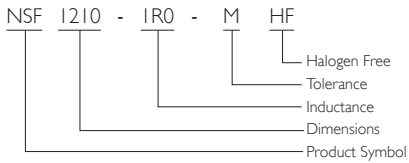


DIP Power Inductors

NSF Series



PRODUCT IDENTIFICATION



■ Tolerance: J = ±5%, K = ±10%, L = ±15%, M = ±20%,
P = ±25%, N = ±30%, Y = min

FEATURES

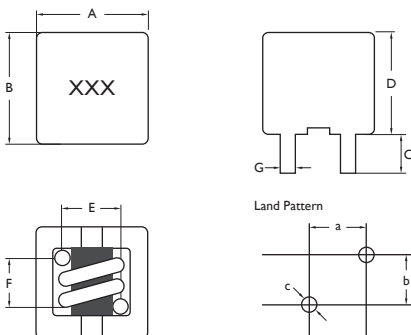
- Halogen Free products
- Shielded construction
- Lowest DCR/μH, in this package size
- Handles high transient current spikes without saturation

APPLICATIONS

Excellent for power lines used on DC-DC conversion applications i.e. power switching, personal computers and handheld devices.

SHAPES AND DIMENSIONS

Unit: mm



TYPE	A	B	C	D	E	F	G	a	b	c
NSF0806	8.2 ⁺⁰	8.2 ⁺⁰	3.5 ± 0.5	7.0 ⁺⁰	4.4 ± 0.5	4.5 ± 0.5	0.7 ± 0.1	4.9	4.5	1.0
NSF0808	8.2 ⁺⁰	8.6 ⁺⁰	3.5 ± 0.5	9.5 ⁺⁰	5.5 ± 0.5	4.0 ± 0.5	0.55	5.5	4.5	0.95
NSF109	11.0 ⁺⁰	11.0 ⁺⁰	3.4 ± 0.5	10.0 ⁺⁰	6.0 ± 1.0	4.5 ± 0.5	1.4 ± 0.1	6.0	4.5	1.8
NSF118	11.5 ⁺⁰	11.5 ⁺⁰	3.4 ± 0.5	10.5 ⁺⁰	6.8 ± 0.5	6.8 ± 0.5	1.0 ± 0.1	6.8	6.8	1.4
NSF1210	11.7 ⁺⁰	11.7 ⁺⁰	3.4 ± 0.5	10.5 ⁺⁰	7.0 ± 0.5	6.0 ± 0.5	1.5 ± 0.1	7.0	6.0	1.9
NSF1310	12.7 ⁺⁰	12.7 ⁺⁰	3.4 ± 0.5	10.5 ⁺⁰	7.3 ± 0.5	6.3 ± 0.5	1.5 ± 0.1	7.3	6.3	1.9

ELECTRICAL CHARACTERISTICS FERRITE CORES

PART NO.	INDUCTANCE (μ H)	TOLERANCE (\pm %)	TEST FREQUENCY (KHz)	DC RESISTANCE (m Ω) \pm 10%	Isat (A) Max.	Irms (A) Max.
NSF0806-1R0M	1.00	20	100	4.32	22.00	18.00
NSF0808-1R0M	1.00	20	100	3.10	15.00	14.00
NSFI09-R25M	0.25	20	100	1.02	40.00	36.00
NSFI09-R47M	0.47	20	100	1.02	40.00	30.00
NSFI09-R50M	0.50	20	100	0.78	30.00	30.00
NSFI09-R60M	0.60	20	100	1.02	23.00	20.00
NSFI09-1R0M	1.00	20	100	1.70	27.00	14.00
NSFI09-1R4M	1.40	20	100	2.49	25.00	22.00
NSFI09-1R8M	1.80	20	100	3.21	20.00	18.00
NSFI18-R36M	0.36	20	100	0.88	60.00	54.00
NSFI18-R60M	0.60	20	100	0.88	38.00	26.00
NSFI18-R68M	0.68	20	100	0.88	33.00	23.00
NSFI18-1R2M	1.20	20	100	1.65	30.00	20.00
NSFI210-R60M	0.60	20	100	0.97	40.00	35.00
NSFI210-R68M	0.68	20	100	0.80	40.00	35.00
NSFI210-101M	100.00	20	100	140.00	3.00	2.70
NSFI210-121M	120.00	20	100	150.00	2.00	1.80
NSFI210-221M	220.00	20	100	350.00	2.00	1.80
NSFI310-R30M	0.30	20	100	0.84	40.00	36.00
NSFI310-R60M	0.60	20	100	0.84	40.00	36.00

