Surface Mount Multilayer Inductor

NFP Series

FEATURES

- 0805, 0806 AND 1008 CASE SIZES
- HIGH DC CURRENT AND LOW DC RESISTANCE
- REFLOW SOLDERING APPLICABLE
- PACKAGE FOR AUTOMATIC PICK-PLACE

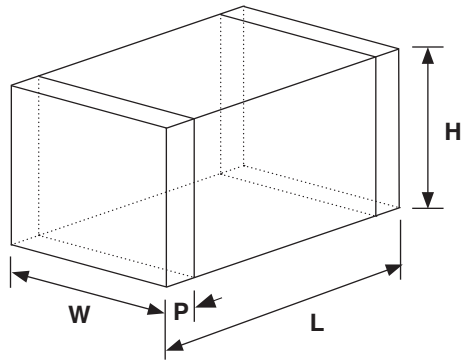
SPECIFICATIONS

Specifications	Case Size			
	0603	0805	0806	1008
Inductance Range	0.47µH ~ 2.2µH	0.47µH ~ 10µH	0.47µH ~ 10µH	0.47µH ~ 10µH
Inductance Tolerance	±20% (M), ±30% (N)			
Operating Temperature Range	-40°C ~ +85°C			
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)

Case Size	L	W	H	P
NFP0603	1.6 ± 0.15	0.8 ± 0.15	0.5 ± 0.1	0.3 ± 0.2
			0.8 ± 0.15	
NFP0805	2.0 +0.3/-0.1	1.25 ± 0.2	0.5 ± 0.1	0.5 ± 0.3
			0.9 ± 0.1	
			1.25 ± 0.2	
NFP0806	2.0 +0.3/-0.1	1.6 ± 0.2	0.9 ± 0.1	0.5 ± 0.3
			1.1 ± 0.1	
NFP1008	2.5 ± 0.2	2.0 +0.3/-0.1	0.9 ± 0.1	0.5 ± 0.3
			1.1 ± 0.1	



PART NUMBER SYSTEM

NFP 0806 M R47 TR 120 F

- F — RoHS compliant
- 120 — Current rating code (120=1200mA)
- TR — Packaging: TR = Tape & Reel
- R47 — Rated inductance in µH (R denotes decimal point)
- M — Inductance Tolerance Code: M = ±20%, N = ±30%
- 0806 — Case Size: 06 = 0603, 10 = 0805
- NFP — Series

ENVIRONMENTAL CHARACTERISTICS

Test	Specification	Test Method & Condition
Resistance to Soldering Heat	No Mechanical Damage Inductance: ±20% of initial value (parts should be stablized at room temperature for 2 hours prior to testing)	+260°C for 5 seconds
Low Frequency Vibration		Cycle 10Hz ~ 55Hz ~ 10Hz (1 minute), 2 hours each axis (X, Y, Z)
Thermal Shock		Cycle -40°C for 30 min. > +85°C 30 min., 100 cycles
Humidity		+60°C, 90% ~ 95%RH, 1,000 hours
Low Temperature Storage		-40°C for 1,000 hours
High Temperature Load Life		+85°C for 1,000 hours

NFP0603 SERIES 0603 CASE SIZE

NIC P/N	'L' Inductance (µH)	Tolerance	"L" Test Frequency	SRF MHz (min.)	DC Resistance (ohms)	Rated DC Current (mA) Max.	Component Thickness (mm)
NFP0603NR47TR90F	0.47	±30% (N)	1	105	0.19 ± 25%	900	0.5 ± 0.1
NFP0603NR47TR120F	0.47	±30% (N)	1	105	0.12 ± 25%	1200	0.8 ± 0.15
NFP0603NR68TR100F	0.68	±30% (N)	1	90	0.16 ± 25%	1000	
NFP0603N1R0TR95F	1.0	±30% (N)	1	60	0.20 ± 25%	950	
NFP0603N2R2TR75F	2.2	±30% (N)	1	40	0.30 ± 25%	750	

