Magnetics

Shielded Low Profile Surface Mount Inductors

MODEL HM73



Features

- Operating Temperature Range -40°C to +155°C
- Temperature Rise, Maximum 50°C
- Operating Frequency Up to 400kHz
  (For HM73-SXXXXLF models Up to 800kHz)
- RoHS Compliant

Specifications @ 25°C

Part Number	Inductance 100 kHz 0.1V		I_{rated} (1) Rated Current Amps	Heating(2) Current Amps	I_{sat} (3) Saturation Current Amps	DC Resistance		Height Inch/mm Max.	Figure
	@ 0 Adc µH ± 20%	@ I_{rated} µH Typ.				mΩ Typ.	mΩ Max.		
HM73-10R10LF	0.10	0.09	22.0	26.7	38.0	1.40	1.65	.138/3.50	2
HM73-10R10LLF	0.10	0.09	22.0	28.0	38.0	1.20	1.40	.124/3.15	1
HM73-10R20LF	0.22	0.20	17.0	23.0	23.0	1.80	2.10	.138/3.50	2
HM73-10R20LLF	0.22	0.20	17.0	23.0	23.0	1.80	2.10	.124/3.15	1
HM73-10R47LF	0.47	0.42	15.0	19.2	23.0	2.70	3.16	.158/4.00	1
HM73-10R68LF	0.68	0.64	12.0	14.9	28.0	4.50	5.20	.158/4.00	1
HM73-101R0LF	1.00	1.00	8.5	14.9	15.0	5.20	7.00	.158/4.00	1
HM73-101R0LLF	1.00	0.90	6.0	10.9	18.0	8.40	9.20	.126/3.20	1
HM73-101R5LF	1.50	1.30	6.5	12.7	11.0	6.20	8.30	.177/4.50	1
HM73-102R0LF	2.00	1.70	8.0	11.8	11.0	7.20	8.30	.177/4.50	1
HM73-106R0LF	6.00	5.00	4.8	6.0	4.8	26.00	30.00	.197/5.00	1
HM73-106R4LF	6.40	5.80	3.5	6.0	6.0	26.00	30.00	.197/5.00	1
HM73-12R68LF	0.68	0.60	16.0	20.0	30.0	2.70	3.20	.197/5.00	1
HM73-S121R0LF	1.00	0.80	10.0	12.0	12.0	3.50	4.00	.177/4.50	1
HM73-S121R8LF	1.80	1.40	6.0	8.0	7.0	7.00	7.30	.177/4.50	1
HM73-15R10LF	0.108	0.103	30.0	40.8	51.0	0.60	0.70	.185/4.70	1
HM73-15R20LF	0.20	0.17	21.0	35.3	40.0	0.80	0.90	.158/4.00	1
HM73-15R47LF	0.47	0.42	17.0	26.7	35.0	1.40	1.55	.158/4.00	1
HM73-15R70LF	0.70	0.65	16.0	27.7	30.0	1.30	1.50	.220/5.60	1
HM73-151R0LF	1.00	0.95	10.0	22.0	34.0	2.00	2.20	.220/5.60	1
HM73-151R2LF	1.20	1.07	14.0	23.0	23.0	2.00	2.30	.232/5.90	1
HM73-151R5LF	1.50	1.33	10.0	22.9	25.0	1.90	2.20	.216/5.50	1
HM73-S152R1LF	2.10	1.68	11.0	12.0	16.0	6.50	7.80	.177/4.50	1
HM73-152R2LF	2.20	2.10	8.0	16.1	13.0	3.85	4.60	.216/5.50	1
HM73-152R4LF	2.40	1.92	15.0	17.0	20.0	3.35	4.00	.224/5.70	1
HM73-153R3LF	3.30	3.00	10.0	16.0	18.0	4.50	5.00	.287/7.30	1
HM73-154R7LF	4.70	3.50	10.0	15.6	16.0	4.80	5.30	.288/7.30	1
HM73-201R0LF	1.00	0.91	16.0	18.8	32.0	2.80	3.30	.177/4.50	1
HM73-201R5LF	1.50	1.43	13.0	16.4	22.0	3.70	4.40	.177/4.50	1
HM73-30R60LF	0.60	0.54	27.0	30.1	40.0	1.10	1.40	.216/5.50	1
HM73-301R0LF	1.00	0.89	23.0	25.8	34.0	1.50	1.85	.216/5.50	1
HM73-301R5LF	1.50	1.25	18.0	16.0	30.0	1.90	2.30	.216/5.50	1
HM73-302R2LF	2.20	2.00	12.0	15.0	24.0	4.40	5.10	.216/5.50	1
HM73-303R9LF	3.90	3.60	10.0	13.7	18.0	5.70	7.20	.216/5.50	1
HM73-304R6LF	4.60	4.10	9.0	12.4	14.0	6.50	8.30	.216/5.50	1
HM73-316R4LF	6.40	5.65	6.5	7.8	16.0	16.60	25.00	.197/5.00	2
HM73-318R2LF	8.20	7.72	5.6	7.3	16.0	18.80	26.00	.197/5.00	2
HM73-31100LF	10.0	8.90	6.0	6.9	10.0	20.80	26.00	.197/5.00	2
HM73-40R15LF	0.15	0.13	40.0	44.7	80.0	0.50	0.55	.256/6.50	1
HM73-40R30LF	0.30	0.27	40.0	40.8	73.0	0.60	0.75	.256/6.50	1
HM73-40R40LF	0.40	0.37	40.0	40.0	61.0	0.65	1.00	.256/6.50	1

