

SMT Shielded Power Inductor—SMRH8D Series



FEATURES

- ROHS, Halogen free and REACH Compliance.
- Magnetic shielded surface mount inductor.
- High current capacity and Low DCR.
- Various package size and wide inductance range.

APPLICATIONS

Monitors, Game consoles and LED lightings, TV,DC/DC converter and power supply for VTRs.

PRODUCT IDENTIFICATION



01 Type	
ZSMRH8 D	SMT Shielded Power Inductor

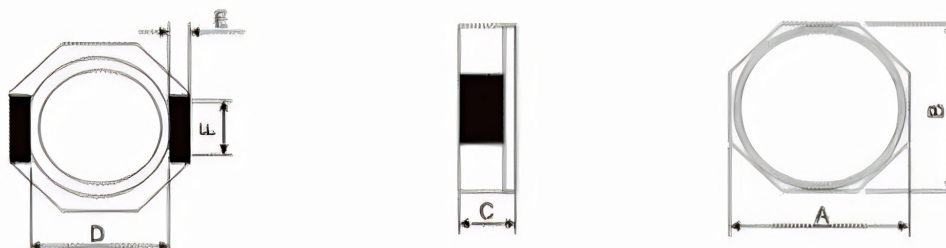
02 External Dimensions (LxW)(mm)	
8D28	8.3x 3.0
8D38	8.3x 4.0
8D43	8.3x 4.5

04 Nominal Inductance	
Example	Nominal value
6R8	6.8uH
680	68uH
101	100uH

05 Tolerance	
K	±10%
M	±20%
N	±30%

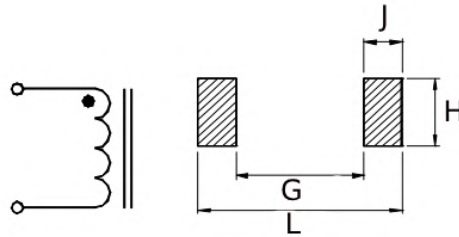
05 Packing	
T	Tape & Reel

SHAPE AND DIMENSIONS



Part Number	Dimensions(mm)					
	A(Max)	B(Max)	C(Max)	D	E	F
ZSMRH8D28	9.5	8.3	3.0	6.3	2.5	2.5
ZSMRH8D38	9.5	8.3	4.0	6.3	2.5	2.5
ZSMRH8D43	9.5	8.3	4.5	6.3	2.5	2.5

RECOMMENDED PC BOARD PATTERN



Part Number	Dimensions(mm)			
	L	G	H	J
ZSMRH8D28	10.1	6.1	2.8	2.0Ref
ZSMRH8D38	10.1	6.1	3.8	2.0Ref
ZSMRH8D43	10.1	6.1	4.3	2.0Ref

SPECIFICATIONS

● ZSMRH8D28 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
ZSMRH8D28-2R2	2.2	N	100/0.25	0.018	5000
ZSMRH8D28-2R7	2.7		100/0.25	0.026	4500
ZSMRH8D28-3R9	3.9		100/0.25	0.031	4000
ZSMRH8D28-4R7	4.7		100/0.25	0.041	3400
ZSMRH8D28-5R6	5.6		100/0.25	0.048	3200
ZSMRH8D28-6R8	6.8		100/0.25	0.055	3000
ZSMRH8D28-8R2	8.2	K、M	100/0.25	0.067	2800
ZSMRH8D28-100	10		100/0.25	0.074	2500
ZSMRH8D28-150	15		100/0.25	0.112	1900
ZSMRH8D28-220	22		100/0.25	0.139	1600
ZSMRH8D28-330	33		100/0.25	0.214	1300
ZSMRH8D28-470	47		100/0.25	0.308	1150
ZSMRH8D28-680	68		100/0.25	0.394	920
ZSMRH8D28-100	100		100/0.25	0.583	750

