NPIM-PA Series

Automotive Shielded Power Inductors

AEC-Q200 QUALIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC COMPONENTS
Performance Passives By Design

FEATURES

- SHIELDED POWER INDUCTOR
- MOLDED METAL COMPOSITE CONSTRUCTION
- HIGH SATURATION CURRENT CHARACTERISTICS (~ 135A)
- LOW PROFILE (1.0mm ~ 6.7mm)
- MEETS THE REQUIREMENTS OF AEC-Q200

CHARACTERISTICS

Case Code	39	30	31	32	40	41	42
Inductance Range (μH)	0.15 ~ 10	0.22 ~ 10	0.47 ~ 15	0.10 ~ 10	0.10 ~ 22	0.047 ~ 10	0.10 ~ 22
Case Code	59	50	51	52	53	79	70
Inductance Range (μH)	0.10 ~ 15	0.10 ~ 22	0.10 ~ 15	0.10 ~ 22	0.10 ~ 33	0.10 ~ 22	0.10 ~ 22
Case Code	71	72	73	74	75	83	104
Inductance Range (μH)	0.10 ~ 33	0.10 ~ 22	0.10 ~ 22	0.10 ~ 47	0.10 ~ 100	0.22 ~ 22	0.10 ~ 100
Case Code	105	143	144	146	177		
Inductance Range (μH)	0.22 ~ 100	1.0 ~ 47	0.10 ~ 82	0.15 ~ 330	0.22 ~ 470		
Ambient Operating Temperature Range	-55°C ~ +125°C						
Maximum Component Temperature (Ambient + Self-Heating)	+125°C						
Temperature Rise at Irms	+40°C						
Inductance Change at Isat	-30%						
Inductance Tolerance	See Specifications Tables						
Resistance to Solder Heat	260°C ±5°C for 10 seconds						

PART NUMBER SYSTEM

NPIM -- PA4R7 M TR QY F

- F — RoHS Compliant
- QY — "QY" denotes suitable for automotive equipment, sourced to special production and inspection at IATF-16949 certified production site
- TR — Packaging: TR = Tape & Reel
- M — Inductance Tolerance Code: M=±20%
- 4R7 — Inductance Code (μH): 1st two digits are significant, 3rd digit is multiplier for values from 10μH and up.
- PA — Construction Code (see drawing for details)
- -- — Size Code (see table for details)
- NPIM — Series

Figure 1

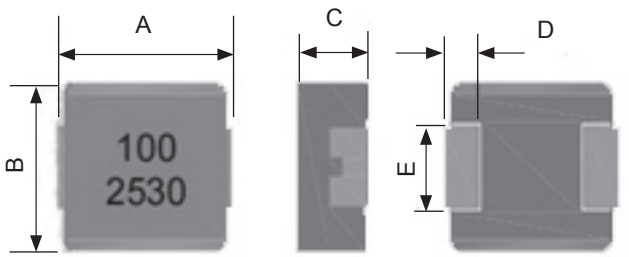
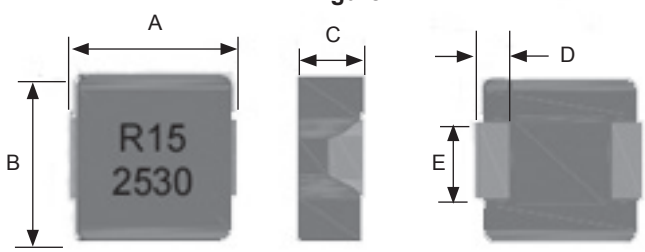


Figure 2



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COMPONENTS
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CASE SIZE AND DIMENSIONS (mm)

Series	A	B	C	D	E
NPIM39PA	3.50±0.20	3.20±0.20	1.00±0.20	0.70±0.20	1.20±0.20
NPIM30PA	3.50±0.30	3.20±0.20	1.30±0.20	0.70±0.20	1.20±0.20
NPIM31PA	3.50±0.30	3.20±0.20	1.60±0.20	0.70±0.20	1.20±0.20
NPIM32PA	3.50±0.20	3.20±0.20	1.80±0.20	0.70±0.20	1.20±0.20
NPIM40PA	4.45±0.25	4.06±0.25	1.00±0.20	0.76±0.30	2.00±0.20
NPIM41PA	4.45±0.25	4.06±0.25	1.30±0.20	0.76±0.30	2.00±0.20
NPIM42PA	4.45±0.25	4.06±0.25	1.80±0.20	0.76±0.30	2.00±0.20
NPIM59PA	5.70±0.30	5.20±0.20	1.00±0.20	1.10±0.30	2.50±0.30
NPIM50PA	5.70±0.30	5.20±0.20	1.30±0.20	1.10±0.30	2.50±0.30
NPIM51PA	5.70±0.30	5.20±0.20	1.60±0.20	1.10±0.30	2.50±0.30
NPIM52PA	5.70±0.30	5.20±0.20	1.80±0.20	1.10±0.30	2.50±0.30
NPIM53PA	5.70±0.30	5.20±0.20	2.80±0.20	1.10±0.30	1.50±0.20
NPIM79PA	7.30±0.30	6.60±0.30	1.00±0.20	1.80±0.30	2.50±0.30
NPIM70PA	7.30±0.30	6.60±0.30	1.30±0.20	1.80±0.30	3.00±0.30
NPIM71PA	7.30±0.30	6.60±0.30	1.60±0.20	1.80±0.30	3.00±0.30
NPIM72PA	7.30±0.30	6.60±0.30	1.80±0.20	1.80±0.30	3.00±0.30
NPIM73PA	7.30±0.30	6.60±0.30	2.20±0.20	1.80±0.30	3.00±0.30
NPIM74PA	7.30±0.30	6.60±0.30	2.80±0.20	1.80±0.30	3.00±0.30
NPIM75PA	7.30±0.30	6.60±0.30	4.80±0.20	1.80±0.30	3.00±0.30
NPIM83PA	8.80±0.40	8.40±0.30	2.80±0.20	1.60±0.30	5.00±0.30
NPIM104PA	11.00±0.50	10.00±0.30	3.80±0.20	2.30±0.30	3.00±0.30
NPIM105PA	11.00±0.50	10.00±0.30	4.80±0.20	2.30±0.30	3.00±0.30
NPIM143PA	13.50±0.50	12.50±0.30	3.30±0.30	2.30±0.30	4.70±0.30
NPIM144PA	13.50±0.50	12.50±0.30	4.80±0.30	2.30±0.30	4.70±0.30
NPIM146PA	13.50±0.50	12.50±0.30	6.20±0.30	2.30±0.30	4.70±0.30
NPIM177PA	17.60±0.40	16.90±0.30	6.70±0.30	2.10±0.30	11.90±0.30

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NIC COMPONENTS
Performance Passives By Design

