NPIS Shielded Power Inductors

NPIS_E Series

FEATURES

- SHIELDED POWER INDUCTOR
- SMALL SIZE WITH CURRENT RATINGS TO 7.0AMPS
- SURFACE MOUNTABLE CONSTRUCTION
- HIGH INDUCTANCE (UP TO 1,500µH)
- TAPED AND REELED FOR AUTOMATIC INSERTION
- FOR USE IN DC/DC CONVERTERS

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details

AVAILABLE CASE SIZES, VALUES AND CHARACTERISTICS

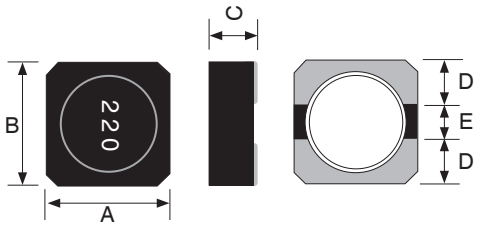
Case Size	NPIS310E	NPIS312E	NPIS315E	NPIS320E	NPIS410E	NPIS412E	NPIS415E
Inductance Range	0.47 ~ 47	1.0 ~ 22	1.0 ~ 100	1.0 ~ 47	0.5 ~ 10	0.33 ~ 15	22 ~ 1,000
Ambient Operating Temperature Range	-40°C ~ +105°C (Including self-heating)						
Temperature Rise at Irms	+40°C max.						
Inductance Change at Isat	-30% max. @ +25°C						
Inductance Tolerance	±20% (M) ±30% (Y)						±10% (K) ±20% (M) ±30% (Y)
Resistance to Solder Heat	+260°C for 10 seconds						

Case Size	NPIS418E	NPIS420E	NPIS425E	NPIS430E	NPIS510E	NPIS520E	NPIS525E	NPIS530E
Inductance Range	0.56 ~ 1,500	1.8 ~ 560	1.2 ~ 100	1.0 ~ 1,000	0.33 ~ 560	0.30 ~ 220	3.3 ~ 220	1.2 ~ 1,000
Ambient Operating Temperature Range	-40°C ~ +105°C (Including self-heating)							
Temperature Rise at I rms	+40°C max							
Inductance Change at I sat	-30% max. @ +25°C							
Inductance Tolerance	±20% (M) ±30% (Y)							
Resistance to Solder Heat	+260°C for 10 seconds							

Case Size	NPIS612E	NPIS615E	NPIS620E	NPIS625E
Inductance Range	2.2 ~ 10	3.0 ~ 6.8	1.3 ~ 100	1.0 ~ 47
Ambient Operating Temperature Range	-40°C ~ +105°C (Including self-heating)			
Temperature Rise at I rms	+40°C max			
Inductance Change at I sat	-30% max. @ +25°C			
Inductance Tolerance	±20% (M) ±30% (Y)			
Resistance to Solder Heat	+260°C for 10 seconds			

DIMENSIONS (mm)

Series	A	B	C max.	D typ.	E typ.
NPIS310E	3.0 ± 0.2	3.0 ± 0.2	1.0	0.9	1.2
NPIS312E	3.0 ± 0.2	3.0 ± 0.2	1.2	0.9	1.2
NPIS315E	3.0 ± 0.2	3.0 ± 0.2	1.5	0.9	1.2
NPIS320E	3.0 ± 0.2	3.0 ± 0.2	2.0	0.9	1.2
NPIS410E	4.0 ± 0.2	4.0 ± 0.2	1.0	1.1	1.8
NPIS412E	4.0 ± 0.2	4.0 ± 0.2	1.2	1.1	1.8
NPIS415E	4.0 ± 0.2	4.0 ± 0.2	1.5	1.1	1.8
NPIS418E	4.0 ± 0.2	4.0 ± 0.2	1.8	1.1	1.8
NPIS420E	4.0 ± 0.2	4.0 ± 0.2	2.0	1.1	1.8
NPIS425E	4.0 ± 0.2	4.0 ± 0.2	2.5	1.1	1.8
NPIS430E	4.0 ± 0.2	4.0 ± 0.2	3.0	1.1	1.8
NPIS510E	5.0 ± 0.2	5.0 ± 0.2	1.0	1.75	1.5
NPIS520E	5.0 ± 0.2	5.0 ± 0.2	2.0	1.75	1.5
NPIS525E	5.0 ± 0.2	5.0 ± 0.2	2.5	1.75	1.5
NPIS530E	5.0 ± 0.2	5.0 ± 0.2	3.0	1.75	1.5
NPIS612E	6.0 ± 0.2	6.0 ± 0.2	1.2	2.0	2.0
NPIS615E	6.0 ± 0.2	6.0 ± 0.2	1.5	2.0	2.0
NPIS620E	6.0 ± 0.2	6.0 ± 0.2	2.0	2.0	2.0
NPIS625E	6.0 ± 0.2	6.0 ± 0.2	2.5	2.0	2.0