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%, N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● ZSMRH8D38 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
ZSMRH8D38-2R2	2.2	M、N	100/0.25	0.020	5500
ZSMRH8D38-3R3	3.3		100/0.25	0.025	4400
ZSMRH8D38-4R7	4.7		100/0.25	0.027	4000
ZSMRH8D38-5R6	5.6		100/0.25	0.030	3800
ZSMRH8D38-6R8	6.8		100/0.25	0.038	3500
ZSMRH8D38-8R2	8.2		100/0.25	0.051	3000
ZSMRH8D38-100	10	K、M	100/0.25	0.057	2600
ZSMRH8D38-150	15		100/0.25	0.073	2300
ZSMRH8D38-220	22		100/0.25	0.111	1880
ZSMRH8D38-330	33		100/0.25	0.165	1520
ZSMRH8D38-470	47		100/0.25	0.199	1280
ZSMRH8D38-560	56		100/0.25	0.279	1200
ZSMRH8D38-680	68		100/0.25	0.313	1100
ZSMRH8D38-820	82		100/0.25	0.349	950
ZSMRH8D38-101	100		100/0.25	0.470	880

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%, M: ±20%, N: ±30%;

1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

● ZSMRH8D43 TYPE

Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
ZSMRH8D43-2R7	2.7	M、N	100/0.25	0.020	7300
ZSMRH8D43-3R3	3.3		100/0.25	0.022	6200
ZSMRH8D43-4R7	4.7		100/0.25	0.025	5370
ZSMRH8D43-5R6	5.6		100/0.25	0.027	4740
ZSMRH8D43-6R8	6.8		100/0.25	0.030	4240
ZSMRH8D43-8R2	8.2		100/0.25	0.034	3840
ZSMRH8D43-100	10		100/0.25	0.046	3500
ZSMRH8D43-120	12		100/0.25	0.050	3220



Part Number	Inductance (uH)	Tolerance	Test condition (KHz/V)	DCR Max(Ω)	Rated Current Max (mA)
ZSMRH8D43-150	15	K、M	100/0.25	0.070	2990
ZSMRH8D43-180	18		100/0.25	0.080	2600
ZSMRH8D43-220	22		100/0.25	0.082	2440
ZSMRH8D43-270	27		100/0.25	0.093	2180
ZSMRH8D43-330	33		100/0.25	0.130	1970
ZSMRH8D43-390	39		100/0.25	0.140	1790
ZSMRH8D43-470	47		100/0.25	0.160	1650
ZSMRH8D43-560	56		100/0.25	0.210	1520
ZSMRH8D43-680	68		100/0.25	0.240	1370
ZSMRH8D43-820	82		100/0.25	0.260	1240
ZSMRH8D43-101	100		100/0.25	0.360	1140

Note: When ordering, please specify tolerance code. Tolerance: K: ±10%、M: ±20%、N: ±30%;

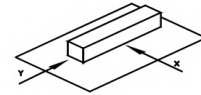
1. Operating temperature range -40 -125°C

2. Isat for Inductance drop 30% from its value without current

DETAIL ELECTRICAL CHARACTERISTICS

1. Operating temperature range: -40 to + 105°C(Includes temperature when the coil is heated) .
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y

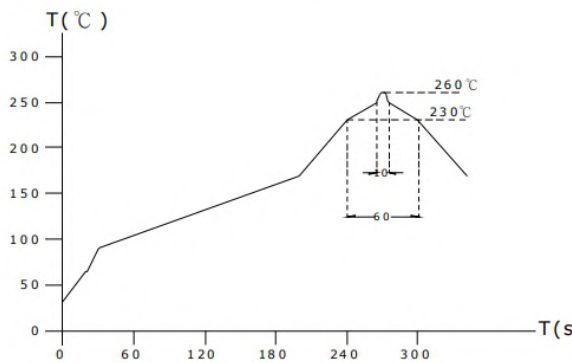
withstanding at below conditions.



Terminal should not peel off. (refer to figure at right) 5. 0N 60 sec.

4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$ (-25~+80°C degree Celsius), inductance deviation within $\pm 5.0\%$, after 96 hours.
7. Humidity characteristics(Moisture Resistance): Inductance deviation within $\pm 5\%$, after 96 hours in 90~95% relative humidity at $40 \pm 2^{\circ}\text{C}$ and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within $\pm 5\%$, after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within $\pm 5\%$, after being dropped once with 981m/s² (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C, 10 seconds(See attached recommend reflow) .
11. Storage condition: Temperature Range: 0°C ~ 35°C; -40°C ~ 105°C (after PCB), Humidity Range: 50% ~ 70% RH.
12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:

Lead-free heat endurance test



Lead-free the recommended reflow condition