NFP0805 SERIES 0805 CASE SIZE

NIC P/N	'L' Inductance (µH)	Tolerance	"L" Test Frequency	SRF MHz (min.)	DC Resistance (ohms)	Rated DC Current (mA) Max.	Component Thickness (mm)
NFP0805MR22TR150F	0.22	±20% (M)	1	100	0.09 ± 25%	1500	0.5 ± 0.1
NFP0805_R47TR110F	0.47	±20% (M), ±30% (N)	1	100	0.12 ± 25%	1100	
NFP0805_1R0TR80F	1	±20% (M), ±30% (N)	1	60	0.19 ± 25%	800	
NFP0805_1R5TR70F	1.5	±20% (M), ±30% (N)	1	50	0.26 ± 25%	700	
NFP0805_2R2TR60F	2.2	±20% (M), ±30% (N)	1	40	0.34 ± 25%	600	
NFP0805_R47TR120F	0.47	±20% (M), ±30% (N)	1	100	0.09 ± 25%	1200	
NFP0805_1R0TR100F	1	±20% (M), ±30% (N)	1	60	0.11 ± 25%	1000	0.9 ± 0.1
NFP0805_1R5TR90F	1.5	±20% (M), ±30% (N)	1	50	0.16 ± 25%	900	
NFP0805_2R2TR80F	2.2	±20% (M), ±30% (N)	1	40	0.25 ± 25%	800	
NFP0805_3R3TR90F	3.3	±20% (M), ±30% (N)	1	30	0.19 ± 25%	900	
NFP0805_4R7TR80F	4.7	±20% (M), ±30% (N)	1	30	0.25 ± 25%	800	
NFP0805M100TR50F	10	±20% (M)	1	15	0.5 ± 30%	500	1.25 ± 0.2

NFP0806 SERIES 0806 CASE SIZE

NIC P/N	'L' Inductance (µH)	Tolerance	"L" Test Frequency	SRF MHz (min.)	DC Resistance (ohms)	Rated DC Current (mA) Max.	Component Thickness (mm)
NFP0806_R47TR160F	0.47	±20% (M), ±30% (N)	1	100	0.06 ± 25%	1600	0.9 ± 0.1
NFP0806_1R0TR140F	1	±20% (M), ±30% (N)	1	70	0.09 ± 25%	1400	
NFP0806_1R5TR120F	1.5	±20% (M), ±30% (N)	1	60	0.11 ± 25%	1200	
NFP0806_2R2TR120F	2.2	±20% (M), ±30% (N)	1	50	0.11 ± 25%	1200	
NFP0806_3R3TR120F	3.3	±20% (M), ±30% (N)	1	40	0.12 ± 25%	1200	
NFP0806_4R7TR110F	4.7	±20% (M), ±30% (N)	1	30	0.14 ± 25%	1100	
NFP0806M100TR80F	10	±20% (M)	1	15	0.25 ± 25%	800	1.1 ± 0.1

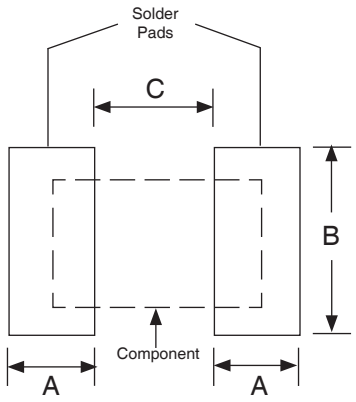
NFP1008 SERIES 1008 CASE SIZE

NIC P/N	'L' Inductance (µH)	Tolerance	"L" Test Frequency	SRF MHz (min.)	DC Resistance (ohms)	Rated DC Current (mA) Max.	Component Thickness (mm)
NFP1008_R47TR180F	0.47	±20% (M), ±30% (N)	1	100	0.04 ± 25%	1800	0.9 ± 0.1
NFP1008_1R0TR160F	1	±20% (M), ±30% (N)	1	60	0.06 ± 25%	1600	
NFP1008_1R5TR150F	1.5	±20% (M), ±30% (N)	1	50	0.07 ± 25%	1500	
NFP1008_2R2TR130F	2.2	±20% (M), ±30% (N)	1	40	0.08 ± 25%	1300	
NFP1008_3R3TR120F	3.3	±20% (M), ±30% (N)	1	30	0.10 ± 25%	1200	
NFP1008_4R7TR110F	4.7	±20% (M), ±30% (N)	1	25	0.11 ± 25%	1100	
NFP1008_1R0TR150F	1	±20% (M), ±30% (N)	1	70	0.09 ± 25%	1500	1.1 ± 0.1
NFP1008_2R2TR100F	2.2	±20% (M), ±30% (N)	1	40	0.12 ± 25%	1000	
NFP1008_3R3TR100F	3.3	±20% (M), ±30% (N)	1	30	0.12 ± 25%	1000	
NFP1008_4R7TR90F	4.7	±20% (M), ±30% (N)	1	25	0.14 ± 25%	900	
NFP1008M100TR80F	10	±20% (M)	1	15	0.30 ± 30%	800	