PART NUMBER SYSTEM

NPIS 42 E 150 M TR F

- F — Termination Finish: F = Standard Pb-free (100%Sn)
- TR — Packaging: TR = Tape & Reel
- M — Inductance Tolerance Code: K=±10%, M=±20%, Y=±30%
- 150 — Inductance Code (µH): 1st two digits are significant, 3rd digit is multiplier.
- E — Construction Code (see drawing for details)
- 42 — Size Code (see table for details)
- NPIS — Series

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 310 (3.0x3.0x1.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS310ER47_TRF	0.47	±20% (M), ±30% (Y)	100KHz/0.1V	0.07	2.30	2.30
NPIS310ER56_TRF	0.56	±20% (M), ±30% (Y)	100KHz/0.1V	0.08	2.00	2.00
NPIS310E1R0_TRF	1.0	±20% (M), ±30% (Y)	100KHz/0.1V	0.085	1.60	1.75
NPIS310E1R2_TRF	1.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	1.50	1.70
NPIS310E1R5_TRF	1.5	±20% (M), ±30% (Y)	100KHz/0.1V	0.12	1.30	1.60
NPIS310E1R8_TRF	1.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.15	1.20	1.40
NPIS310E2R2_TRF	2.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.22	1.10	1.15
NPIS310E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.22	0.82	1.05
NPIS310E3R9_TRF	3.9	±20% (M), ±30% (Y)	100KHz/0.1V	0.25	0.78	0.95
NPIS310E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.33	0.72	0.80
NPIS310E5R6_TRF	5.6	±20% (M), ±30% (Y)	100KHz/0.1V	0.40	0.66	0.78
NPIS310E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.45	0.62	0.74
NPIS310E8R2_TRF	8.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.56	0.55	0.71
NPIS310E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.63	0.51	0.64
NPIS310E120_TRF	12	±20% (M), ±30% (Y)	100KHz/0.1V	0.74	0.45	0.55
NPIS310E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.95	0.40	0.50
NPIS310E180_TRF	18	±20% (M), ±30% (Y)	100KHz/0.1V	1.00	0.37	0.47
NPIS310E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	1.20	0.33	0.41
NPIS310E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	2.00	0.27	0.35
NPIS310E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	3.20	0.24	0.31

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 312 (3.0x3.0x1.2mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS312E1R0YTRF	1.0	±30% (Y)	100KHz/0.1V	0.08	1.8	1.8
NPIS312E1R2YTRF	1.2	±30% (Y)	100KHz/0.1V	0.095	1.65	1.7
NPIS312E1R5YTRF	1.5	±30% (Y)	100KHz/0.1V	0.11	1.5	1.65
NPIS312E2R0YTRF	2.0	±30% (Y)	100KHz/0.1V	0.15	1.3	1.3
NPIS312E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.15	1.3	1.3
NPIS312E3R3YTRF	3.3	±30% (Y)	100KHz/0.1V	0.18	1.0	1.2
NPIS312E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.28	0.85	1.05
NPIS312E5R6_TRF	5.6	±20% (M), ±30% (Y)	100KHz/0.1V	0.36	0.8	0.85
NPIS312E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.42	0.75	0.7
NPIS312E8R2_TRF	8.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.55	0.65	0.65
NPIS312E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.62	0.57	0.6
NPIS312E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.8	0.5	0.5
NPIS312E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	1.2	0.4	0.42

