

Power Inductor Wire Wound Shield Type

PIW-6B Series

MERITEK

FEATURE

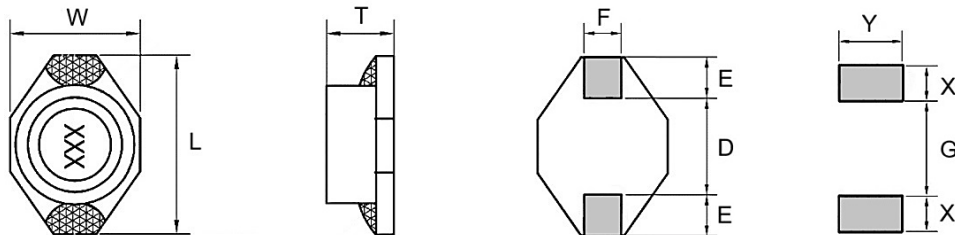
- Magnetically Shielded Construction Against Radiation
- High Power Rating and High Saturation Current
- Ideal Used In DC/DC Converters
- Application: Communication Equipment, Home Electronics, Industrial Control, Power Distribution, DC/DC Converters



SPECIFICATIONS

Series Code	Inductance (μ H)	Tolerance (%)	Q Min	DCR Max (Ω)	I _{RMS} Max (A)	SRF Ref (MHz)
PIW-04026B	1.0~10000	± 20 (M), ± 30 (N)	30~50	0.04~32.8	0.02~3.0	0.8~250
PIW-08046B	1.0~47	± 20 (M), ± 30 (N)	0.021~0.472	1.0~5.6	0.8~5.0	13~140
PIW-12066B	10~1000	± 20 (M)	0.04~2.01	0.08~8.0	0.53~3.9	2~30

DIMENSIONS



Unit: mm

Size Code	L Max	W Max	T Max	D	E	F	X	Y	G
0402	6.60	4.45	2.92	4.32	1.02	1.27	1.40	3.56	4.06
0804	12.95	9.40	5.08	7.62	2.54	2.54	2.92	2.79	7.37
1206	18.54	15.24	7.62	12.70	2.54	2.54	2.92	2.79	12.45

PART NUMBERING SYSTEM

PIW **470M** **0804** **6B**
(1) (2) (3) (4)

No.	Item	Code	Description
(1)	Product Code	PIW	Power Inductor Series, Wire Wound type
(2)	Inductance	470M	47 μ H $\pm 20\%$ (M) First two digits: Significant, Third: Multiplier
(3)	Size Code	0804	12.95x9.40x5.08mm (L x W x T) See Dimension Table
(4)	Series Code	6B	Shielded Type, Internal control or project reference

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ELECTRICAL CHARACTERISTICS – PIW-04026B

Part Number	Nominal Inductance (μH)	Test Frequency (Hz)	Q Min	DCR Max (Ω)	I _{RMS} Max (A)	SRF Ref (MHz)
PIW1R0N04026B	1.0 ±30% (N)	0.1V/200K	30	0.040	3.00	250
PIW1R5N04026B	1.5 ±30% (N)	0.1V/200K	30	0.045	2.30	125
PIW2R2N04026B	2.2 ±30% (N)	0.1V/200K	40	0.050	1.80	120
PIW3R3N04026B	3.3 ±30% (N)	0.1V/200K	40	0.055	1.60	120
PIW4R7N04026B	4.7 ±30% (N)	0.1V/200K	40	0.060	1.40	105
PIW6R8N04026B	6.8 ±30% (N)	0.1V/200K	40	0.065	1.20	50
PIW100M04026B	10 ±20% (M)	0.1V/200K	40	0.075	1.00	38
PIW150M04026B	15 ±20% (M)	0.1V/100K	40	0.090	0.80	33
PIW220M04026B	22 ±20% (M)	0.1V/100K	40	0.11	0.70	25
PIW330M04026B	33 ±20% (M)	0.1V/100K	40	0.19	0.60	20
PIW470M04026B	47 ±20% (M)	0.1V/100K	40	0.23	0.50	20
PIW680M04026B	68 ±20% (M)	0.1V/100K	40	0.29	0.40	15
PIW101M04026B	100 ±20% (M)	0.1V/100K	40	0.48	0.30	10
PIW151M04026B	150 ±20% (M)	0.1V/100K	40	0.59	0.26	9.0
PIW221M04026B	220 ±20% (M)	0.1V/100K	40	0.90	0.22	6.0
PIW331M04026B	330 ±20% (M)	0.1V/100K	40	1.40	0.20	5.0
PIW471M04026B	470 ±20% (M)	0.1V/100K	40	1.80	0.19	4.0
PIW681M04026B	680 ±20% (M)	0.1V/100K	40	2.20	0.18	3.0
PIW102M04026B	1000 ±20% (M)	0.1V/100K	40	3.40	0.15	2.0
PIW152M04026B	1500 ±20% (M)	0.1V/100K	50	4.20	0.12	2.0
PIW222M04026B	2200 ±20% (M)	0.1V/100K	50	8.50	0.10	2.0
PIW332M04026B	3300 ±20% (M)	0.1V/100K	50	11.0	0.08	1.0
PIW472M04026B	4700 ±20% (M)	0.1V/100K	50	13.9	0.06	1.0
PIW682M04026B	6800 ±20% (M)	0.1V/100K	50	25.0	0.04	1.0
PIW103M04026B	10000 ±20% (M)	0.1V/100K	50	32.8	0.02	0.8

Notes:

1. Saturation Current (I_{SAT}) based on inductance drop (ΔL/L0: ≤10%) approximately.
2. Temperature Rise Current (I_{RMS}) based on temperature rise (ΔT: 40°C) approximately.
3. Operating temperature: -40°C ~ +105°C.