Part Number	STANDARD VALUES - CASE SIZE 39PA (3.5 X 3.2 X 1.0mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM39PAR15YTRQYF	0.15	±30%	11	14	10	100KHz/1.0V	1
NPIM39PAR22MTRQYF	0.22	±20%	17	10	6.5	100KHz/1.0V	1
NPIM39PAR33MTRQYF	0.33	±20%	20	9.2	6.2	100KHz/1.0V	1
NPIM39PAR47MTRQYF	0.47	±20%	30	7.2	5.0	100KHz/1.0V	1
NPIM39PAR56MTRQYF	0.56	±20%	36	6.6	4.5	100KHz/1.0V	1
NPIM39PAR68MTRQYF	0.68	±20%	40	6.1	4.0	100KHz/1.0V	1
NPIM39PAR82MTRQYF	0.82	±20%	48	5.8	3.5	100KHz/1.0V	1
NPIM39PA1R0MTRQYF	1.0	±20%	60	5.5	3.3	100KHz/1.0V	1
NPIM39PA1R5MTRQYF	1.5	±20%	85	4.0	3.0	100KHz/1.0V	1
NPIM39PA2R2MTRQYF	2.2	±20%	115	3.4	2.7	100KHz/1.0V	1
NPIM39PA3R3MTRQYF	3.3	±20%	210	3.1	2.0	100KHz/1.0V	1
NPIM39PA4R7MTRQYF	4.7	±20%	293	2.8	1.6	100KHz/1.0V	1
NPIM39PA5R6MTRQYF	5.6	±20%	360	2.2	1.5	100KHz/1.0V	1
NPIM39PA6R8MTRQYF	6.8	±20%	400	2.0	1.4	100KHz/1.0V	1
NPIM39PA8R2MTRQYF	8.2	±20%	463	1.7	1.2	100KHz/1.0V	1
NPIM39PA100MTRQYF	10	±20%	550	1.4	1.0	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 30PA (3.5 X 3.2 X 1.3mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM30PAR22MTRQYF	0.22	±20%	17	10.8	7.0	100KHz/1.0V	1
NPIM30PAR47MTRQYF	0.47	±20%	28	8.0	5.5	100KHz/1.0V	1
NPIM30PAR56MTRQYF	0.56	±20%	33	7.2	5.0	100KHz/1.0V	1
NPIM30PAR68MTRQYF	0.68	±20%	42	6.5	4.5	100KHz/1.0V	1
NPIM30PA1R0MTRQYF	1.0	±20%	50	5.8	3.6	100KHz/1.0V	1
NPIM30PA1R5MTRQYF	1.5	±20%	77	4.0	3.4	100KHz/1.0V	1
NPIM30PA2R2MTRQYF	2.2	±20%	98	3.8	3.2	100KHz/1.0V	1
NPIM30PA3R3MTRQYF	3.3	±20%	205	3.2	2.5	100KHz/1.0V	1
NPIM30PA4R7MTRQYF	4.7	±20%	264	2.8	1.9	100KHz/1.0V	1
NPIM30PA5R6MTRQYF	5.6	±20%	318	2.3	1.7	100KHz/1.0V	1
NPIM30PA6R8MTRQYF	6.8	±20%	348	2.0	1.5	100KHz/1.0V	1
NPIM30PA8R2MTRQYF	8.2	±20%	468	1.8	1.3	100KHz/1.0V	1
NPIM30PA100MTRQYF	10	±20%	522	1.6	1.2	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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NIC COMPONENTS
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Part Number	STANDARD VALUES - CASE SIZE 31PA (3.5 X 3.2 X 1.6mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM31PAR47MTRQYF	0.47	±20%	25	8.5	6.0	100KHz/1.0V	1
NPIM31PAR56MTRQYF	0.56	±20%	26	8.0	5.0	100KHz/1.0V	1
NPIM31PAR68MTRQYF	0.68	±20%	33.5	6.5	5.0	100KHz/1.0V	1
NPIM31PA1R0MTRQYF	1.0	±20%	44	5.0	3.8	100KHz/1.0V	1
NPIM31PA1R5MTRQYF	1.5	±20%	65	4.0	3.5	100KHz/1.0V	1
NPIM31PA2R2MTRQYF	2.2	±20%	85	3.7	3.3	100KHz/1.0V	1
NPIM31PA3R3MTRQYF	3.3	±20%	158	3.3	2.7	100KHz/1.0V	1
NPIM31PA4R7MTRQYF	4.7	±20%	208	2.9	2.3	100KHz/1.0V	1
NPIM31PA5R6MTRQYF	5.6	±20%	275	2.3	1.9	100KHz/1.0V	1
NPIM31PA6R8MTRQYF	6.8	±20%	320	2.1	1.5	100KHz/1.0V	1
NPIM31PA8R2MTRQYF	8.2	±20%	405	1.9	1.4	100KHz/1.0V	1
NPIM31PA100MTRQYF	10	±20%	450	1.6	1.3	100KHz/1.0V	1
NPIM31PA150MTRQYF	15	±20%	600	1.5	1.2	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 32PA (3.5 X 3.2 X 1.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM32PAR10YTRQYF	0.10	±30%	9.0	14.0	10.5	100KHz/1.0V	1
NPIM32PAR22YTRQYF	0.22	±30%	14.0	11.2	9.0	100KHz/1.0V	1
NPIM32PAR33MTRQYF	0.33	±20%	21.0	10.0	8.0	100KHz/1.0V	1
NPIM32PAR47MTRQYF	0.47	±20%	23.0	9.0	7.0	100KHz/1.0V	1
NPIM32PAR68MTRQYF	0.68	±20%	29.0	7.0	5.5	100KHz/1.0V	1
NPIM32PA1R0MTRQYF	1.0	±20%	38.0	5.0	4.0	100KHz/1.0V	1
NPIM32PA1R5MTRQYF	1.5	±20%	50.0	4.0	3.8	100KHz/1.0V	1
NPIM32PA2R2MTRQYF	2.2	±20%	75.0	3.7	3.5	100KHz/1.0V	1
NPIM32PA3R3MTRQYF	3.3	±20%	145.0	3.5	3.0	100KHz/1.0V	1
NPIM32PA4R7MTRQYF	4.7	±20%	200.0	3.0	2.6	100KHz/1.0V	1
NPIM32PA5R6MTRQYF	5.6	±20%	238.0	2.6	2.2	100KHz/1.0V	1
NPIM32PA6R8MTRQYF	6.8	±20%	300.0	2.2	1.9	100KHz/1.0V	1
NPIM32PA8R2MTRQYF	8.2	±20%	390.0	1.9	1.6	100KHz/1.0V	1
NPIM32PA100MTRQYF	10	±20%	422.0	1.6	1.4	100KHz/1.0V	1

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NIC COMPONENTS
Performance Passives By Design

Part Number	STANDARD VALUES - CASE SIZE 40PA (4.45 X 4.06 X 1.0mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM40PAR10YTRQYF	0.10	±30%	5.5	25.0	11.5	100KHz/1.0V	1
NPIM40PAR15YTRQYF	0.15	±30%	6.8	21.5	10	100KHz/1.0V	1
NPIM40PAR22MTRQYF	0.22	±20%	8.0	20	8.5	100KHz/1.0V	1
NPIM40PAR33MTRQYF	0.33	±20%	16	11	7.0	100KHz/1.0V	1
NPIM40PAR47MTRQYF	0.47	±20%	20	6.5	6.0	100KHz/1.0V	1
NPIM40PAR68MTRQYF	0.68	±20%	37	6.0	5.0	100KHz/1.0V	1
NPIM40PA1R0MTRQYF	1.0	±20%	47	6.0	4.0	100KHz/1.0V	1
NPIM40PA1R5MTRQYF	1.5	±20%	63.3	4.0	3.0	100KHz/1.0V	1
NPIM40PA2R2MTRQYF	2.2	±20%	80	3.5	2.8	100KHz/1.0V	1
NPIM40PA3R3MTRQYF	3.3	±20%	97	3.0	2.3	100KHz/1.0V	1
NPIM40PA4R7MTRQYF	4.7	±20%	145	2.5	2.0	100KHz/1.0V	1
NPIM40PA5R6MTRQYF	5.6	±20%	208	2.3	1.7	100KHz/1.0V	1
NPIM40PA6R8MTRQYF	6.8	±20%	360	1.7	1.5	100KHz/1.0V	1
NPIM40PA8R2MTRQYF	8.2	±20%	376	1.6	1.4	100KHz/1.0V	1
NPIM40PA100MTRQYF	10	±20%	463	1.4	1.3	100KHz/1.0V	1
NPIM40PA220MTRQYF	22	±20%	1050	1.0	0.8	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 41PA (4.45 X 4.06 X 1.3mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM41PA47NMTRQYF	0.047	±20%	2.5	48.0	20.5	100KHz/1.0V	1
NPIM41PAR10YTRQYF	0.10	±30%	4.0	32.0	16.0	100KHz/1.0V	1
NPIM41PAR22MTRQYF	0.22	±20%	7.8	20.0	10.0	100KHz/1.0V	1
NPIM41PAR47MTRQYF	0.47	±20%	19	11.0	8.0	100KHz/1.0V	1
NPIM41PAR68MTRQYF	0.68	±20%	21.5	8.5	6.5	100KHz/1.0V	1
NPIM41PAR82MTRQYF	0.82	±20%	36	7.5	5.5	100KHz/1.0V	1
NPIM41PA1R0MTRQYF	1.0	±20%	40	7.0	5.0	100KHz/1.0V	1
NPIM41PA1R5MTRQYF	1.5	±20%	53	6.0	4.0	100KHz/1.0V	1
NPIM41PA2R2MTRQYF	2.2	±20%	72	4.0	3.2	100KHz/1.0V	1
NPIM41PA4R7MTRQYF	4.7	±20%	140	2.8	2.2	100KHz/1.0V	1
NPIM41PA6R8MTRQYF	6.8	±20%	276	2.3	1.7	100KHz/1.0V	1
NPIM41PA100MTRQYF	10	±20%	400	1.9	1.5	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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Part Number	STANDARD VALUES - CASE SIZE 42PA (4.45 X 4.06 X 1.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM42PAR10YTRQYF	0.10	±30%	4.0	35.0	14.0	100KHz/1.0V	1
NPIM42PAR22YTRQYF	0.22	±30%	7.3	24.0	13.0	100KHz/1.0V	1
NPIM42PAR33MTRQYF	0.33	±20%	8.6	18.0	10.0	100KHz/1.0V	1
NPIM42PAR47MTRQYF	0.47	±20%	14.0	12.0	8.0	100KHz/1.0V	1
NPIM42PAR56MTRQYF	0.56	±20%	16.0	10.0	7.3	100KHz/1.0V	1
NPIM42PAR68MTRQYF	0.68	±20%	19.0	10.0	7.0	100KHz/1.0V	1
NPIM42PA1R0MTRQYF	1.0	±20%	27.0	8.5	5.0	100KHz/1.0V	1
NPIM42PA1R5MTRQYF	1.5	±20%	42.0	7.0	4.5	100KHz/1.0V	1
NPIM42PA2R2MTRQYF	2.2	±20%	61.0	6.0	4.0	100KHz/1.0V	1
NPIM42PA3R3MTRQYF	3.3	±20%	76.0	4.0	3.5	100KHz/1.0V	1
NPIM42PA4R7MTRQYF	4.7	±20%	105.0	3.5	2.6	100KHz/1.0V	1
NPIM42PA5R6MTRQYF	5.6	±20%	125.0	3.0	2.2	100KHz/1.0V	1
NPIM42PA6R8MTRQYF	6.8	±20%	172.0	2.8	2.1	100KHz/1.0V	1
NPIM42PA8R2MTRQYF	8.2	±20%	180.0	2.5	2.0	100KHz/1.0V	1
NPIM42PA100MTRQYF	10	±20%	243.0	2.3	1.8	100KHz/1.0V	1
NPIM42PA150MTRQYF	15	±20%	374.0	1.9	1.5	100KHz/1.0V	1
NPIM42PA220MTRQYF	22	±20%	500.0	1.4	1.2	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 59PA (5.70 X 5.20 X 1.0mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM59PAR10YTRQYF	0.10	±30%	5.2	14.5	14.0	100KHz/1.0V	1
NPIM59PAR15YTRQYF	0.15	±30%	6	14.2	12.0	100KHz/1.0V	1
NPIM59PAR22MTRQYF	0.22	±20%	6.7	14.0	10.7	100KHz/1.0V	1
NPIM59PAR33MTRQYF	0.33	±20%	9.4	13.5	8.5	100KHz/1.0V	1
NPIM59PAR47MTRQYF	0.47	±20%	15.8	11.0	7.0	100KHz/1.0V	1
NPIM59PAR68MTRQYF	0.68	±20%	24.5	9.0	6.0	100KHz/1.0V	1
NPIM59PA1R0MTRQYF	1.0	±20%	30	6.0	5.0	100KHz/1.0V	1
NPIM59PA1R5MTRQYF	1.5	±20%	44	5.0	4.0	100KHz/1.0V	1
NPIM59PA2R2MTRQYF	2.2	±20%	75	4.0	3.5	100KHz/1.0V	1
NPIM59PA3R3MTRQYF	3.3	±20%	86	3.8	3.0	100KHz/1.0V	1
NPIM59PA4R7MTRQYF	4.7	±20%	115	3.2	2.5	100KHz/1.0V	1
NPIM59PA5R6MTRQYF	5.6	±20%	201	3.2	2.4	100KHz/1.0V	1
NPIM59PA6R8MTRQYF	6.8	±20%	222	3.0	2.0	100KHz/1.0V	1
NPIM59PA8R2MTRQYF	8.2	±20%	378	2.8	1.7	100KHz/1.0V	1
NPIM59PA100MTRQYF	10	±20%	385	1.8	1.5	100KHz/1.0V	1
NPIM59PA150MTRQYF	15	±20%	470	1.6	1.3	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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NPIM-PA Series