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 315 (3.0x3.0x1.5mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS315E1R0_TRF	1.0	±20% (M), ±30% (Y)	100KHz/0.1V	0.075	2.0	2.0
NPIS315E1R5_TRF	1.5	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	1.8	1.7
NPIS315E1R8_TRF	1.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	1.5	1.4
NPIS315E2R1_TRF	2.1	±20% (M), ±30% (Y)	100KHz/0.1V	0.11	1.5	1.4
NPIS315E2R2_TRF	2.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.11	1.5	1.4
NPIS315E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.13	1.3	1.4
NPIS315E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.20	1.1	1.2
NPIS315E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.30	0.91	0.90
NPIS315E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.44	0.65	0.75
NPIS315E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.70	0.55	0.59
NPIS315E180_TRF	18	±20% (M), ±30% (Y)	100KHz/0.1V	0.75	0.53	0.58
NPIS315E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.825	0.49	0.57
NPIS315E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	1.30	0.42	0.48
NPIS315E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	1.55	0.32	0.40
NPIS315E680_TRF	68	±20% (M), ±30% (Y)	100KHz/0.1V	2.25	0.28	0.33
NPIS315E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	3.40	0.23	0.26

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 320 (3.0x3.0x2.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS320E1R0_TRF	1.0	±20% (M), ±30% (Y)	100KHz/0.1V	0.04	2.8	2.5
NPIS320E2R2_TRF	2.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.08	2.0	1.8
NPIS320E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	1.8	1.6
NPIS320E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.14	1.6	1.4
NPIS320E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.17	1.4	1.2
NPIS320E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.60	0.70	0.65
NPIS320E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	1.35	0.50	0.50

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 410 (4.0x4.0x1.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS410ER50YTRF	0.5	±30% (Y)	100KHz/0.1V	0.038	3.0	2.9
NPIS410E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.105	1.5	1.7
NPIS410E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.47	0.65	0.7

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 412 (4.0x4.0x1.2mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS412ER33_TRF	0.33	±20% (M), ±30% (Y)	100KHz/0.1V	0.023	5.6	3.7
NPIS412ER47YTRF	0.47	±30% (Y)	100KHz/0.1V	0.045	4.0	2.5
NPIS412ER68YTRF	0.68	±30% (Y)	100KHz/0.1V	0.055	3.5	2.45
NPIS412E1R0YTRF	1.0	±30% (Y)	100KHz/0.1V	0.06	2.8	2.4
NPIS412E1R5YTRF	1.5	±30% (Y)	100KHz/0.1V	0.07	2.5	2.2
NPIS412E2R2_TRF	2.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.1	2.1	1.75
NPIS412E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.13	1.5	1.45
NPIS412E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.175	1.4	1.3
NPIS412E5R6_TRF	5.6	±20% (M), ±30% (Y)	100KHz/0.1V	0.26	1.3	1.1
NPIS412E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.34	1.2	0.98
NPIS412E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.35	0.7	0.75
NPIS412E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.55	0.6	0.73

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 415 (4.0x4.0x1.5mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS415E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.7	0.7	0.6
NPIS415E102_TRF	1000	±10% (K), ±20%(M)	100KHz/0.1V	21.5	0.09	0.1

