SMD Power Inductors

Features:

RoHS Compliant

- Ferrite based SMD inductor with lower core loss.
- Ideal for LCD driver, DSC/DVC, Notebook PC or High density board design.
- Operating temperature range -55°C to + 130°C.

MCSDRH73B - Series

- High current output chokes, up to 8 amperes with about 30% roll off.
- Low profile 3.55 mm maximum height.
- Foot print : 7.6 × 7.6 mm maximum.

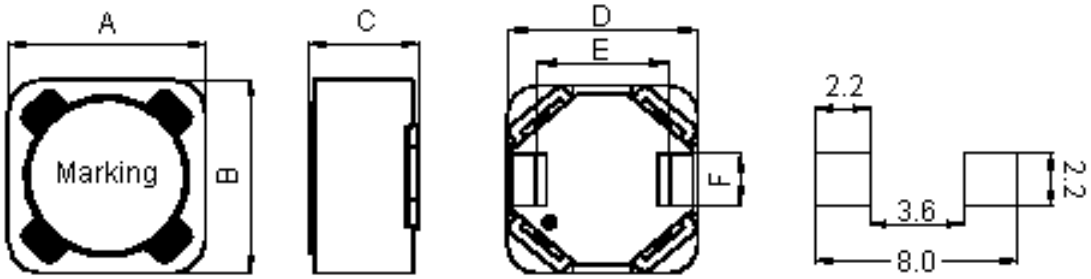
MCSDRH125B - Series

- High current output chokes, up to 24.2 amperes with about 30% roll off.
- Low profile 6 mm maximum height.
- Foot print : 12.5 × 12.5 mm maximum.

Applications:

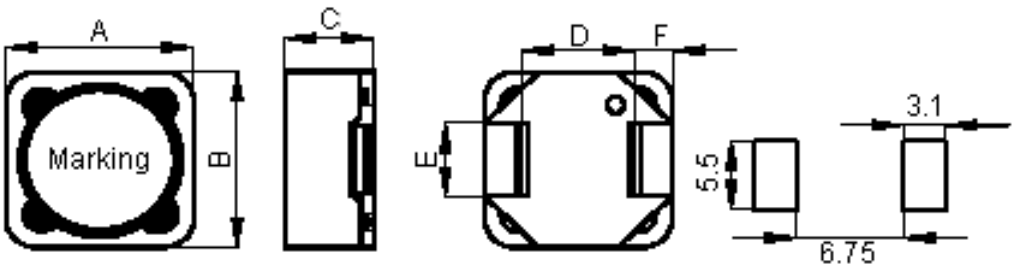
- Integrated DC/DC converter.
- Notebook computers.
- Excellent for power line DC-DC conversion application used in hard disk, notebook computers and other electronic equipment.

Figure 1



Top View | Side View | Bottom View | Suggest PCB Layout

Figure 2



Top View | Side View | Bottom View | Suggest PCB Layout

Dimensions : Millimetres

Mechanical Dimensions

Type	MCSDRH73B (Figure 1) (mm)		MCSDRH125B (Figure 2) (mm)	
A	7.3 ±0.3	-	12 ±0.5	-
B	7.3 ±0.3	-	12 ±0.5	-
C	3.55	(Maximum)	6	(Maximum)
D	7 ±0.3	-	7	(Reference)
E	3.9	(Reference)	5	(Reference)
F	2	(Reference)	2.5	(Reference)