Automotive Shielded Power Inductors

AEC-Q200 QUALIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC COMPONENTS
Performance Passives By Design

Part Number	STANDARD VALUES - CASE SIZE 50PA (5.70 X 5.20 X 1.3mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM50PAR10YTRQYF	0.10	±30%	3.1	35.0	16.0	100KHz/1.0V	1
NPIM50PAR15YTRQYF	0.15	±30%	4.1	25.0	16.0	100KHz/1.0V	1
NPIM50PAR22YTRQYF	0.22	±30%	6.5	20.0	12.0	100KHz/1.0V	1
NPIM50PAR33MTRQYF	0.33	±20%	9.8	16.0	9.0	100KHz/1.0V	1
NPIM50PAR47MTRQYF	0.47	±20%	13.8	15.0	8.0	100KHz/1.0V	1
NPIM50PAR68MTRQYF	0.68	±20%	16.2	13.0	7.0	100KHz/1.0V	1
NPIM50PA1R0MTRQYF	1.0	±20%	25.3	9.0	6.0	100KHz/1.0V	1
NPIM50PA1R5MTRQYF	1.5	±20%	45	7.0	4.5	100KHz/1.0V	1
NPIM50PA2R2MTRQYF	2.2	±20%	52	6.0	4.0	100KHz/1.0V	1
NPIM50PA3R3MTRQYF	3.3	±20%	90	4.5	3.2	100KHz/1.0V	1
NPIM50PA4R7MTRQYF	4.7	±20%	118	4.0	2.7	100KHz/1.0V	1
NPIM50PA5R6MTRQYF	5.6	±20%	152	3.2	2.4	100KHz/1.0V	1
NPIM50PA6R8MTRQYF	6.8	±20%	171	3.0	2.3	100KHz/1.0V	1
NPIM50PA8R2MTRQYF	8.2	±20%	210	2.6	2.1	100KHz/1.0V	1
NPIM50PA100MTRQYF	10	±20%	235	2.3	2.0	100KHz/1.0V	1
NPIM50PA150MTRQYF	15	±20%	390	2.0	1.6	100KHz/1.0V	1
NPIM50PA220MTRQYF	22	±20%	466	1.7	1.2	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 51PA (5.70 X 5.20 X 1.6mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM51PAR10YTRQYF	0.10	±30%	2.8	40.0	17.0	100KHz/1.0V	1
NPIM51PAR15YTRQYF	0.15	±30%	3.9	27.0	15.5	100KHz/1.0V	1
NPIM51PAR22MTRQYF	0.22	±20%	5.0	22.0	13.0	100KHz/1.0V	1
NPIM51PAR33MTRQYF	0.33	±20%	8.6	15.0	11.0	100KHz/1.0V	1
NPIM51PAR47MTRQYF	0.47	±20%	11.3	14.0	10.0	100KHz/1.0V	1
NPIM51PAR56MTRQYF	0.56	±20%	13.0	13.5	9.5	100KHz/1.0V	1
NPIM51PAR68MTRQYF	0.68	±20%	14.3	13.0	9.0	100KHz/1.0V	1
NPIM51PA1R0MTRQYF	1.0	±20%	21	10.0	6.8	100KHz/1.0V	1
NPIM51PA1R5MTRQYF	1.5	±20%	30	9.0	6.0	100KHz/1.0V	1
NPIM51PA2R2MTRQYF	2.2	±20%	48.3	7.5	4.5	100KHz/1.0V	1
NPIM51PA3R3MTRQYF	3.3	±20%	69	5.0	3.5	100KHz/1.0V	1
NPIM51PA4R7MTRQYF	4.7	±20%	98	4.5	3.0	100KHz/1.0V	1
NPIM51PA5R6MTRQYF	5.6	±20%	127	4.0	2.5	100KHz/1.0V	1
NPIM51PA6R8MTRQYF	6.8	±20%	137	3.5	2.4	100KHz/1.0V	1
NPIM51PA8R2MTRQYF	8.2	±20%	165	3.0	2.3	100KHz/1.0V	1
NPIM51PA100MTRQYF	10	±20%	190	2.8	2.3	100KHz/1.0V	1
NPIM51PA150MTRQYF	15	±20%	318	2.3	1.7	100KHz/1.0V	1

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NIC COMPONENTS
Performance Passives By Design

Part Number	STANDARD VALUES - CASE SIZE 52PA (5.70 X 5.20 X 1.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM52PAR10YTRQYF	0.10	±30%	4.0	45	18	100KHz/1.0V	1
NPIM52PAR15YTRQYF	0.15	±30%	4.6	27	16.0	100KHz/1.0V	1
NPIM52PAR22MTRQYF	0.22	±20%	5.5	25	15.0	100KHz/1.0V	1
NPIM52PAR33MTRQYF	0.33	±20%	7.3	21.3	12.0	100KHz/1.0V	1
NPIM52PAR47MTRQYF	0.47	±20%	8.6	18.0	11.5	100KHz/1.0V	1
NPIM52PAR68MTRQYF	0.68	±20%	12.4	12.8	10.0	100KHz/1.0V	1
NPIM52PA1R0MTRQYF	1.0	±20%	20.0	13.7	7.0	100KHz/1.0V	1
NPIM52PA1R5MTRQYF	1.5	±20%	30.5	9.8	5.5	100KHz/1.0V	1
NPIM52PA2R2MTRQYF	2.2	±20%	50.0	9.0	4.2	100KHz/1.0V	1
NPIM52PA3R3MTRQYF	3.3	±20%	76.0	7.3	3.3	100KHz/1.0V	1
NPIM52PA4R7MTRQYF	4.7	±20%	116	5.0	2.8	100KHz/1.0V	1
NPIM52PA5R6MTRQYF	5.6	±20%	122	4.0	2.5	100KHz/1.0V	1
NPIM52PA6R8MTRQYF	6.8	±20%	150	3.8	2.4	100KHz/1.0V	1
NPIM52PA8R2MTRQYF	8.2	±20%	171	3.5	2.3	100KHz/1.0V	1
NPIM52PA100MTRQYF	10	±20%	199	3.4	2.3	100KHz/1.0V	1
NPIM52PA150MTRQYF	15	±20%	270	2.8	1.9	100KHz/1.0V	1
NPIM52PA220MTRQYF	22	±20%	390	1.8	1.5	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