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 418 (4.0x4.0x1.8mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS418ER56_TRF	0.56	±20% (M), ±30% (Y)	100KHz/0.1V	0.03	4.8	2.8
NPIS418ER68_TRF	0.68	±20% (M), ±30% (Y)	100KHz/0.1V	0.035	4.5	2.75
NPIS418E1R0_TRF	1	±20% (M), ±30% (Y)	100KHz/0.1V	0.04	3.4	2.7
NPIS418E1R5_TRF	1.5	±20% (M), ±30% (Y)	100KHz/0.1V	0.05	2.7	2.5
NPIS418E1R6YTRF	1.6	±30% (Y)	100KHz/0.1V	0.05	2.7	2.5
NPIS418E2R2_TRF	2.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.07	2.5	2.2
NPIS418E2R5YTRF	2.5	±30% (Y)	100KHz/0.1V	0.075	2.4	2.1
NPIS418E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.08	2.2	2.0
NPIS418E3R6YTRF	3.6	±30% (Y)	100KHz/0.1V	0.10	2.0	1.80
NPIS418E3R9_TRF	3.9	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	2.0	1.80
NPIS418E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.125	1.7	1.60
NPIS418E5R6_TRF	5.6	±20% (M), ±30% (Y)	100KHz/0.1V	0.135	1.5	1.45
NPIS418E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.15	1.2	1.30
NPIS418E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.20	1.1	1.15
NPIS418E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.28	0.86	0.90
NPIS418E180_TRF	18	±20% (M), ±30% (Y)	100KHz/0.1V	0.30	0.78	0.88
NPIS418E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.36	0.74	0.85
NPIS418E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.46	0.58	0.77
NPIS418E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.75	0.51	0.63
NPIS418E680_TRF	68	±20% (M), ±30% (Y)	100KHz/0.1V	1.07	0.41	0.48
NPIS418E820_TRF	82	±20% (M), ±30% (Y)	100KHz/0.1V	1.22	0.38	0.44
NPIS418E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	1.64	0.34	0.42
NPIS418E121_TRF	120	±20% (M), ±30% (Y)	100KHz/0.1V	1.88	0.31	0.38
NPIS418E151_TRF	150	±20% (M), ±30% (Y)	100KHz/0.1V	2.45	0.27	0.31
NPIS418E181_TRF	180	±20% (M), ±30% (Y)	100KHz/0.1V	2.91	0.24	0.30
NPIS418E221_TRF	220	±20% (M), ±30% (Y)	100KHz/0.1V	4.2	0.22	0.24
NPIS418E331_TRF	330	±20% (M), ±30% (Y)	100KHz/0.1V	5.9	0.18	0.22
NPIS418E471_TRF	470	±20% (M), ±30% (Y)	100KHz/0.1V	7.1	0.14	0.20
NPIS418E561_TRF	560	±20% (M), ±30% (Y)	100KHz/0.1V	10	0.13	0.18
NPIS418E681_TRF	680	±20% (M), ±30% (Y)	100KHz/0.1V	11.5	0.12	0.16
NPIS418E821_TRF	820	±20% (M), ±30% (Y)	100KHz/0.1V	17.8	0.11	0.12
NPIS418E102MTRF	1000	±20% (M)	100KHz/0.1V	19.4	0.10	0.10
NPIS418E152MTRF	1500	±20% (M)	100KHz/0.1V	30	0.08	0.08

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 420 (4.0x4.0x2.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS420E1R8YTRF	1.8	±30% (Y)	100KHz/0.1V	0.051	1.97	2.37
NPIS420E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.059	1.72	2.19
NPIS420E3R3YTRF	3.3	±30% (Y)	100KHz/0.1V	0.078	1.52	1.94
NPIS420E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.098	1.24	1.71
NPIS420E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.131	1.05	1.47
NPIS420E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.185	0.85	1.00
NPIS420E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.431	0.56	0.80
NPIS420E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.628	0.47	0.69
NPIS420E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.934	0.39	0.56
NPIS420E680_TRF	68	±20% (M), ±30% (Y)	100KHz/0.1V	1.2	0.32	0.50
NPIS420E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	1.4	0.26	0.40
NPIS420E561_TRF	560	±20% (M), ±30% (Y)	100KHz/0.1V	6.6	0.12	0.20

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 425 (4.0x4.0x2.5mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS425E1R2_TRF	1.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.025	2.7	3.0
NPIS425E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.075	1.6	1.8
NPIS425E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	1.4	1.7
NPIS425E560_TRF	56	±20% (M), ±30% (Y)	100KHz/0.1V	1.43	0.40	0.55
NPIS425E680_TRF	68	±20% (M), ±30% (Y)	100KHz/0.1V	2.15	0.35	0.45
NPIS425E820_TRF	82	±20% (M), ±30% (Y)	100KHz/0.1V	2.35	0.30	0.30
NPIS425E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	2.5	0.25	0.25