ELECTRICAL CHARACTERISTICS – PIW-08046B

Part Number	Nominal Inductance (μH)	Test Frequency (Hz)	Q Min	DCR Max (Ω)	I _{RMS} Max (A)	SRF Ref (MHz)
PIW1R0N08046B	1.0 ±30% (N)	0.1V/200K	0.021	5.6	5.0	140
PIW1R5N08046B	1.5 ±30% (N)	0.1V/200K	0.022	5.2	4.5	120
PIW2R2N08046B	2.2 ±30% (N)	0.1V/200K	0.032	5.0	3.8	80
PIW3R3N08046B	3.3 ±30% (N)	0.1V/200K	0.039	3.9	3.3	70
PIW4R7N08046B	4.7 ±30% (N)	0.1V/200K	0.054	3.2	2.7	40
PIW6R8N08046B	6.8 ±30% (N)	0.1V/200K	0.075	2.8	2.2	38
PIW100M08046B	10 ±20% (M)	0.1V/200K	0.101	2.4	2.0	35
PIW150M08046B	15 ±20% (M)	0.1V/100K	0.150	2.0	1.5	25
PIW220M08046B	22 ±20% (M)	0.1V/100K	0.207	1.6	1.3	19
PIW330M08046B	33 ±20% (M)	0.1V/100K	0.334	1.4	1.1	15
PIW470M08046B	47 ±20% (M)	0.1V/100K	0.472	1.0	0.8	13

Notes:

4. Saturation Current (I_{SAT}) based on inductance drop (ΔL/L0: ≤10%) approximately.
5. Temperature Rise Current (I_{RMS}) based on temperature rise (ΔT: 40°C) approximately.
6. Operating temperature: -40°C ~ +105°C.

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ELECTRICAL CHARACTERISTICS – PIW-12066B

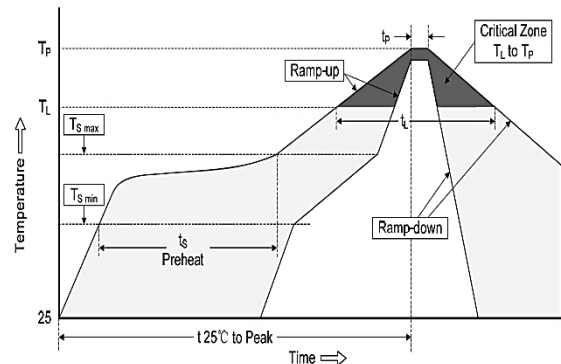
Part Number	Nominal Inductance (μH)	Test Frequency (Hz)	Q Min	DCR Max (Ω)	IRMS Max (A)	SRF Ref (MHz)
PIW100M12066B	10 ±20% (M)	0.1V/200K	0.040	8.0	3.9	30
PIW150M12066B	15 ±20% (M)	0.1V/100K	0.048	7.0	3.4	20
PIW220M12066B	22 ±20% (M)	0.1V/100K	0.059	6.0	3.1	18
PIW330M12066B	33 ±20% (M)	0.1V/100K	0.075	5.0	2.8	14
PIW470M12066B	47 ±20% (M)	0.1V/100K	0.097	4.0	2.4	10
PIW680M12066B	68 ±20% (M)	0.1V/100K	0.138	3.0	2.0	9.0
PIW101M12066B	100 ±20% (M)	0.1V/100K	0.207	2.4	1.7	7.0
PIW151M12066B	150 ±20% (M)	0.1V/100K	0.293	2.1	1.3	6.0
PIW221M12066B	220 ±20% (M)	0.1V/100K	0.470	1.9	1.1	5.0
PIW331M12066B	330 ±20% (M)	0.1V/100K	0.780	1.1	0.86	4.0
PIW471M12066B	470 ±20% (M)	0.1V/100K	1.08	1.1	0.73	3.0
PIW681M12066B	680 ±20% (M)	0.1V/100K	1.40	0.96	0.64	2.5
PIW102M12066B	1000 ±20% (M)	0.1V/100K	2.01	0.80	0.53	2.0

Notes:

1. Operating temperature: -40°C ~ +105°C.
2. Saturation Current (I_{SAT}) based on inductance drop ($\Delta L/L_0$: ≤10%) approximately.
3. Temperature Rise Current (I_{RMS}) based on temperature rise (ΔT : 40°C) approximately.

RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	160°C
	Temp. Max $T_{s(max)}$	180°C
	Time (min. to max.) (t_s)	60 ~120 seconds
Reflow	Temp. (T_L)	230°C
	Time (min. to max.) (t_L)	40 seconds
Peak Temperature (T_P)		250°C
t_p within 5°C of Peak Temperature (t_p)		10 seconds



*Specifications subject to change without notice.