Part Number	STANDARD VALUES - CASE SIZE 53PA (5.70 X 5.20 X 2.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM53PAR10YTRQYF	0.10	±30%	3.0	27.0	23.0	100KHz/1.0V	1
NPIM53PAR22MTRQYF	0.22	±20%	4.4	21.0	15.5	100KHz/1.0V	1
NPIM53PAR33MTRQYF	0.33	±20%	5.0	18.0	14.0	100KHz/1.0V	1
NPIM53PAR47MTRQYF	0.47	±20%	7.4	16.0	12.0	100KHz/1.0V	1
NPIM53PAR56MTRQYF	0.56	±20%	10	15	10.0	100KHz/1.0V	1
NPIM53PAR68MTRQYF	0.68	±20%	12	14	8.5	100KHz/1.0V	1
NPIM53PA1R0MTRQYF	1.0	±20%	14	11	7.0	100KHz/1.0V	1
NPIM53PA1R5MTRQYF	1.5	±20%	25	10	6.0	100KHz/1.0V	1
NPIM53PA2R2MTRQYF	2.2	±20%	35	9.0	5.5	100KHz/1.0V	1
NPIM53PA3R3MTRQYF	3.3	±20%	38	8.0	5.0	100KHz/1.0V	1
NPIM53PA4R7MTRQYF	4.7	±20%	53	6.0	4.6	100KHz/1.0V	1
NPIM53PA5R6MTRQYF	5.6	±20%	63	4.5	4.25	100KHz/1.0V	1
NPIM53PA6R8MTRQYF	6.8	±20%	76.2	4.3	4.0	100KHz/1.0V	1
NPIM53PA100MTRQYF	10	±20%	128	3.5	2.75	100KHz/1.0V	1
NPIM53PA150MTRQYF	15	±20%	190	2.6	2.1	100KHz/1.0V	1
NPIM53PA220MTRQYF	22	±20%	250	1.7	1.9	100KHz/1.0V	1
NPIM53PA330MTRQYF	33	±20%	440	1.6	1.6	100KHz/1.0V	1

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NIC COMPONENTS
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Part Number	STANDARD VALUES - CASE SIZE 79PA (7.3 X 6.6 X 1.0mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM79PAR10YTRQYF	0.10	±30%	4.0	30	16	100KHz/1.0V	1
NPIM79PAR15YTRQYF	0.15	±30%	5.7	24	14	100KHz/1.0V	1
NPIM79PAR22YTRQYF	0.22	±30%	7.5	19	11	100KHz/1.0V	1
NPIM79PAR33MTRQYF	0.33	±20%	10	16	9.5	100KHz/1.0V	1
NPIM79PAR47MTRQYF	0.47	±20%	17	12	8.5	100KHz/1.0V	1
NPIM79PAR68MTRQYF	0.68	±20%	19	9.0	7.0	100KHz/1.0V	1
NPIM79PA1R0MTRQYF	1.0	±20%	30	7.0	6.0	100KHz/1.0V	1
NPIM79PA1R5MTRQYF	1.5	±20%	40	6.5	4.5	100KHz/1.0V	1
NPIM79PA2R2MTRQYF	2.2	±20%	61	5.0	4.0	100KHz/1.0V	1
NPIM79PA3R3MTRQYF	3.3	±20%	103	4.0	3.2	100KHz/1.0V	1
NPIM79PA4R7MTRQYF	4.7	±20%	150	3.8	2.5	100KHz/1.0V	1
NPIM79PA6R8MTRQYF	6.8	±20%	198	3.0	2.1	100KHz/1.0V	1
NPIM79PA100MTRQYF	10	±20%	290	2.5	1.8	100KHz/1.0V	1
NPIM79PA180MTRQYF	18	±20%	540	2.0	1.35	100KHz/1.0V	1
NPIM79PA220MTRQYF	22	±20%	600	1.7	1.20	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 70PA (7.3 X 6.6 X 1.3mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM70PAR10YTRQYF	0.10	±30%	3.1	35	17.5	100KHz/1.0V	1
NPIM70PAR15YTRQYF	0.15	±30%	4.5	25	16	100KHz/1.0V	1
NPIM70PAR22YTRQYF	0.22	±30%	5.2	22.0	14	100KHz/1.0V	1
NPIM70PAR33MTRQYF	0.33	±20%	7.6	18	11	100KHz/1.0V	1
NPIM70PAR47MTRQYF	0.47	±20%	10.3	16.0	9.5	100KHz/1.0V	1
NPIM70PAR56MTRQYF	0.56	±20%	14	15.5	9.0	100KHz/1.0V	1
NPIM70PAR68MTRQYF	0.68	±20%	15.2	15.0	7.5	100KHz/1.0V	1
NPIM70PAR82MTRQYF	0.82	±20%	24	14	7.0	100KHz/1.0V	1
NPIM70PA1R0MTRQYF	1.0	±20%	25.8	12.0	6.5	100KHz/1.0V	1
NPIM70PA1R5MTRQYF	1.5	±20%	42.5	9.5	5.0	100KHz/1.0V	1
NPIM70PA2R2MTRQYF	2.2	±20%	55	6.5	4.5	100KHz/1.0V	1
NPIM70PA3R3MTRQYF	3.3	±20%	74	6.0	4.2	100KHz/1.0V	1
NPIM70PA4R7MTRQYF	4.7	±20%	111	5.0	3.8	100KHz/1.0V	1
NPIM70PA5R6MTRQYF	5.6	±20%	138	4.5	3.0	100KHz/1.0V	1
NPIM70PA6R8MTRQYF	6.8	±20%	148	3.5	2.6	100KHz/1.0V	1
NPIM70PA8R2MTRQYF	8.2	±20%	184	3.2	2.4	100KHz/1.0V	1
NPIM70PA100MTRQYF	10	±20%	216	2.8	2.3	100KHz/1.0V	1
NPIM70PA220MTRQYF	22	±20%	504	2.5	1.5	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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NPIM-PA Series

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NIC COMPONENTS
Performance Passives By Design