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 430 (4.0x4.0x3.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS430E1R0YTRF	1.0	±30% (Y)	100KHz/0.1V	0.02	2.8	3.3
NPIS430E1R5YTRF	1.5	±30% (Y)	100KHz/0.1V	0.028	2.6	3.0
NPIS430E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.035	2.3	2.7
NPIS430E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.045	2.1	2.5
NPIS430E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.055	2.0	2.3
NPIS430E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.078	1.5	2.0
NPIS430E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.13	1.0	1.5
NPIS430E120_TRF	12	±20% (M), ±30% (Y)	100KHz/0.1V	0.175	0.90	1.4
NPIS430E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.21	0.85	1.3
NPIS430E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.29	0.80	1.1
NPIS430E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.455	0.70	0.85
NPIS430E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.685	0.60	0.70
NPIS430E680_TRF	68	±20% (M), ±30% (Y)	100KHz/0.1V	0.955	0.50	0.55
NPIS430E820_TRF	82	±20% (M), ±30% (Y)	100KHz/0.1V	1.1	0.45	0.45
NPIS430E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	1.5	0.40	0.40
NPIS430E151_TRF	150	±20% (M), ±30% (Y)	100KHz/0.1V	2.4	0.30	0.35
NPIS430E181_TRF	180	±20% (M), ±30% (Y)	100KHz/0.1V	3.6	0.25	0.30
NPIS430E102_TRF	1000	±20% (M), ±30% (Y)	100KHz/0.1V	9.0	0.12	0.12

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 510 (5.0x5.0x1.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS510ER33YTRF	0.33	±30% (Y)	100KHz/0.1V	0.03	3.5	3.0
NPIS510ER68YTRF	0.68	±30% (Y)	100KHz/0.1V	0.048	2.5	2.0
NPIS510E1R0_TRF	1.0	±20% (M), ±30% (Y)	100KHz/0.1V	0.072	1.7	1.4
NPIS510E1R5_TRF	1.5	±20% (M), ±30% (Y)	100KHz/0.1V	0.072	1.7	1.4
NPIS510E2R2_TRF	2.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	1.4	1.2
NPIS510E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.125	1.1	1.1
NPIS510E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.175	1.0	0.98
NPIS510E5R6_TRF	5.6	±20% (M), ±30% (Y)	100KHz/0.1V	0.24	0.9	0.92
NPIS510E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.255	0.84	0.85
NPIS510E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.35	0.68	0.80
NPIS510E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.50	0.55	0.75
NPIS510E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.67	0.45	0.62
NPIS510E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	1.05	0.38	0.55
NPIS510E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	1.45	0.30	0.44
NPIS510E680_TRF	68	±20% (M), ±30% (Y)	100KHz/0.1V	2.0	0.26	0.35
NPIS510E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	3.1	0.22	0.28
NPIS510E121_TRF	120	±20% (M), ±30% (Y)	100KHz/0.1V	3.5	0.20	0.25
NPIS510E151_TRF	150	±20% (M), ±30% (Y)	100KHz/0.1V	4.25	0.18	0.23
NPIS510E221_TRF	220	±20% (M), ±30% (Y)	100KHz/0.1V	6.25	0.15	0.20
NPIS510E331_TRF	330	±20% (M), ±30% (Y)	100KHz/0.1V	8.6	0.12	0.185
NPIS510E471_TRF	470	±20% (M), ±30% (Y)	100KHz/0.1V	12.7	0.09	0.15
NPIS510E561_TRF	560	±20% (M), ±30% (Y)	100KHz/0.1V	15.7	0.085	0.135

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 520 (5.0x5.0x2.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS520ER30YTRF	0.30	±30% (Y)	100KHz/0.1V	0.009	6.0	7.0
NPIS520ER33YTRF	0.33	±30% (Y)	100KHz/0.1V	0.011	5.8	6.0
NPIS520ER68YTRF	0.68	±30% (Y)	100KHz/0.1V	0.015	4.0	5.2
NPIS520E1R0YTRF	1.0	±30% (Y)	100KHz/0.1V	0.025	3.5	4.0
NPIS520E1R3YTRF	1.3	±30% (Y)	100KHz/0.1V	0.035	3.2	3.3
NPIS520E1R5YTRF	1.5	±30% (Y)	100KHz/0.1V	0.035	3.2	3.3
NPIS520E1R8_TRF	1.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.045	3.0	3.0
NPIS520E2R2_TRF	2.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.055	2.7	2.75
NPIS520E2R5_TRF	2.5	±20% (M), ±30% (Y)	100KHz/0.1V	0.06	2.6	2.6
NPIS520E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.065	2.4	2.5
NPIS520E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.08	2.1	2.0
NPIS520E5R6_TRF	5.6	±20% (M), ±30% (Y)	100KHz/0.1V	0.09	1.95	1.9
NPIS520E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.105	1.8	1.7
NPIS520E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.15	1.4	1.5
NPIS520E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.27	1.1	1.2
NPIS520E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.35	0.78	0.90
NPIS520E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.48	0.65	0.80
NPIS520E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.75	0.60	0.70
NPIS520E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	1.21	0.34	0.55
NPIS520E121_TRF	120	±20% (M), ±30% (Y)	100KHz/0.1V	1.6	0.30	0.48
NPIS520E151_TRF	150	±20% (M), ±30% (Y)	100KHz/0.1V	2.25	0.28	0.40
NPIS520E221_TRF	220	±20% (M), ±30% (Y)	100KHz/0.1V	3.3	0.26	0.37