Electrical Characteristics

OCL (µH) ±20%	DCR (Ω) (Typical)	DCR (Ω) (Maximum)	I_{sat} (A) at 25°C	L at I_{sat} (µH) (Typical)	I_{rms} (A) at 25°C	L at I_{rms} (µH) (Typical)	Part Number
1	0.0091	0.0109	8	0.785	6.5	0.89	MCSDRH73B-1R0MHF
1.5	0.0125	0.015	6.52	1.186	5.54	1.325	MCSDRH73B-1R5MHF
2.2	0.018	0.0216	5.52	1.7	4.6	1.95	MCSDRH73B-2R2MHF
3.3	0.023	0.0276	4.4	2.69	4.08	2.84	MCSDRH73B-3R3MHF
4.7	0.0297	0.0356	3.78	3.63	3.65	3.8	MCSDRH73B-4R7MHF
6.8	0.0415	0.0498	3.12	5.53	3.04	5.66	MCSDRH73B-6R8MHF
8.2	0.0525	0.063	2.8	6.5	2.7	6.7	MCSDRH73B-8R2MHF
10	0.0656	0.0787	2.5	8.16	2.35	8.48	MCSDRH73B-100MHF
15	0.08	0.096	2.05	10.3	2.12	9.65	MCSDRH73B-150MHF
22	0.108	0.13	1.67	15.25	1.83	13.9	MCSDRH73B-220MHF
33	0.166	0.199	1.35	24.75	1.48	19.75	MCSDRH73B-330MHF
47	0.231	0.277	1.14	33.2	1.25	27.9	MCSDRH73B-470MHF
68	0.331	0.397	0.96	48	1.04	41.33	MCSDRH73B-680MHF
82	0.41	0.492	0.89	55.05	0.94	49.3	MCSDRH73B-820MHF
100	0.491	0.589	0.79	71	0.86	60.33	MCSDRH73B-101MHF
150	0.751	0.901	0.65	100.8	0.69	88.9	MCSDRH73B-151MHF
220	1.05	1.26	0.53	156.3	0.59	126	MCSDRH73B-221MHF
330	1.59	1.908	0.44	252.7	0.48	219.9	MCSDRH73B-331MHF
470	2.17	2.604	0.37	320.2	0.41	263.7	MCSDRH73B-471MHF
680	3.12	3.744	0.31	542.1	0.34	467.3	MCSDRH73B-681MHF
820	4.01	4.812	0.28	591.3	0.3	515.5	MCSDRH73B-821MHF
1000	5.06	6.072	0.25	679.9	0.27	578.4	MCSDRH73B-102MHF

