohms)	Isat Max. (A)	Irms Max. (A)	Thickness (mm)
NPMS0805B_R11TR560F	0.11	±20% (M), ±30% (N)	1	185	0.01	10	5.6	0.8 Max
NPMS0805B_R24TR540F	0.24	±20% (M), ±30% (N)	1	130	0.016	6.5	5.4	
NPMS0805B_R33TR400F	0.33	±20% (M), ±30% (N)	1	125	0.023	5.6	4.0	
NPMS0805B_R47TR370F	0.47	±20% (M), ±30% (N)	1	96	0.037	5.5	3.7	
NPMS0805B_R47TR400F	0.47	±20% (M), ±30% (N)	1	96	0.022	4.5	4	
NPMS0805B_1R0TR200F	1.0	±20% (M), ±30% (N)	1	74	0.092	2.8	2	
NPMS0805B_2R2TR110F	2.2	±20% (M), ±30% (N)	1	45	0.216	2.2	1.1	
NPMS0805B_2R2TR180F	2.2	±20% (M), ±30% (N)	1	42	0.12	1.9	1.8	
NPMS0805C_R11TR640F	0.11	±20% (M), ±30% (N)	1	264	0.008	13	6.4	1.0 Max
NPMS0805C_R24TR450F	0.24	±20% (M), ±30% (N)	1	136	0.019	6.2	4.5	
NPMS0805C_R47TR480F	0.47	±20% (M), ±30% (N)	1	96	0.021	5.1	4.8	
NPMS0805C_1R0TR310F	1.0	±20% (M), ±30% (N)	1	56	0.046	3.6	3.1	
NPMS0805C_2R2TR190F	2.2	±20% (M), ±30% (N)	1	36	0.1	2.1	1.9	

NPMS0806 SERIES (0806 Size Code, 2.0 x 1.6 mm)

NIC P/N	'L' Inductance (uH)	Tolerance	"L" Test Frequency (MHz)	SRF MHz (min.)	DCR (ohms)	Isat Max. (A)	Irms Max. (A)	Thickness (mm)
NPMS0806B_R24TR440F	0.24	±20% (M), ±30% (N)	1	120	0.018	5.7	4.4	0.8 Max
NPMS0806B_R33TR510F	0.33	±20% (M), ±30% (N)	1	115	0.021	6.6	5.1	
NPMS0806B_R47TR360F	0.47	±20% (M), ±30% (N)	1	104	0.021	5.0	3.6	
NPMS0806B_R68TR370F	0.68	±20% (M), ±30% (N)	1	74	0.042	4.4	3.7	
NPMS0806B_1R0TR270F	1.0	±20% (M), ±30% (N)	1	62	0.059	3.3	2.7	
NPMS0806B_2R2TR180F	2.2	±20% (M), ±30% (N)	1	40	0.134	2.3	1.8	
NPMS0806C_R24TR500F	0.24	±20% (M), ±30% (N)	1	142	0.014	7	5	1.0 Max
NPMS0806C_R33TR480F	0.33	±20% (M), ±30% (N)	1	110	0.018	6.8	4.8	
NPMS0806C_R47TR400F	0.47	±20% (M), ±30% (N)	1	98	0.026	6.0	4.0	
NPMS0806C_1R0TR350F	0.68	±20% (M), ±30% (N)	1	68	0.03	4.8	3.5	
NPMS0806C_1R0TR340F	1.0	±20% (M), ±30% (N)	1	46	0.042	4.6	3.4	
NPMS0806C_1R5TR280F	1.5	±20% (M), ±30% (N)	1	40	0.064	3.2	2.8	
NPMS0806C_2R2TR210F	2.2	±20% (M), ±30% (N)	1	40	0.123	3.8	2.1	
NPMS0806C_4R7TR130F	4.7	±20% (M), ±30% (N)	1	26	0.213	1.6	1.3	

Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.

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NPMS Series

Miniaturized Molded Chip Power Inductors



NPMS1008 SERIES (1008 Size Code, 2.5 x 2.0 mm)

NIC P/N	'L' Inductance (uH)	Tolerance	"L" Test Frequency (MHz)	SRF MHz (min.)	DCR (ohms)	Isat Max. (A)	Irms Max. (A)	Thickness (mm)
NPMS1008B_1R0TR320F	1.0	±20% (M), ±30% (N)	1	55	0.046	3.5	3.2	0.8 Max
NPMS1008B_4R7TR165F	4.7	±20% (M), ±30% (N)	1	20	0.165	1.75	1.65	
NPMS1008B_100TR095F	10	±20% (M), ±30% (N)	1	14	0.507	1.2	0.95	
NPMS1008C_R24TR600F	0.24	±20% (M), ±30% (N)	1	144	0.0115	8.4	6	1.0 Max
NPMS1008C_R33TR500F	0.33	±20% (M), ±30% (N)	1	95	0.013	7.5	5	
NPMS1008C_R47TR470F	0.47	±20% (M), ±30% (N)	1	81	0.016	6	4.7	
NPMS1008C_R68TR450F	0.68	±20% (M), ±30% (N)	1	63	0.024	5.8	4.5	
NPMS1008C_1R0TR340F	1.0	±20% (M), ±30% (N)	1	53	0.038	4.5	3.4	
NPMS1008C_1R5TR360F	1.5	±20% (M), ±30% (N)	1	35	0.037	3.7	3.6	
NPMS1008C_2R2TR230F	2.2	±20% (M), ±30% (N)	1	27	0.057	3.2	2.3	
NPMS1008C_3R3TR190F	3.3	±20% (M), ±30% (N)	1	22	0.095	2.6	1.9	
NPMS1008C_4R7TR160F	4.7	±20% (M), ±30% (N)	1	19	0.124	1.9	1.6	
NPMS1008C_100TR120F	10	±20% (M), ±30% (N)	1	14	0.36	1.5	1.2	