Note:

Isat: DC current at which the inductance drops 20% from its value without current

Irms: The actual current when temperature of coil becomes $\Delta T = 40^\circ\text{C}$



ELECTRICAL CHARACTERISTICS IRON CORES

PART NO.	INDUCTANCE (μ H)	TOLERANCE (\pm %)	TEST FREQUENCY (KHz)	DC RESISTANCE (m Ω) \pm 10%	Isat (A) Max.	Irms (A) Max.
NSF0806-R47M	0.47	20	100	1.90	38.00	22.00
NSF0806-R56M	0.56	20	100	1.90	28.00	23.00
NSF0806-R60M	0.60	20	100	1.90	34.00	21.00
NSF0806-R80M	0.80	20	100	2.90	27.00	17.00
NSF0806-R82M	0.82	20	100	2.90	23.00	18.00
NSF0806-1R0M	1.00	20	100	4.30	22.00	14.00
NSF0806-1R2M	1.20	20	100	4.30	21.00	15.00
NSFI008-R56M	0.56	20	100	1.06	50.00	37.00
NSFI008-1R5M	1.50	20	100	3.60	30.00	16.00
NSFI 18-R47M	0.47	20	100	0.80	50.00	38.00
NSFI 18-R60M	0.60	20	100	0.80	50.00	38.00
NSFI 18-R80M	0.80	20	100	1.30	45.00	31.00
NSFI 18-1R0M	1.00	20	100	1.30	35.00	31.00
NSFI 18-1R5M	1.50	20	100	1.80	25.00	26.00
NSFI 18-2R0M	2.00	20	100	3.30	30.00	20.00
NSFI 18-3R3M	3.30	20	100	6.30	25.00	14.00
NSFI210-R47M	0.47	20	100	0.80	50.00	41.00
NSFI210-R60M	0.60	20	100	0.80	50.00	41.00
NSFI210-R68M	0.68	20	100	0.80	40.00	35.00
NSFI210-R80M	0.80	20	100	1.30	45.00	33.00
NSFI210-1R0M	1.00	20	100	1.30	35.00	32.00
NSFI210-1R1M	1.10	20	100	1.30	30.00	25.00
NSFI210-1R5M	1.50	20	100	1.80	25.00	27.00
NSFI210-2R0M	2.00	20	100	3.30	35.00	20.00
NSFI210-3R3M	3.30	20	100	6.30	25.00	14.00
NSFI310-R47M	0.47	20	100	0.75	50.00	40.00
NSFI310-R60M	0.60	20	100	0.75	50.00	40.00
NSFI310-R80M	0.80	20	100	0.75	50.00	39.00
NSFI310-1R0M	1.00	20	100	1.15	42.00	32.00
NSFI310-1R5M	1.50	20	100	1.85	42.00	26.00
NSFI310-2R0M	2.00	20	100	3.00	35.00	21.00
NSFI310-2R4M	2.40	20	100	3.00	25.00	20.00
NSFI310-3R3M	3.30	20	100	4.30	22.00	17.00

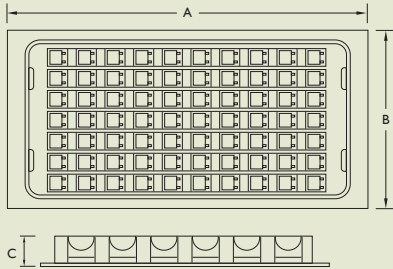
Note:

Isat: DC current at which the inductance drops 20% from its value without current

Irms: The actual current when temperature of coil becomes $\Delta T = 40^\circ\text{C}$

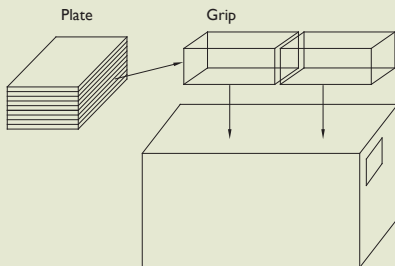
PLATE DIMENSIONS

Unit: mm



TYPE	A	B	C
NSF109	251	143	15.25
NSF118	251	138	13.00
NSF1210	251	138	13.00
NSF1310	251	138	13.00

PACKAGING QUANTITY



TYPE	BULK	QTY/PLATE	PLATE/GRIP	GRIP	BOX
NSF118	v	60	8	2	960
NSF1210	v	60	8	2	960
NSF1310	v	60	8	2	960