General Note

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MODEL HM73

Specifications @ 25°C (continued)

Part Number	Inductance 100 kHz 0.1V		I_{rated} (1) Rated Current Amps	Heating(2) Current Amps	I_{sat} (3) Saturation Current Amps	DC Resistance		Height C Inch/mm Max.	Figure
	@ 0 Adc µH ± 20%	@ I_{rated} µH Typ.				mΩ Typ.	mΩ Max.		
HM73-40R50LF	0.50	0.46	40.0	40.0	49.0	0.80	1.00	.256/6.50	1
HM73-40R90LF	0.90	0.80	25.0	28.8	40.0	1.20	1.40	.256/6.50	1
HM73-402R2LF	2.20	1.90	15.0	20.8	27.0	2.30	2.60	.256/6.50	1
HM73-403R0LF	3.00	2.40	17.0	19.0	23.0	3.90	4.70	.256/6.50	1
HM73-403R3LF	3.30	2.64	17.0	21.0	24.0	3.30	4.20	.276/7.00	1
HM73-509R1LF	9.10	7.40	8.0	10.5	15.0	9.10	10.80	.295/7.50	1
HM73-50100LF	10.0	8.00	8.0	10.2	15.0	9.60	11.40	.295/7.50	1
HM73-50120LF	12.0	10.59	7.0	8.7	13.0	13.00	15.00	.295/7.50	1
HM73-50140LF	14.0	12.00	5.5	9.5	10.0	11.00	13.20	.335/8.50	1
HM73-5015R5LF	15.5	13.00	5.0	9.9	10.0	15.00	18.20	.315/8.00	1
HM73-5020R9LF	20.9	17.00	4.5	8.0	8.0	16.00	19.00	.335/8.50	1
HM73-5026R5LF	26.5	22.50	4.6	7.0	8.8	21.00	25.20	.355/9.00	1
HM73-601R0LF	1.00	0.80	30.0	38.0	45.0	1.00	1.20	.287/7.30	1
HM73-602R02LF	2.02	1.62	20.0	28.0	28.0	1.85	2.22	.323/8.20	1

Notes: (1) The rated current is the approximate current at which inductance will be decreased by 20% from its initial (zero DC) value.
(2) The Heating Current is the DC current which causes the component temperature to increase by approximately 50°C. This current is determined by soldering the component on a typical application PCB, and then applying the current to the component for 30 minutes.
(3) Isat is the saturation current at which inductance rolls off approximately 30% from its initial unbiased inductance value.
(4) PC Board layout, proximity of other components, trace size and airflow will affect temperature rise and must be considered when selecting an inductor.

Packaging

Standard:	Embossed Tape and Reel				
	(1) Case size 10, 10L & 12				
	Reel:	Diameter:		7"(177.8mm)	13" (330.2mm)
		Capacity:	=	250 Units	1000 Units
	(2) Other case sizes				
	Reel:	Diameter:	Case size 15, 20, 30, 31, 40, 50, 60	=	13" (330.2mm)
		Capacity:	Case size 20, 30, 31, 40 *	=	400 Units
			Case size 15	=	500 Units
			Case size 50, 60	=	250 Units
			* Except for HM73-403R3LFTR13 which is 300 units per reel.		

Ordering Information

HM73 - S 12 1R0 LF TR13

Model Series

Type
S _ Low loss core material
(No code used for normal material)

Case Size:
10, 31 = Figure 2
10, 10L, 12, 15, 20, 30, 40, 50, 60 = Figure 1

Tape & Reel Packing
7 – 7" reel
13 – 13" reel

Lead Free

Inductance Code:
First 2 digits are significant.
Last digit denotes the number of trailing zeros. For values below 10µH, "R" denotes the decimal point.