Part Number	STANDARD VALUES - CASE SIZE 71PA (7.3 X 6.6 X 1.6mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM71PAR10YTRQYF	0.10	±30%	2,5	45	18	100KHz/1.0V	1
NPIM71PAR15MTRQYF	0.15	±20%	2.6	34	18	100KHz/1.0V	1
NPIM71PAR22MTRQYF	0.22	±20%	3.0	26	16	100KHz/1.0V	1
NPIM71PAR33MTRQYF	0.33	±20%	5.8	22	14	100KHz/1.0V	1
NPIM71PAR47MTRQYF	0.47	±20%	7.4	18	12	100KHz/1.0V	1
NPIM71PAR56MTRQYF	0.56	±20%	10	17.5	11	100KHz/1.0V	1
NPIM71PAR68MTRQYF	0.68	±20%	11	17	10	100KHz/1.0V	1
NPIM71PAR82MTRQYF	0.82	±20%	14	15.5	8.5	100KHz/1.0V	1
NPIM71PA1R0MTRQYF	1.0	±20%	17	14	7.0	100KHz/1.0V	1
NPIM71PA1R5MTRQYF	1.5	±20%	25.2	13	6.0	100KHz/1.0V	1
NPIM71PA2R2MTRQYF	2.2	±20%	35	11	6.0	100KHz/1.0V	1
NPIM71PA3R3MTRQYF	3.3	±20%	46	9.0	5.0	100KHz/1.0V	1
NPIM71PA4R7MTRQYF	4.7	±20%	76	7.0	4.0	100KHz/1.0V	1
NPIM71PA5R6MTRQYF	5.6	±20%	86	6.0	3.5	100KHz/1.0V	1
NPIM71PA6R8MTRQYF	6.8	±20%	104	5.5	3.0	100KHz/1.0V	1
NPIM71PA8R2MTRQYF	8.2	±20%	140	4.5	2.6	100KHz/1.0V	1
NPIM71PA100MTRQYF	10	±20%	160	3.5	2.3	100KHz/1.0V	1
NPIM71PA150MTRQYF	15	±20%	280	3.0	2.0	100KHz/1.0V	1
NPIM71PA220MTRQYF	22	±20%	360	2.5	1.8	100KHz/1.0V	1
NPIM71PA330MTRQYF	33	±20%	650	2.1	1.3	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 72PA (7.3 X 6.6 X 1.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM72PAR10YTRQYF	0.10	±30%	2.4	40	21	100KHz/1.0V	1
NPIM72PAR15YTRQYF	0.15	±30%	2.7	39	18	100KHz/1.0V	1
NPIM72PAR22MTRQYF	0.22	±20%	4.0	32	15	100KHz/1.0V	1
NPIM72PAR33MTRQYF	0.33	±20%	5.0	25	14	100KHz/1.0V	1
NPIM72PAR47MTRQYF	0.47	±20%	8.3	20	11.7	100KHz/1.0V	1
NPIM72PAR56MTRQYF	0.56	±20%	9.3	18	11	100KHz/1.0V	1
NPIM72PAR68MTRQYF	0.68	±20%	10	16	10.5	100KHz/1.0V	1
NPIM72PA1R0MTRQYF	1.0	±20%	18	14	8.0	100KHz/1.0V	1
NPIM72PA1R5MTRQYF	1.5	±20%	27	12	7.0	100KHz/1.0V	1
NPIM72PA2R2MTRQYF	2.2	±20%	37	10	6.0	100KHz/1.0V	1
NPIM72PA3R3MTRQYF	3.3	±20%	48	8.0	5.0	100KHz/1.0V	1
NPIM72PA4R7MTRQYF	4.7	±20%	60	7.0	4.5	100KHz/1.0V	1
NPIM72PA5R6MTRQYF	5.6	±20%	68	6.0	4.0	100KHz/1.0V	1
NPIM72PA6R8MTRQYF	6.8	±20%	73	5.5	4.0	100KHz/1.0V	1
NPIM72PA8R2MTRQYF	8.2	±20%	116	5.0	3.2	100KHz/1.0V	1
NPIM72PA100MTRQYF	10	±20%	154	4.0	2.8	100KHz/1.0V	1
NPIM72PA150MTRQYF	15	±20%	210	3.3	2.1	100KHz/1.0V	1
NPIM72PA220MTRQYF	22	±20%	280	2.5	1.5	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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Part Number	STANDARD VALUES - CASE SIZE 73PA (7.3 X 6.6 X 2.2mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM73PAR10YTRQYF	0.10	±30%	1.7	70	30	100KHz/1.0V	1
NPIM73PAR15YTRQYF	0.15	±30%	2.3	45	30	100KHz/1.0V	1
NPIM73PAR22MTRQYF	0.22	±20%	3.2	34	21	100KHz/1.0V	1
NPIM73PAR33MTRQYF	0.33	±20%	4.4	30	18	100KHz/1.0V	1
NPIM73PAR47MTRQYF	0.47	±20%	5.1	26	15	100KHz/1.0V	1
NPIM73PAR56MTRQYF	0.56	±20%	6.5	24	13	100KHz/1.0V	1
NPIM73PAR68MTRQYF	0.68	±20%	7.2	21	13	100KHz/1.0V	1
NPIM73PAR82MTRQYF	0.82	±20%	9.5	17	11	100KHz/1.0V	1
NPIM73PA1R0MTRQYF	1.0	±20%	13.5	16	11	100KHz/1.0V	1
NPIM73PA1R5MTRQYF	1.5	±20%	20	15	9.0	100KHz/1.0V	1
NPIM73PA2R2MTRQYF	2.2	±20%	28	14	7.0	100KHz/1.0V	1
NPIM73PA3R3MTRQYF	3.3	±20%	39	10	6.0	100KHz/1.0V	1
NPIM73PA4R7MTRQYF	4.7	±20%	50	9.0	5.5	100KHz/1.0V	1
NPIM73PA5R6MTRQYF	5.6	±20%	62	8.0	5.0	100KHz/1.0V	1
NPIM73PA6R8MTRQYF	6.8	±20%	72	7.0	4.0	100KHz/1.0V	1
NPIM73PA8R2MTRQYF	8.2	±20%	95	6.0	3.6	100KHz/1.0V	1
NPIM73PA100MTRQYF	10	±20%	101	5.0	3.2	100KHz/1.0V	1
NPIM73PA150MTRQYF	15	±20%	180	3.5	2.5	100KHz/1.0V	1
NPIM73PA220MTRQYF	22	±20%	215	3.0	1.8	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 74PA (7.3 X 6.6 X 2.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM74PAR10YTRQYF	0.10	±30%	1.7	60.0	32.5	100KHz/1.0V	1
NPIM74PAR15YTRQYF	0.15	±30%	1.9	45.0	27.0	100KHz/1.0V	1
NPIM74PAR22YTRQYF	0.22	±30%	2.8	40.0	23.0	100KHz/1.0V	1
NPIM74PAR33MTRQYF	0.33	±20%	3.9	32.0	20.0	100KHz/1.0V	1
NPIM74PAR47MTRQYF	0.47	±20%	4.2	26.0	17.5	100KHz/1.0V	1
NPIM74PAR56MTRQYF	0.56	±20%	5.0	25.5	16.5	100KHz/1.0V	1
NPIM74PAR68MTRQYF	0.68	±20%	5.5	25.0	15.5	100KHz/1.0V	1
NPIM74PAR82MTRQYF	0.82	±20%	8.0	24.0	13.0	100KHz/1.0V	1
NPIM74PA1R0MTRQYF	1.0	±20%	10.0	22.0	11.0	100KHz/1.0V	1
NPIM74PA1R5MTRQYF	1.5	±20%	15.0	18.0	9.0	100KHz/1.0V	1
NPIM74PA2R2MTRQYF	2.2	±20%	20.0	14.0	8.0	100KHz/1.0V	1
NPIM74PA3R3MTRQYF	3.3	±20%	30.0	13.5	6.0	100KHz/1.0V	1
NPIM74PA4R7MTRQYF	4.7	±20%	40.0	10.0	5.5	100KHz/1.0V	1
NPIM74PA5R6MTRQYF	5.6	±20%	48.0	9.0	5.0	100KHz/1.0V	1
NPIM74PA6R8MTRQYF	6.8	±20%	60.0	8.0	4.5	100KHz/1.0V	1
NPIM74PA8R2MTRQYF	8.2	±20%	68.0	7.5	4.0	100KHz/1.0V	1
NPIM74PA100MTRQYF	10	±20%	85.0	6.0	3.5	100KHz/1.0V	1
NPIM74PA150MTRQYF	15	±20%	123.0	4.0	3.0	100KHz/1.0V	1
NPIM74PA220MTRQYF	22	±20%	190.0	3.5	2.0	100KHz/1.0V	1
NPIM74PA330MTRQYF	33	±20%	240.0	2.5	2.0	100KHz/1.0V	1
NPIM74PA470MTRQYF	47	±20%	363.0	2.0	1.75	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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Part Number	STANDARD VALUES - CASE SIZE 75PA (7.3 X 6.6 X 4.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM75PAR10YTRQYF	0.10	±30%	0.78	65	32	100KHz/1.0V	2
NPIM75PAR15YTRQYF	0.15	±30%	1.7	50	30	100KHz/1.0V	1
NPIM75PAR22YTRQYF	0.22	±30%	1.9	35	25	100KHz/1.0V	1
NPIM75PAR33MTRQYF	0.33	±20%	3.0	32	25	100KHz/1.0V	1
NPIM75PAR47MTRQYF	0.47	±20%	3.9	30	22	100KHz/1.0V	1
NPIM75PAR56MTRQYF	056	±20%	4.2	27	20	100KHz/1.0V	1
NPIM75PAR68MTRQYF	0.68	±20%	4.5	24	18	100KHz/1.0V	1
NPIM75PA1R0MTRQYF	1.0	±20%	6.5	20	15	100KHz/1.0V	1
NPIM75PA1R5MTRQYF	1.5	±20%	9.0	16.5	12	100KHz/1.0V	1
NPIM75PA2R2MTRQYF	2.2	±20%	12	14	10	100KHz/1.0V	1
NPIM75PA3R3MTRQYF	3.3	±20%	20.9	12	8.0	100KHz/1.0V	1
NPIM75PA4R7MTRQYF	4.7	±20%	30.8	10	6.5	100KHz/1.0V	1
NPIM75PA5R6MTRQYF	5.6	±20%	49	9.0	5.0	100KHz/1.0V	1
NPIM75PA6R8MTRQYF	6.8	±20%	51.5	8.5	5.5	100KHz/1.0V	1
NPIM75PA8R2MTRQYF	8.2	±20%	63	8.0	5.0	100KHz/1.0V	1
NPIM75PA100MTRQYF	10	±20%	69	7.5	4.0	100KHz/1.0V	1
NPIM75PA150MTRQYF	15	±20%	92	6.0	3.5	100KHz/1.0V	1
NPIM75PA220MTRQYF	22	±20%	170	5.5	2.5	100KHz/1.0V	1
NPIM75PA330MTRQYF	33	±20%	200	3.5	2.0	100KHz/1.0V	1
NPIM75PA470MTRQYF	47	±20%	330	2.7	1.9	100KHz/1.0V	1
NPIM75PA560MTRQYF	56	±20%	396	2.1	1.6	100KHz/1.0V	1
NPIM75PA680MTRQYF	68	±20%	445	2.0	1.2	100KHz/1.0V	1
NPIM75PA820MTRQYF	82	±20%	500	1.8	1.1	100KHz/1.0V	1
NPIM75PA101MTRQYF	100	±20%	552	1.6	1.0	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 83PA (8.8 X 8.4 X 2.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM83PAR22MTRQYF	0.22	±20%	1.9	55	26	100KHz/1.0V	1
NPIM83PAR33MTRQYF	0.33	±20%	2.5	47	25	100KHz/1.0V	1
NPIM83PAR47MTRQYF	0.47	±20%	3.3	36	20	100KHz/1.0V	1
NPIM83PAR68MTRQYF	0.68	±20%	4.3	30	18	100KHz/1.0V	1
NPIM83PA1R0MTRQYF	1.0	±20%	6.05	26	14	100KHz/1.0V	1
NPIM83PA1R5MTRQYF	1.5	±20%	10.4	23	13	100KHz/1.0V	1
NPIM83PA2R2MTRQYF	2.2	±20%	13	21	11.5	100KHz/1.0V	1
NPIM83PA3R3MTRQYF	3.3	±20%	21.9	16	10	100KHz/1.0V	1
NPIM83PA4R7MTRQYF	4.7	±20%	32.2	14	9.0	100KHz/1.0V	1
NPIM83PA6R8MTRQYF	6.8	±20%	57	13	7.0	100KHz/1.0V	1
NPIM83PA8R2MTRQYF	8.2	±20%	64.4	11	5.5	100KHz/1.0V	1
NPIM83PA100MTRQYF	10	±20%	74.5	9.0	4.8	100KHz/1.0V	1
NPIM83PA150MTRQYF	15	±20%	122	7.0	3.8	100KHz/1.0V	1
NPIM83PA220MTRQYF	22	±20%	162	6.5	3.2	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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Part Number	STANDARD VALUES - CASE SIZE 104PA (11.0 X 10.0 X 3.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM104PAR10YTRQYF	0.10	±30%	0.41	80	46	100KHz/1.0V	2
NPIM104PAR15MTRQYF	0.15	±20%	0.6	75	43	100KHz/1.0V	2
NPIM104PAR22MTRQYF	0.22	±20%	1.0	60	35	100KHz/1.0V	2
NPIM104PAR33MTRQYF	0.33	±30%	1.2	60	31	100KHz/1.0V	2
NPIM104PAR47MTRQYF	0.47	±20%	1.5	43	28	100KHz/1.0V	2
NPIM104PAR56MTRQYF	0.56	±20%	1.8	40	25	100KHz/1.0V	2
NPIM104PAR68MTRQYF	0.68	±20%	2.7	39	22	100KHz/1.0V	2
NPIM104PA1R0MTRQYF	1.0	±20%	3.3	36	18	100KHz/1.0V	2
NPIM104PA1R5MTRQYF	1.5	±20%	4.6	33	16	100KHz/1.0V	2
NPIM104PA2R2MTRQYF	2.2	±20%	7.0	27	12	100KHz/1.0V	1
NPIM104PA3R3MTRQYF	3.3	±20%	11.8	20	11	100KHz/1.0V	1
NPIM104PA4R7MTRQYF	4.7	±20%	15.5	17	10	100KHz/1.0V	1
NPIM104PA5R6MTRQYF	5.6	±20%	19.3	14	9.0	100KHz/1.0V	1
NPIM104PA6R8MTRQYF	6.8	±20%	23.3	13.5	8.5	100KHz/1.0V	1
NPIM104PA8R2MTRQYF	8.2	±20%	22.5	12.5	8.0	100KHz/1.0V	1
NPIM104PA100MTRQYF	10	±20%	30.0	12	7.5	100KHz/1.0V	1
NPIM104PA150MTRQYF	15	±20%	45.0	10	6.25	100KHz/1.0V	1
NPIM104PA220MTRQYF	22	±20%	74.0	7.0	5.0	100KHz/1.0V	1
NPIM104PA270MTRQYF	27	±20%	100.0	6.0	4.0	100KHz/1.0V	1
NPIM104PA330MTRQYF	33	±20%	112.0	5.0	3.5	100KHz/1.0V	1
NPIM104PA470MTRQYF	47	±20%	167.0	4.5	3.0	100KHz/1.0V	1
NPIM104PA680MTRQYF	68	±20%	240	3.0	2.0	100KHz/1.0V	1
NPIM104PA820MTRQYF	82	±20%	320	2.5	1.5	100KHz/1.0V	1
NPIM104PA101MTRQYF	100	±20%	420	2.4	1.3	100KHz/1.0V	1