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 525 (5.0x5.0x2.5mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS525E3R3YTRF	3.3	±30% (Y)	100KHz/0.1V	0.06	2.3	1.7
NPIS525E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.07	2.1	1.6
NPIS525E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.12	1.5	1.3
NPIS525E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.22	1.0	1.1
NPIS525E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.30	0.70	1.0
NPIS525E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.55	0.65	0.70
NPIS525E680_TRF	68	±20% (M), ±30% (Y)	100KHz/0.1V	0.90	0.50	0.55
NPIS525E820_TRF	82	±20% (M), ±30% (Y)	100KHz/0.1V	1.0	0.40	0.50
NPIS525E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	1.2	0.35	0.45
NPIS525E221_TRF	220	±20% (M), ±30% (Y)	100KHz/0.1V	1.8	0.20	0.30

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 530 (5.0x5.0x3.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS530E1R2_TRF	1.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.04	3.5	2.65
NPIS530E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.057	3.1	2.15
NPIS530E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.066	2.5	1.8
NPIS530E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.083	2.0	1.75
NPIS530E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.099	1.7	1.6
NPIS530E8R2_TRF	8.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.12	1.6	1.5
NPIS530E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.15	1.5	1.4
NPIS530E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.175	1.3	1.2
NPIS530E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.19	1.0	1.1
NPIS530E270_TRF	27	±20% (M), ±30% (Y)	100KHz/0.1V	0.27	0.90	1.0
NPIS530E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.35	0.80	0.90
NPIS530E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.50	0.75	0.75
NPIS530E560_TRF	56	±20% (M), ±30% (Y)	100KHz/0.1V	0.65	0.65	0.65
NPIS530E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	0.9	0.45	0.55
NPIS530E331_TRF	330	±20% (M), ±30% (Y)	100KHz/0.1V	1.8	0.17	0.42
NPIS530E821_TRF	820	±20% (M), ±30% (Y)	100KHz/0.1V	5.0	0.12	0.26
NPIS530E102_TRF	1000	±20% (M), ±30% (Y)	100KHz/0.1V	5.1	0.11	0.25

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 612 (6.0x6.0x1.2mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS612E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.07	2.3	2.3
NPIS612E2R5YTRF	2.5	±30% (Y)	100KHz/0.1V	0.07	2.3	2.3
NPIS612E3R0YTRF	3.0	±30% (Y)	100KHz/0.1V	0.081	2.0	2.0
NPIS612E3R3YTRF	3.3	±30% (Y)	100KHz/0.1V	0.09	1.9	1.9
NPIS612E3R9YTRF	3.9	±30% (Y)	100KHz/0.1V	0.10	1.7	1.7
NPIS612E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.13	1.6	1.5
NPIS612E5R6_TRF	5.6	±20% (M), ±30% (Y)	100KHz/0.1V	0.145	1.5	1.4
NPIS612E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.165	1.4	1.3
NPIS612E8R2_TRF	8.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.20	1.2	1.2
NPIS612E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.24	1.0	1.0

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 615 (6.0x6.0x1.5mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS615E3R0YTRF	3.0	±30% (Y)	100KHz/0.1V	0.065	2.2	2.1
NPIS615E3R3YTRF	3.3	±30% (Y)	100KHz/0.1V	0.075	2.1	2.0
NPIS615E3R6YTRF	3.6	±30% (Y)	100KHz/0.1V	0.08	2.0	1.9
NPIS615E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.13	1.6	1.4