ENVIRONMENTAL CHARACTERISTICS

Test	Test Method & Condition
Resistance to Soldering Heat	Solder temperature: 260±5°C, residence time:10±1s, Depth: the tin surface is 1.5mm from the element body, Speed:25mm/s±6mm/s; Solder: Sn/3.0Ag/0.5Cu. Place at room temperature for at least 24 ± 2 hours before measurements.
High Frequency Vibration	Reflow 3 times, soldered on board, 20Hz~2000Hz~20Hz, 1.5mm, peak acceleration 20G, 4mins for 1 cycle, 4 cycles in each X,Y,Z directions(16min), total of 12 cycles(48 mins).
Thermal Shock	Reflow 3 times, -40°C/(30±3min)-->+125°C/(30±3min), transforming interval:20s,100cycles.
Humidity	Reflow 3 times,85°C, 85%RH,1000hours. Place at room temperature for at least 24 ± 2 hours before measurements.
Low Temperature Storage	Reflow 3 times,-40±2°C, 1000h, Place at room temperature for at least 24 ±2 hours before measurements.
High Temperature Load Life	Reflow 3 times, 85±2°C,1000(+24) hours,rated current,3.6A

Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.

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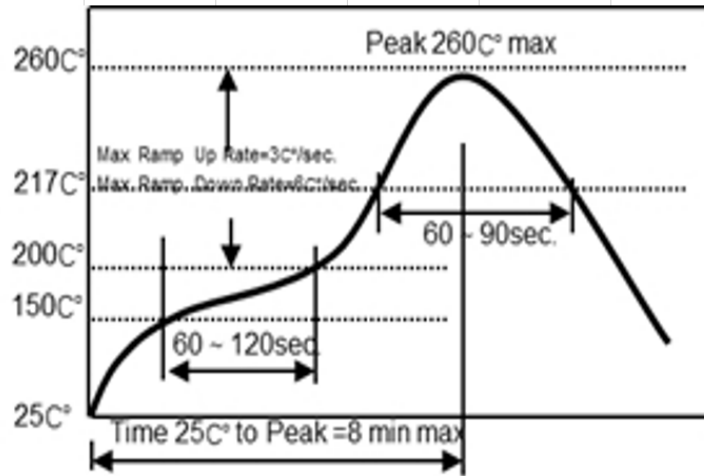
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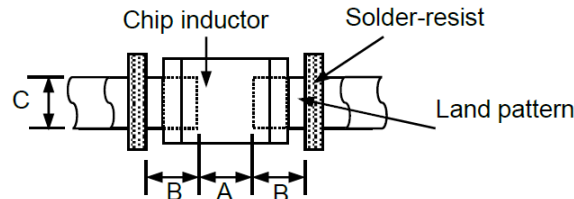


REFLOW SOLDERING PROFILE



LAND PATTERN DIMENSIONS

Series	A	B	C
NPMS0605	0.5 ~ 0.7	0.55 ~ 0.75	1.3 ~ 1.5
NPMS0805	0.8 ~ 1.2	0.8 ~ 1.2	1.2 ~ 2.0
NPMS0806	0.8 ~ 1.2	0.8 ~ 1.2	1.2 ~ 2.0
NPMS1008	1.2 ~ 1.6	0.8 ~ 1.2	1.8 ~ 2.4



CARRIER DIMENSIONS & REEL QUANTITY (mm)

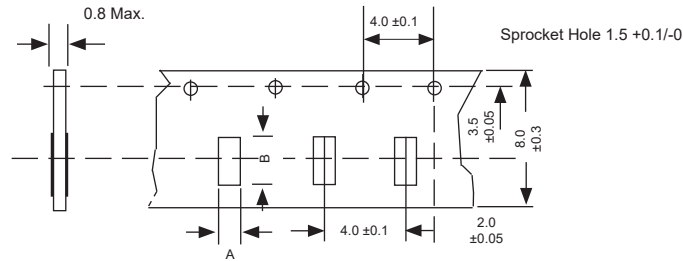
TYPE	Part Thickness	L	W	a	Carrier Material	Reel Qty
NPMS0605	0.65	1.4 ±0.2	1.2 ±0.2	0.4±0.15	Metal Alloy	3K
	0.8				Metal Alloy	3K
NPMS0805	0.8	2.0 ±0.2	1.2 ±0.2	0.6±0.2	Metal Alloy	3K
	1.0				Metal Alloy	3K
NPMS0806	0.8	2.0 ±0.2	1.6 ±0.2	0.6±0.2	Metal Alloy	3K
	1.0				Metal Alloy	3K
NPMS1008	0.8	2.5 ±0.2	2.0 ±0.2	0.8±0.2	Metal Alloy	3K
	1.0				Metal Alloy	3K

NPMS Series

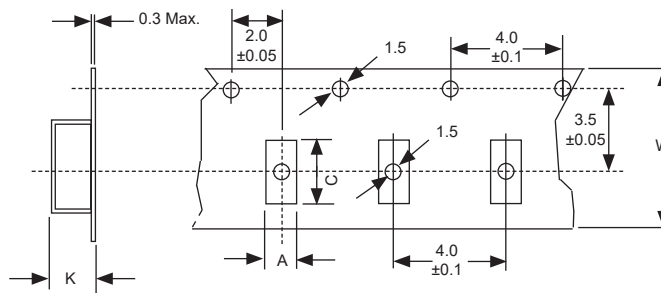
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PAPER CARRIER DIMENSIONS (mm)



EMBOSSED PLASTIC CARRIER DIMENSIONS (mm)



REEL DIMENSIONS (mm)