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Part Number	STANDARD VALUES - CASE SIZE 105PA (11.0 X 10.0 X 4.8mm)						
	Inductance Value (μH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM105PAR22MTRQYF	0.22	±20%	0.5	70	45	100KHz/1.0V	2
NPIM105PAR47MTRQYF	0.47	±20%	1.38	50	28	100KHz/1.0V	2
NPIM105PAR56MTRQYF	0.56	±20%	1.5	43	26.5	100KHz/1.0V	2
NPIM105PAR68MTRQYF	0.68	±20%	1.9	35	25	100KHz/1.0V	2
NPIM105PA1R0MTRQYF	1.0	±20%	3.5	30	22	100KHz/1.0V	2
NPIM105PA1R5MTRQYF	1.5	±20%	4.1	27	19	100KHz/1.0V	2
NPIM105PA2R2MTRQYF	2.2	±20%	6.0	24	16	100KHz/1.0V	1
NPIM105PA3R3MTRQYF	3.3	±20%	10.4	22	14	100KHz/1.0V	1
NPIM105PA4R7MTRQYF	4.7	±20%	12.5	19	13	100KHz/1.0V	1
NPIM105PA5R6MTRQYF	5.6	±20%	16.8	16	10	100KHz/1.0V	1
NPIM105PA6R8MTRQYF	6.8	±20%	21	15	9.6	100KHz/1.0V	1
NPIM105PA8R2MTRQYF	8.2	±20%	24	14.5	9.0	100KHz/1.0V	1
NPIM105PA100MTRQYF	10	±20%	29	13.5	8.0	100KHz/1.0V	1
NPIM105PA150MTRQYF	15	±20%	45	9.5	5.5	100KHz/1.0V	1
NPIM105PA220MTRQYF	22	±20%	60	9.0	5.0	100KHz/1.0V	1
NPIM105PA330MTRQYF	33	±20%	92	7.5	4.3	100KHz/1.0V	1
NPIM105PA470MTRQYF	47	±20%	145	6.5	3.8	100KHz/1.0V	1
NPIM105PA680MTRQYF	68	±20%	205	4.0	2.5	100KHz/1.0V	1
NPIM105PA820MTRQYF	82	±20%	294	3.6	2.3	100KHz/1.0V	1
NPIM105PA101MTRQYF	100	±20%	380	3.0	2.0	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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Performance Passives By Design

Part Number	STANDARD VALUES - CASE SIZE 143PA (13.5 X 12.5 X 3.3mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM143PA1R0MTRQYF	1.0	±20%	3.5	40	24	100KHz/1.0V	1
NPIM143PA1R5MTRQYF	1.5	±20%	5.5	45	19	100KHz/1.0V	1
NPIM143PA2R2MTRQYF	2.2	±20%	8.0	29	16	100KHz/1.0V	1
NPIM143PA3R3MTRQYF	3.3	±20%	13.5	27	12	100KHz/1.0V	1
NPIM143PA4R7MTRQYF	4.7	±20%	18.5	24	10	100KHz/1.0V	1
NPIM143PA5R6MTRQYF	5.6	±20%	22	19	9.5	100KHz/1.0V	1
NPIM143PA6R8MTRQYF	6.8	±20%	24	18	9.0	100KHz/1.0V	1
NPIM143PA8R2MTRQYF	8.2	±20%	28	16	8.5	100KHz/1.0V	1
NPIM143PA100MTRQYF	10	±20%	34	14	7.0	100KHz/1.0V	1
NPIM143PA150MTRQYF	15	±20%	65	10	6.5	100KHz/1.0V	1
NPIM143PA220MTRQYF	22	±20%	99	7.0	4.5	100KHz/1.0V	1
NPIM143PA330MTRQYF	33	±20%	160	6.0	3.5	100KHz/1.0V	1
NPIM143PA470MTRQYF	47	±20%	218	5.5	3.0	100KHz/1.0V	1