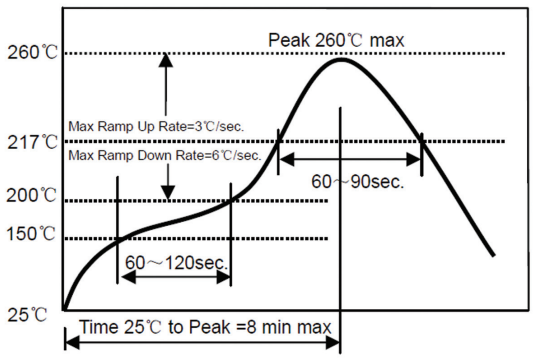
Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.

LAND PATTERN DIMENSIONS

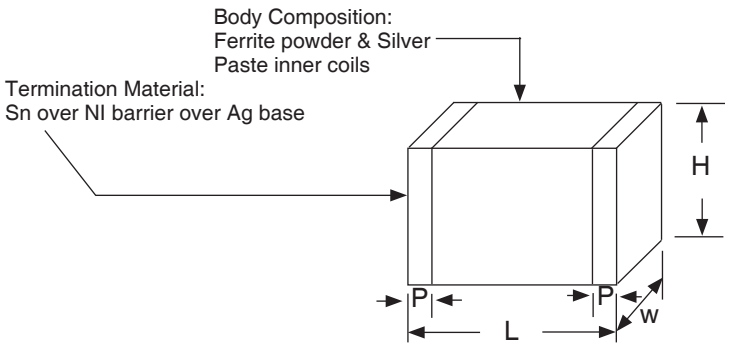
Series	A	B	C
NFP0603	0.6 ~ 0.8	0.6 ~ 0.8	0.6 ~ 0.8
NFP0805	0.8 ~ 1.2	0.9 ~ 1.6	0.8 ~ 1.2
NFP0806	0.8 ~ 1.2	1.2 ~ 2.0	0.8 ~ 1.2
NPF1008	0.6 ~ 1.0	1.8 ~ 2.2	1.0 ~ 1.4



REFLOW SOLDERING PROFILE



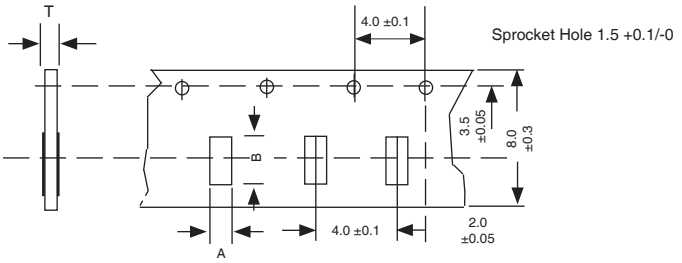
COMPOSITION



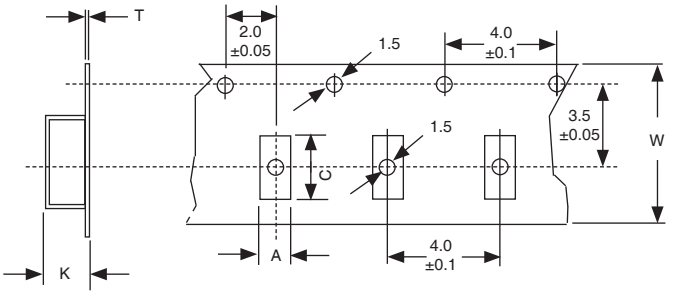
CARRIER DIMENSIONS & REEL QUANTITY (mm)

TYPE	Part Thickness	A	B	K max.	T max.	Carrier Material	Reel Qty
NFP0603	0.5	1.0 ± 0.2	1.8 ± 0.2	-	0.8	Paper	5,000
	0.8				1.1		4,000
NFP0805	0.5	1.55 ± 0.10	2.30 ± 0.10		0.8		5,000
	0.9			1.45	0.3	Plastic	3,000
	1.25			1.75			
NFP0806	0.9	1.90 ± 0.10		1.45			
	1.1			1.75			
NFP1008	0.9	2.30 ± 0.10	2.80 ± 0.10	1.45			
	1.1			1.75			

PAPER CARRIER DIMENSIONS (mm)



EMBOSSED PLASTIC CARRIER DIMENSIONS (mm)



REEL DIMENSIONS (mm):