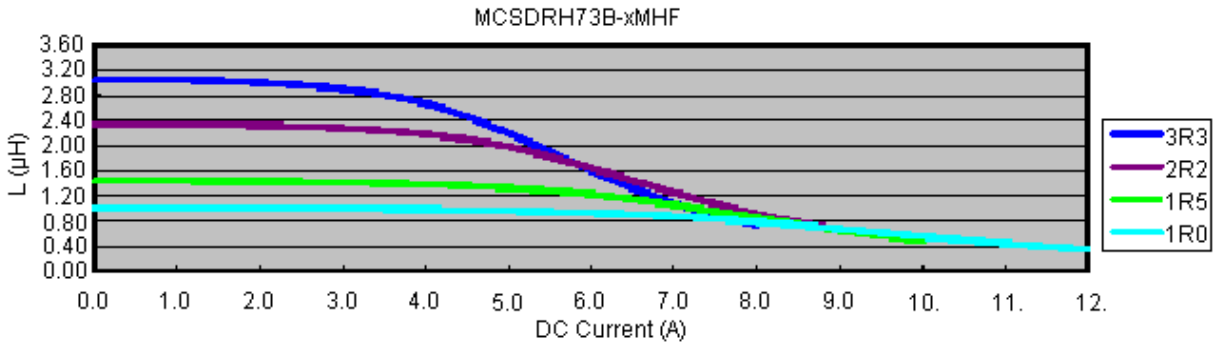
Electrical Characteristics

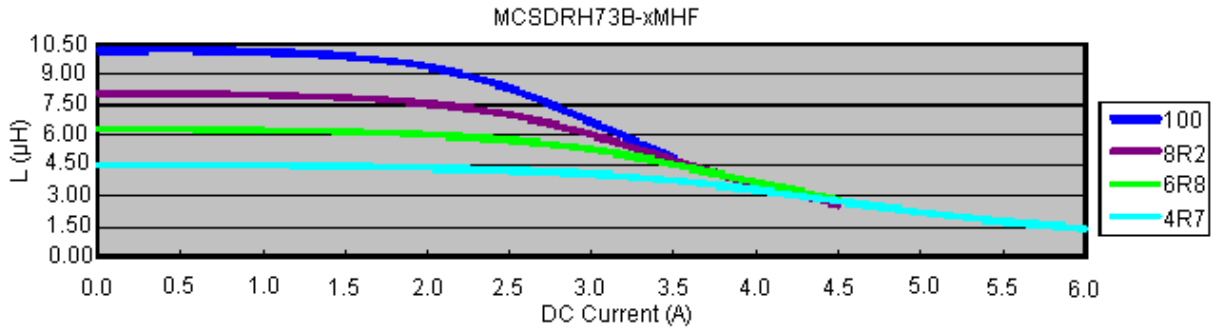
OCL (µH) ±20%	DCR (Ω) (Typical)	DCR (Ω) (Maximum)	I_{sat} (A) at 25°C	L at I_{sat} (µH) (Typical)	I_{rms} (A) at 25°C	L at I_{rms} (µH) (Typical)	Part Number
0.82	0.0039	0.0047	24.2	0.659	15.5	0.807	MCSDRH125B-R82MHF
1.5	0.0052	0.00625	18.5	1.12	13.3	1.4	MCSDRH125B-1R5MHF
2.2	0.0064	0.0077	14.8	1.75	12	2.05	MCSDRH125B-2R2MHF
3.3	0.0079	0.0095	12.6	2.65	10.8	2.95	MCSDRH125B-3R3MHF
4.7	0.0107	0.01285	10.1	3.6	9.3	4	MCSDRH125B-4R7MHF
6.8	0.0119	0.0143	8.4	5.75	8.8	5.5	MCSDRH125B-6R8MHF
8.2	0.0156	0.0187	7.6	6.6	7.7	6.5	MCSDRH125B-8R2MHF
10	0.0164	0.0197	6.9	8.3	7.5	7.45	MCSDRH125B-100MHF
15	0.0268	0.0322	5.65	11.2	5.8	10.77	MCSDRH125B-150MHF
22	0.0318	0.0382	4.7	18.7	5.4	15.3	MCSDRH125B-220MHF
33	0.0445	0.0534	4	26.65	4.5	21.7	MCSDRH125B-330MHF
47	0.0659	0.079	3.2	37.95	3.7	29.4	MCSDRH125B-470MHF
68	0.0991	0.119	2.7	55.6	3.05	45.3	MCSDRH125B-680MHF
82	0.121	0.145	2.4	67	2.75	52	MCSDRH125B-820MHF
100	0.155	0.186	2.2	79	2.4	66.7	MCSDRH125B-101MHF
150	0.217	0.26	1.8	124.8	2.05	98	MCSDRH125B-151MHF
220	0.321	0.385	1.5	182.4	1.7	148	MCSDRH125B-221MHF
330	0.434	0.52	1.2	284	1.45	206.5	MCSDRH125B-331MHF
470	0.627	0.753	1	402	1.2	293	MCSDRH125B-471MHF
680	0.888	1.066	0.85	548	1	404	MCSDRH125B-681MHF
820	1.093	1.312	0.76	680	0.92	511	MCSDRH125B-821MHF
1000	1.409	1.69	0.69	801	0.8	610	MCSDRH125B-102MHF