Part Number	STANDARD VALUES - CASE SIZE 144PA (13.5 X 12.5 X 4.8mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig
NPIM144PAR10MTRQYF	0.10	±20%	0.45	120	55	100KHz/1.0V	2
NPIM144PAR22MTRQYF	0.22	±20%	0.55	110	52	100KHz/1.0V	2
NPIM144PAR33MTRQYF	0.33	±20%	0.90	80	42	100KHz/1.0V	2
NPIM144PAR47MTRQYF	0.47	±20%	1.1	65	38	100KHz/1.0V	2
NPIM144PAR56MTRQYF	0.56	±20%	1.5	55	36	100KHz/1.0V	2
NPIM144PAR68MTRQYF	0.68	±20%	1.7	54	34	100KHz/1.0V	2
NPIM144PAR82MTRQYF	0.82	±20%	2.1	52	31	100KHz/1.0V	2
NPIM144PA1R0MTRQYF	1.0	±20%	2.5	50	29	100KHz/1.0V	2
NPIM144PA1R5MTRQYF	1.5	±20%	3.3	48	27	100KHz/1.0V	1
NPIM144PA2R2MTRQYF	2.2	±20%	5.5	32	20	100KHz/1.0V	1
NPIM144PA3R3MTRQYF	3.3	±20%	9.2	32	15	100KHz/1.0V	1
NPIM144PA4R7MTRQYF	4.7	±20%	15	27	12	100KHz/1.0V	1
NPIM144PA5R6MTRQYF	5.6	±20%	16.5	22	11.5	100KHz/1.0V	1
NPIM144PA6R8MTRQYF	6.8	±20%	18.5	21	11	100KHz/1.0V	1
NPIM144PA8R2MTRQYF	8.2	±20%	22.5	18	9.5	100KHz/1.0V	1
NPIM144PA100MTRQYF	10	±20%	25.5	16	9.0	100KHz/1.0V	1
NPIM144PA150MTRQYF	15	±20%	38	13	8.2	100KHz/1.0V	1
NPIM144PA220MTRQYF	22	±20%	58	10	6.5	100KHz/1.0V	1
NPIM144PA330MTRQYF	33	±20%	88	8.0	5.0	100KHz/1.0V	1
NPIM144PA470MTRQYF	47	±20%	120	6.5	4.0	100KHz/1.0V	1
NPIM144PA560MTRQYF	56	±20%	144	6.0	3.7	100KHz/1.0V	1
NPIM144PA680MTRQYF	68	±20%	162	5.5	3.5	100KHz/1.0V	1
NPIM144PA820MTRQYF	82	±20%	238	4.8	3.0	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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Part Number	STANDARD VALUES - CASE SIZE 146PA (13.5 X 12.5 X 6.2mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM146PAR15MTRQYF	0.15	±20%	0.60	118.0	55.0	100KHz/1.0V	2
NPIM146PAR22MTRQYF	0.22	±20%	0.60	112.0	53.0	100KHz/1.0V	2
NPIM146PAR33MTRQYF	0.33	±20%	0.80	68.0	46.0	100KHz/1.0V	2
NPIM146PAR47MTRQYF	0.47	±20%	1.20	63.0	41.0	100KHz/1.0V	2
NPIM146PAR56MTRQYF	0.56	±20%	1.20	58.0	37.0	100KHz/1.0V	2
NPIM146PAR68MTRQYF	0.68	±20%	1.50	55.0	35.0	100KHz/1.0V	2
NPIM146PAR82MTRQYF	0.82	±20%	1.90	50.0	33.0	100KHz/1.0V	2
NPIM146PA1R0MTRQYF	1.0	±20%	2.30	48.0	30.0	100KHz/1.0V	2
NPIM146PA1R5MTRQYF	1.5	±20%	3.00	45.0	27.0	100KHz/1.0V	2
NPIM146PA2R2MTRQYF	2.2	±20%	4.20	37.0	22.0	100KHz/1.0V	1
NPIM146PA3R3MTRQYF	3.3	±20%	6.80	30.0	18.0	100KHz/1.0V	1
NPIM146PA4R7MTRQYF	4.7	±20%	8.40	28.0	13.5	100KHz/1.0V	1
NPIM146PA5R6MTRQYF	5.6	±20%	10	23.0	12.5	100KHz/1.0V	1
NPIM146PA6R8MTRQYF	6.8	±20%	11.5	18.0	11.5	100KHz/1.0V	1
NPIM146PA8R2MTRQYF	8.2	±20%	15.5	16.0	10.5	100KHz/1.0V	1
NPIM146PA100MTRQYF	10	±20%	16.5	15.5	10.0	100KHz/1.0V	1
NPIM146PA150MTRQYF	15	±20%	28	12.5	9.0	100KHz/1.0V	1
NPIM146PA220MTRQYF	22	±20%	37	12.0	9.0	100KHz/1.0V	1
NPIM146PA330MTRQYF	33	±20%	58	11.0	8.0	100KHz/1.0V	1
NPIM146PA470MTRQYF	47	±20%	90	9.5	6.5	100KHz/1.0V	1
NPIM146PA560MTRQYF	56	±20%	108	8.6	5.5	100KHz/1.0V	1
NPIM146PA680MTRQYF	68	±20%	130	7.8	4.8	100KHz/1.0V	1
NPIM146PA820MTRQYF	82	±20%	155	6.5	4.5	100KHz/1.0V	1
NPIM146PA101MTRQYF	100	±20%	165	5.5	4.2	100KHz/1.0V	1
NPIM146PA151MTRQYF	150	±20%	250	5.0	3.2	100KHz/1.0V	1
NPIM146PA220MTRQYF	220	±20%	408	3.5	2.1	100KHz/1.0V	1
NPIM146PA331MTRQYF	330	±20%	780	3.0	1.8	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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Part Number	STANDARD VALUES - CASE SIZE 177PA (17.6 X 16.9 X 6.7mm)						
	Inductance Value (µH)	Tolerance	DC Resistance (mΩ) Max.	DC Current Isat (Amps)	DC Current Irms (Amps)	Test Frequency	Fig.
NPIM177PAR22MTRQYF	0.22	±20%	0.75	135	80	100KHz/1.0V	1
NPIM177PAR33MTRQYF	0.33	±20%	0.90	130	70	100KHz/1.0V	1
NPIM177PAR47MTRQYF	0.47	±20%	1.03	123	62	100KHz/1.0V	1
NPIM177PAR68MTRQYF	0.68	±20%	1.5	90	55	100KHz/1.0V	1
NPIM177PAR82MTRQYF	0.82	±20%	1.8	75	53	100KHz/1.0V	1
NPIM177PA1R0MTRQYF	1.0	±20%	2.0	70	52	100KHz/1.0V	1
NPIM177PA1R5MTRQYF	1.5	±20%	2.5	65	47	100KHz/1.0V	1
NPIM177PA2R2MTRQYF	2.2	±20%	2.7	62	43.5	100KHz/1.0V	1
NPIM177PA3R3MTRQYF	3.3	±20%	3.9	54	28	100KHz/1.0V	1
NPIM177PA4R7MTRQYF	4.7	±20%	5.5	50	25	100KHz/1.0V	1
NPIM177PA5R6MTRQYF	5.6	±20%	7.05	45	21	100KHz/1.0V	1
NPIM177PA6R8MTRQYF	6.8	±20%	9.2	39	19	100KHz/1.0V	1
NPIM177PA8R2MTRQYF	8.2	±20%	10.8	31	18	100KHz/1.0V	1
NPIM177PA100MTRQYF	10	±20%	13	29	16.5	100KHz/1.0V	1
NPIM177PA150MTRQYF	15	±20%	20.5	27	15	100KHz/1.0V	1
NPIM177PA220MTRQYF	22	±20%	26.5	23	12	100KHz/1.0V	1
NPIM177PA330MTRQYF	33	±20%	44	20	10.7	100KHz/1.0V	1
NPIM177PA470MTRQYF	47	±20%	55	16	8.7	100KHz/1.0V	1
NPIM177PA560MTRQYF	56	±20%	62	15	7.8	100KHz/1.0V	1
NPIM177PA680MTRQYF	68	±20%	80	13	7.0	100KHz/1.0V	1
NPIM177PA820MTRQYF	82	±20%	100	12	5.7	100KHz/1.0V	1
NPIM177PA101MTRQYF	100	±20%	118	12	5.3	100KHz/1.0V	1
NPIM177PA151MTRQYF	150	±20%	168	10	4.6	100KHz/1.0V	1
NPIM177PA471MTRQYF	470	±20%	550	5.0	2.2	100KHz/1.0V	1

Maximum +40°C temperature rise at Irms. Approximate -30% inductance change at Isat.