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 620 (6.0x6.0x2.0mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS620E1R3YTRF	1.3	±30% (Y)	100KHz/0.1V	0.031	3.2	3.0
NPIS620E1R5YTRF	1.5	±30% (Y)	100KHz/0.1V	0.031	3.2	3.0
NPIS620E1R8YTRF	1.8	±30% (Y)	100KHz/0.1V	0.038	3.0	2.6
NPIS620E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.04	2.7	2.4
NPIS620E2R5YTRF	2.5	±30% (Y)	100KHz/0.1V	0.04	2.7	2.4
NPIS620E3R3YTRF	3.3	±30% (Y)	100KHz/0.1V	0.06	2.5	2.3
NPIS620E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.07	2.1	2.0
NPIS620E6R2_TRF	6.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.085	1.9	1.8
NPIS620E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.085	1.9	1.8
NPIS620E8R2_TRF	8.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.125	1.7	1.5
NPIS620E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.15	1.4	1.2
NPIS620E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.22	1.1	1.1
NPIS620E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.32	1.0	0.90
NPIS620E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.45	0.90	0.80
NPIS620E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.6	0.85	0.70
NPIS620E101_TRF	100	±20% (M), ±30% (Y)	100KHz/0.1V	1.2	0.50	0.45

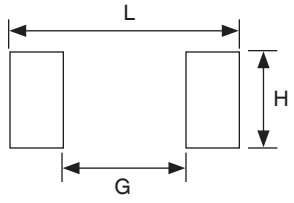
Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

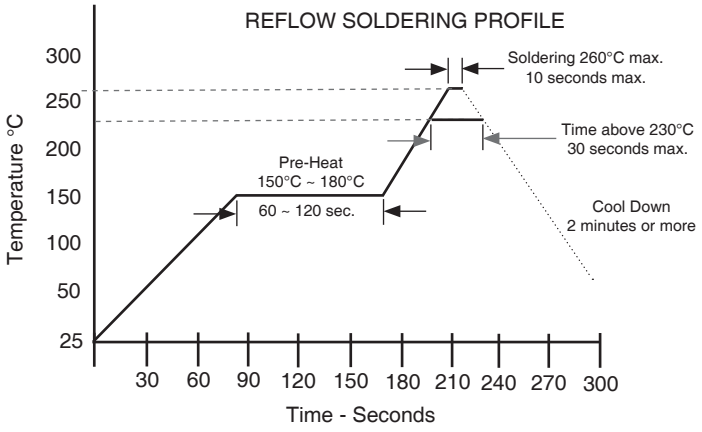
PART NUMBERS AND SPECIFICATIONS

Part Number	Standard Values - Case Size 625 (6.0x6.0x2.5mm)					
	Inductance Value (µH)	Available Tolerance	Test Conditions	DC Resistance (Ω)	DC Current Isat (Arms)	DC Current Irms (Arms)
NPIS625E1R0YTRF	1.0	±30% (Y)	100KHz/0.1V	0.035	5.5	1.8
NPIS625E1R2YTRF	1.2	±30% (Y)	100KHz/0.1V	0.040	5.3	1.65
NPIS625E1R5YTRF	1.5	±30% (Y)	100KHz/0.1V	0.040	5.3	1.65
NPIS625E2R2YTRF	2.2	±30% (Y)	100KHz/0.1V	0.045	3.9	1.4
NPIS625E3R3_TRF	3.3	±20% (M), ±30% (Y)	100KHz/0.1V	0.055	3.5	1.35
NPIS625E4R7_TRF	4.7	±20% (M), ±30% (Y)	100KHz/0.1V	0.065	3.1	1.3
NPIS625E5R0YTRF	5.0	±30% (Y)	100KHz/0.1V	0.065	3.1	1.3
NPIS625E6R8_TRF	6.8	±20% (M), ±30% (Y)	100KHz/0.1V	0.095	2.7	1.3
NPIS625E8R2_TRF	8.2	±20% (M), ±30% (Y)	100KHz/0.1V	0.10	2.2	1.3
NPIS625E100_TRF	10	±20% (M), ±30% (Y)	100KHz/0.1V	0.105	2.0	1.3
NPIS625E150_TRF	15	±20% (M), ±30% (Y)	100KHz/0.1V	0.135	2.0	1.2
NPIS625E220_TRF	22	±20% (M), ±30% (Y)	100KHz/0.1V	0.175	1.4	1.1
NPIS625E330_TRF	33	±20% (M), ±30% (Y)	100KHz/0.1V	0.26	1.1	0.9
NPIS625E470_TRF	47	±20% (M), ±30% (Y)	100KHz/0.1V	0.42	0.98	0.8

Irms/Isat specification is based on +40°C temperature rise or -30% inductance change whichever is less.

