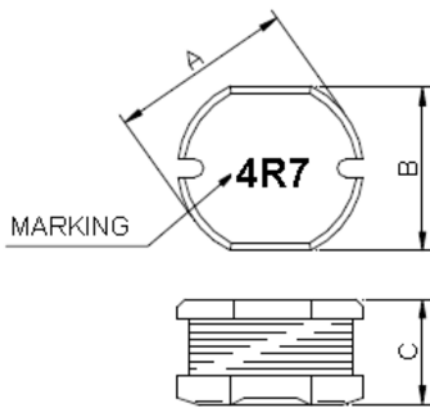


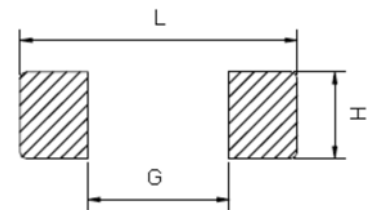
FEATRLRES

- Excellent solderability and high heat resistance.
- Excellent terminal strength construction.
- Packed in embossed carrier tape and can be used by automatic mounting machine.
- 100% Lead(Pb) & Halogen-Free and RoHS compliant.

CONFIGLRATIONS & DIMENSIONS (unit in mm)



Recommended Land pattern



Size	A	B	C	L	G	H
HSDR75	7.80±0.3	7.00±0.3	5.00±0.3	8.0	2.0	7.5

ELECTRICAL CHARACTERISTICS

Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) max.	IDC (A) max.
HSDR75-3R3M	3.30	± 20%	1V/7.96M	0.03	4.60
HSDR75-4R7M	4.70	± 20%	1V/7.96M	0.04	4.20
HSDR75-100M	10.0	± 20%	1V/2.52M	0.07	2.30
HSDR75-120M	12.0	± 20%	1V/2.52M	0.08	2.00
HSDR75-150M	15.0	± 20%	1V/2.52M	0.09	1.80
HSDR75-180M	18.0	± 20%	1V/2.52M	0.10	1.60
HSDR75-220M	22.0	± 20%	1V/2.52M	0.11	1.50
HSDR75-270M	27.0	± 20%	1V/2.52M	0.12	1.30
HSDR75-330M	33.0	± 20%	1V/2.52M	0.13	1.20
HSDR75-390M	39.0	± 20%	1V/2.52M	0.16	1.10
HSDR75-470K	47.0	± 10%	1V/2.52M	0.18	1.10
HSDR75-560K	56.0	± 10%	1V/2.52M	0.24	0.94

HSDR75-680K	68.0	± 10%	1V/2.52M	0.28	0.85
HSDR75-820K	82.0	± 10%	1V/2.52M	0.37	0.78
HSDR75-101K	100	± 10%	1V/1K	0.43	0.72
HSDR75-121K	120	± 10%	1V/1K	0.47	0.66
HSDR75-151K	150	± 10%	1V/1K	0.64	0.58
HSDR75-181K	180	± 10%	1V/1K	0.71	0.51
HSDR75-221K	220	± 10%	1V/1K	0.96	0.49
HSDR75-391K	390	± 10%	1V/1K	1.77	0.36
HSDR75-471K	470	± 10%	1V/1K	1.96	0.34

Note:

Based on inductance change ($\Delta L/L0 : \leq -35\%$) @ ambient temp. 25°C Based on temperature rise ($\Delta T : 40^\circ\text{C}$ typ.)

Reliability and Test Condition

Item	Performance	Test Condition
Operating temperature	-40~+125°C (Including self - temperature rise)	
Storage temperature	1. -10~+40°C,50~60%RH (Product with taping) 2. -40~+125°C(on board)	
Electrical Performance Test		
Inductance	Refer to standard electrical characteristics list.	HP4284A,CH11025,CH3302,CH1320,CH1320S LCR Meter.
DCR		CH16502,Agilent33420A Micro-Ohm Meter.
Saturation Current (Isat)	Approximately $\Delta L30\%$	Saturation DC Current (Isat) will cause L0 to drop $\Delta L(\%)$
Heat Rated Current (Irms)	Approximately $\Delta T40^\circ\text{C}$	Heat Rated Current (Irms) will cause the coil temperature rise $\Delta T(^\circ\text{C})$. 1.Applied the allowed DC current 2.Temperature measured by digital surface thermometer
Reliability Test		
Life Test	Appearance : No damage. Inductance : within $\pm 10\%$ of initial value Q : Shall not exceed the specification value. RDC : within $\pm 15\%$ of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles) Temperature : 125 $\pm 2^\circ\text{C}$ (Inductor) Applied current : rated current Duration : 1000 ± 12 hrs Measured at room temperature after placing for 24 ± 2 hrs
Load Humidity		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles) Humidity : 85 $\pm 2\%$ R.H, Temperature : 85 $\pm 2^\circ\text{C}$ Duration : 1000hrs Min. with 100% rated current Measured at room temperature after placing for 24 ± 2 hrs
Moisture Resistance		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles 1. Baked at50°C for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65 $\pm 2^\circ\text{C}$ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs. 3. Raise temperature to 65 $\pm 2^\circ\text{C}$ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs,keep at 25°C for 2 hrs then keep at -10°C for 3 hrs 4. Keep at 25°C 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.

Thermal shock		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles Condition for 1 cycle Step1 : -40±2°C 30±5min Step2 : 25±2°C ≤0.5min Step3 : 125±2°C 30±5min Number of cycles : 500 Measured at room temperature after placing for 24±2 hrs															
Vibration		Oscillation Frequency: 10 ~ 2K ~ 10Hz for 20 minutes Equipment : Vibration checker Total Amplitude:1.52mm±10% Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations).															
Bending		Shall be mounted on a FR4 substrate of the following dimensions: >=0805 inch(2012mm):40x100x1.2mm <0805 inch(2012mm):40x100x0.8mm Bending depth: >=0805 inch(2012mm):1.2mm <0805 inch(2012mm):0.8mm duration of 10 sec.															
Shock	Appearance : No damage. Impedance : within±15% of initial value Inductance : within±10% of initial value Q : Shall not exceed the specification value. RDC : within ±15% of initial value and shall not exceed the specification value	<table border="1"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (V)ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table>	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (V)ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
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Lead	50	11	Half-sine	11.3													
Solder ability	More than 95% of the terminal electrode should be covered with solder.	Preheat: 150°C,60sec. Solder: Sn96.5% Ag3% Cu0.5% Temperature: 245±5°C Flux for lead free: Rosin. 9.5% Dip time: 4±1sec Depth: completely cover the termination															
Resistance to Soldering Heat		Depth: completely cover the termination <table border="1"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 ±5 (solder temp)</td> <td>10 ±1</td> <td>25mm/s ±6 mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1							
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Terminal Strength	Appearance : No damage. Impedance : within±15% of initial value Inductance : within±10% of initial value Q : Shall not exceed the specification value. RDC : within ±15% of initial value and shall not exceed the specification value e	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force(>0805:1kg , <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 															

Note : When there are questions concerning measurement result : measurement shall be made after 48 ± 2 hours of recovery under the standard condition.