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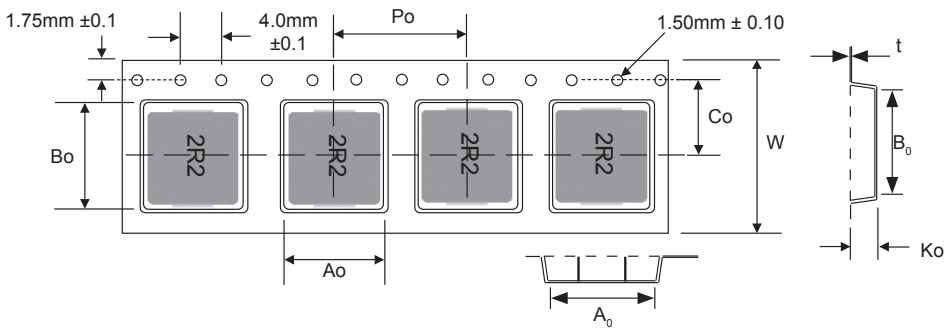
CARRIER TAPE DIMENSIONS (mm) SIZES 39 TO 105

Series	B_0	B_1	A_0	A_1	Ko	Po	W	Co	t
NPIM39PA	3.8±0.1	n/a	3.5±0.1	n/a	2.3±0.1	8.0±0.1	12.0±0.3	5.5±0.1	0.35±0.05
NPIM30PA									
NPIM31PA									
NPIM32PA									
NPIM40PA	5.0±0.1		4.4±0.1						
NPIM41PA									
NPIM42PA									
NPIM59PA	6.2±0.1		5.5±0.1						
NPIM50PA									
NPIM51PA									
NPIM52PA									
NPIM53PA									
NPIM79PA	7.7±0.1		7.0±0.1		3.3±0.1	12.0±0.1	16.0±0.3	7.5±0.1	
NPIM70PA									
NPIM71PA									
NPIM72PA									
NPIM73PA									
NPIM74PA									
NPIM75PA									
NPIM83PA	9.0±0.1		8.9±0.1		3.3±0.1	16.0±0.1	24.0±0.3	11.5±0.1	
NPIM104PA	11.6±0.1		10.4±0.1		4.5±0.1				
NPIM105PA									

CARRIER TAPE FOR SIZES 39 to 105



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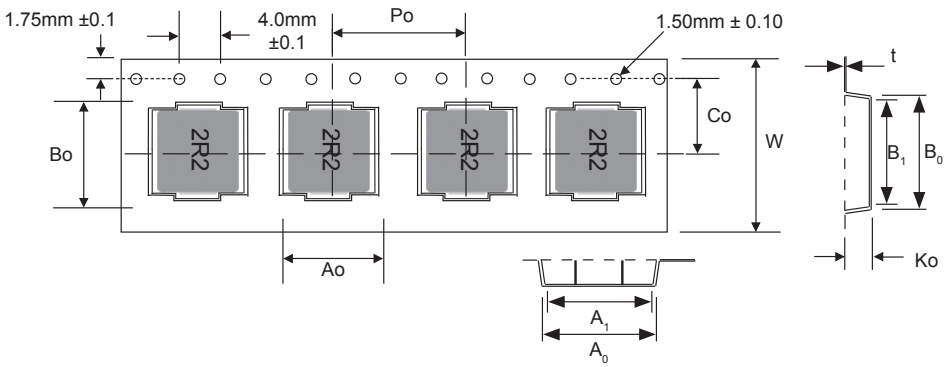
CARRIER TAPE DIMENSIONS (mm) SIZES 143 TO 177

Series	B_0	B_1	A_0	A_1	Ko	Po	W	Co	t
NPIM143PA	14.1±0.1	13.0±0.1	12.9±0.1	7.0±0.1	6.5±0.1	16.0±0.1	24.0±0.3	11.5±0.1	0.35±0.05
NPIM144PA									
NPIM146PA					7.0±0.1				
NPIM177PA	18.5±0.1	17.5±0.1	17.5±0.1	12.6±0.1	7.5±0.1	24.0±0.1	32.0±0.3	14.2±0.1	0.50±0.05

CARRIER TAPE FOR SIZES 143 to 177



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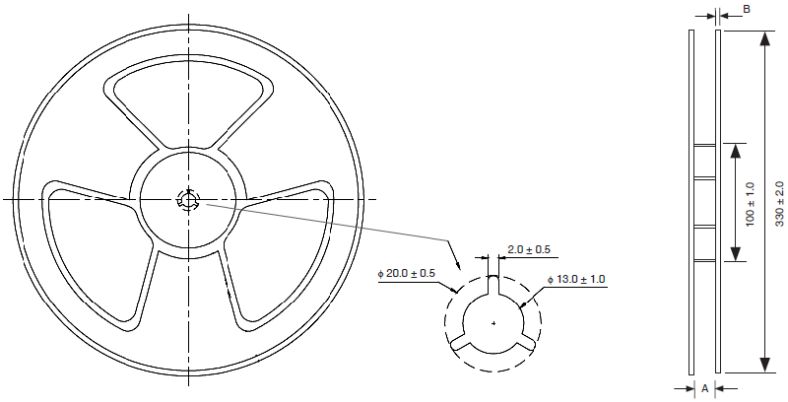
REEL DIMENSIONS (mm)

Series	A	B	C	D	Qty/Reel
NPIM39PA	12.4 +2.0/-0	100 ±2.0	13.5 ±0.5	330	4,000
NPIM30PA					3,000
NPIM31PA					3,000
NPIM32PA					3,000
NPIM40PA					4,000
NPIM41PA					3,500
NPIM42PA					3,000
NPIM59PA					4,000
NPIM50PA					3,500
NPIM51PA					3,000
NPIM52PA					3,000
NPIM53PA					2,000
NPIM79PA	16.4 +2.0/-0				3,000
NPIM70PA					2,000
NPIM71PA					2,000
NPIM72PA					1,500
NPIM73PA					1,500
NPIM74PA					1,000
NPIM75PA					800
NPIM83PA	24.4 +2.0/-0				1,000
NPIM104PA					500
NPIM105PA					500
NPIM143PA					500
NPIM144PA					500
NPIM146PA					500
NPIM177PA	32.4+2.0/-0				200



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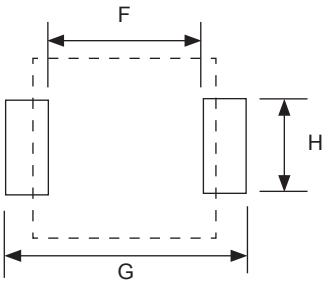
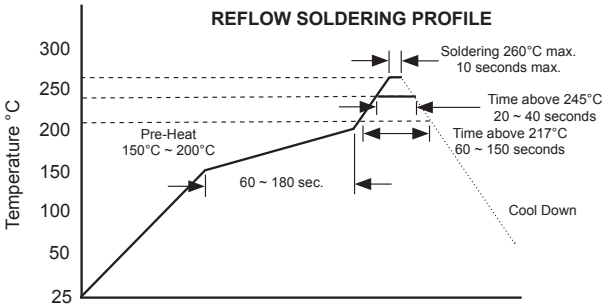
LAND PATTERN DIMENSIONS (mm)

Series	F	G	H
NPIM39PA	1.9	4.1	1.45
NPIM30PA			
NPIM31PA			
NPIM32PA			
NPIM40PA	2.2	5.2	2.4
NPIM41PA			
NPIM42PA			
NPIM59PA	2.2	6.2	2.8
NPIM50PA			
NPIM51PA			
NPIM52PA			
NPIM53PA	2.5	6.2	1.8
NPIM79PA	2.5	7.7	3.0
NPIM70PA	2.5	7.7	3.5
NPIM71PA			
NPIM72PA			
NPIM73PA			
NPIM74PA	2.5	8.4	3.5
NPIM75PA			
NPIM83PA	4.5	9.6	5.5
NPIM104PA	5.4	13.6	3.5
NPIM105PA			
NPIM143PA	8.0	14.2	5.0
NPIM144PA			
NPIM146PA			
NPIM177PA	12.2	18.5	12.5





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