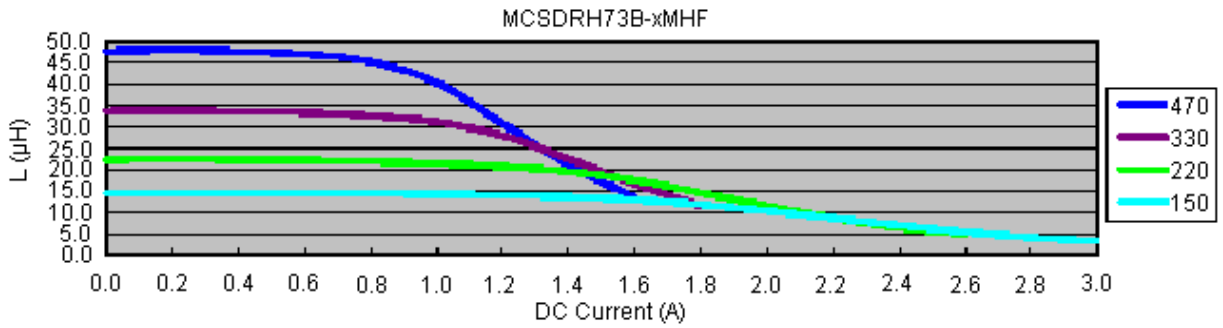
Note :

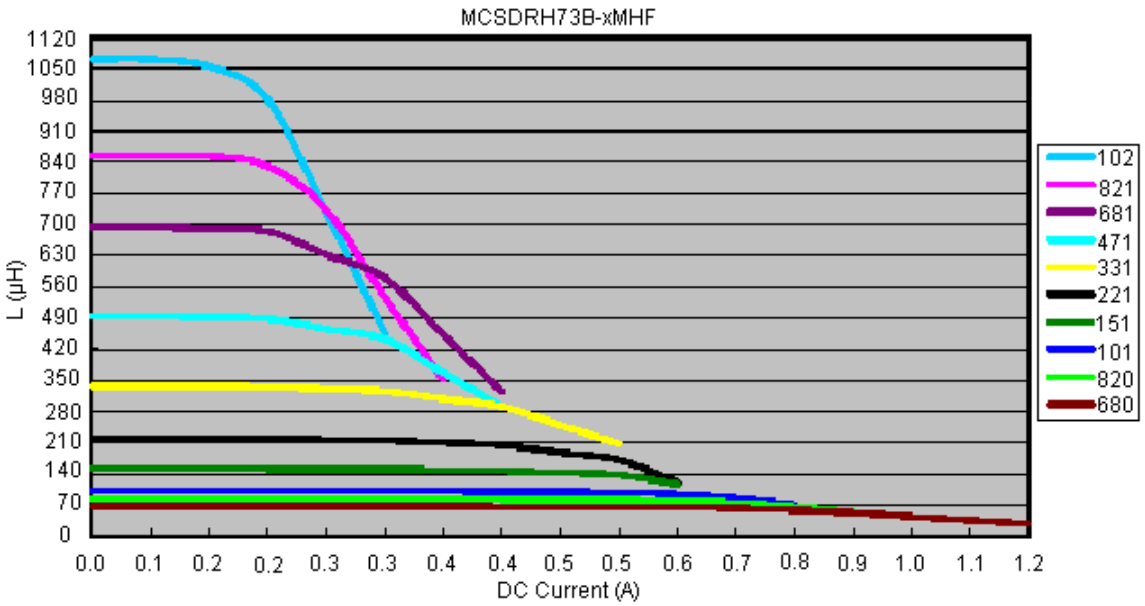
1. OCL (Open Circuit Inductance) and L at I_{rms} and L at I_{sat} and DCR are measured at: 100 KHz, 0.25 V at 25ºC.
2. I_{sat} : DC current that causes inductance to drop by approximately 30% from OCL; (T_a = 25ºC).
3. I_{rms} : DC current that causes an approximate temperature rise (ΔT) of 40°C; (T_a = 25ºC).
4. Inductance Vs. DC bias curve, please see the next page to get more detail information.
5. Inductance tolerance: ±20%, Base type: Plastic.

Inductance vs. Current









Inductance vs. Current