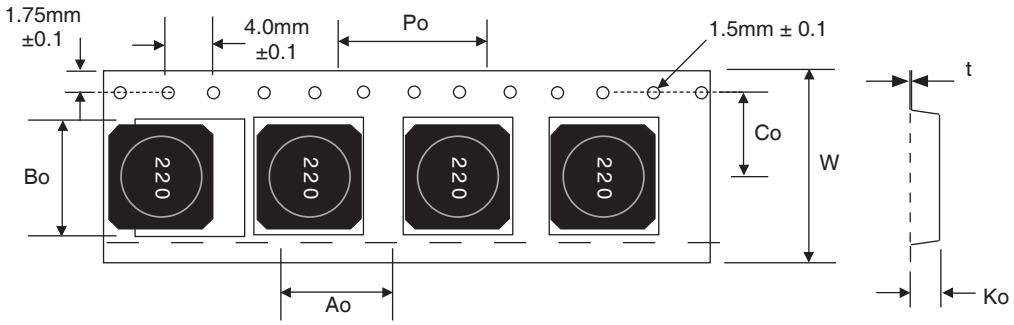
Series	L	G	H
NPIS310E	3.3	1.0	3.3
NPIS312E			
NPIS315E			
NPIS320E			
NPIS410E	4.4	1.8	4.4
NPIS412E			
NPIS415E			
NPIS418E			
NPIS420E			
NPIS425E			
NPIS430E			
NPIS510E	5.4	1.5	5.4
NPIS520E			
NPIS525E			
NPIS530E			
NPIS612E	6.6	2.0	6.6
NPIS615E			
NPIS620E			
NPIS625E			





Series	Reel Quantity	CARRIER TAPE DIMENSIONS (mm)						
		W	Ao	Bo	Co	Ko	Po	t
NPIS310E	1,500	12	3.4	3.4	5.5	1.2	8.0	0,35
NPIS312E	1,500	12	3.4	3.4	5.5	1.4	8.0	0.35
NPIS315E	1,000	12	3.4	3.4	5.5	1.7	8.0	0.35
NPIS320E	1,000	12	3.4	3.4	5.5	2.1	8.0	0.30
NPIS410E	1,500	12	4.4	4.4	5.5	1.2	8.0	0.30
NPIS412E	1,000	12	4.4	4.4	5.5	1.4	8.0	0.30
NPIS415E	1,000	12	4.4	4.4	5.5	1.8	8.0	0.35
NPIS418E	1,000	12	4.4	4.4	5.5	2.0	8.0	0.35
NPIS420E	1,000	12	4.4	4.4	5.5	2.2	8.0	0.30
NPIS425E	800	12	4.4	4.4	5.5	2.7	8.0	0.35
NPIS430E	600	12	4.4	4.4	5.5	3.2	8.0	0.35
NPIS510E	1,000	12	5.4	5.4	5.5	1.2	8.0	0.30
NPIS520E	900	12	5.4	5.4	5.5	2.2	8.0	0.35
NPIS525E	2,000	12	5.4	5.4	5.5	2.7	8.0	0.35
NPIS530E	2,000	12	5.45	5.45	5.5	3.4	8.0	0.35
NPIS612E	3,000	16	6.4	6.4	7.5	1.4	12	0.35
NPIS615E	2,000	16	6.4	6.4	7.5	1.7	12	0.35
NPIS620E	2,000	16	6.5	6.5	7.5	2.2	12	0.35
NPIS625E	1,500	16	6.4	6.4	7.5	2.7	12	0.35

TRF TAPING DIMENSIONS



Case Sizes	Tape Width (mm)	REEL DIMENSIONS (mm)		
		A(mm)	B(mm)	C(mm)
NPIS310E ~ 520E	12.0	178	20 ± 0.5	13 ± 0.2
NPIS525E ~ 530E	12.0	330		
NPIS612E ~ 625E	16.0	330