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Outline Dimensions (Inch/mm)

Figure 1

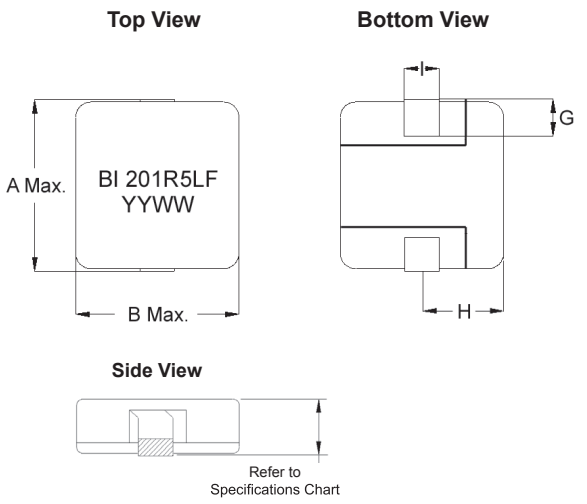
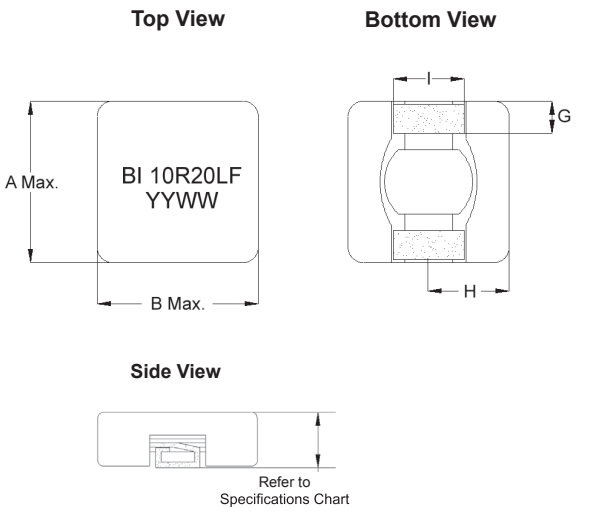
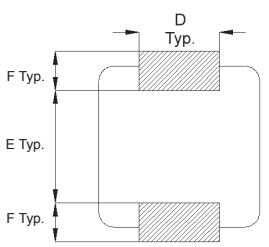


Figure 2



Recommended Solder Pad Layout



Case size	Inductance Code	Fig.	A	B	D	E	F	G	H	I
10	All Models	2	.295 7.50	.271 6.90	.138 3.50	.138 3.50	.098 2.50	.079 ± .020 2.0 ± 0.5	.126 ± .020 3.2 ± 0.5	.118 ± .020 3.0 ± 0.5
10 & 10L	All Models	1	.285 7.23	.265 6.73	.086 2.20	.098 2.50	.098 2.50	.079 ± .020 2.0 ± 0.5	.126 ± .020 3.2 ± 0.5	.053 ± .020 1.35 ± 0.5
12	All Models	1	.295 7.50	.265 6.73	.086 2.20	.098 2.50	.098 2.50	.079 ± .020 2.0 ± 0.5	.126 ± .020 3.2 ± 0.5	.053 ± .020 1.35 ± 0.5
15	All Models	1	.461 11.70	.413 10.50	.098 2.50	.177 4.50	.142 3.60	.09 ± .020 2.3 ± 0.5	.197 ± .020 5.0 ± 0.5	.079 ± .020 2.0 ± 0.5
20	All Models	1	.531 13.5	.512 13.0	.158 4.00	.236 6.00	.158 4.00	.118 ± .020 3.0 ± 0.5	.240 ± .020 6.1 ± 0.5	.091 ± .020 2.3 ± 0.5
30	All Models	1	.552 14.0	.512 13.0	.158 4.00	.236 6.00	.167 4.25	.118 ± .020 3.0 ± 0.5	.240 ± .020 6.1 ± 0.5	.091 ± .020 2.3 ± 0.5
31	All Models	2	.512 13.0	.512 13.0	.295 7.50	.236 6.00	.177 4.50	.118 ± .020 3.0 ± 0.5	.240 ± .020 6.1 ± 0.5	.217 ± .020 5.5 ± 0.5
40	R15, R40 & 3R3	1	.575 14.6	.512 13.0	.158 4.00	.236 6.00	.177 4.50	.118 ± .020 3.0 ± 0.5	.240 ± .020 6.1 ± 0.5	.091 ± .020 2.3 ± 0.5
	R30, R50 R90, 2R2 & 3R0	1	.556 14.1	.512 13.0	.158 4.00	.236 6.00	.167 4.25	.118 ± .020 3.0 ± 0.5	.240 ± .020 6.1 ± 0.5	.091 ± .020 2.3 ± 0.5
50	All Models	1	.531 13.5	.512 13.0	.158 4.00	.236 6.00	.158 4.00	.118 ± .020 3.0 ± 0.5	.240 ± .020 6.1 ± 0.5	.091 ± .020 2.3 ± 0.5
60	All Models	1	.591 15.0	.512 13.0	.165 4.20	.236 6.00	.197 5.00	.118 ± .020 3.0 ± 0.5	.250 ± .020 6.35 ± 0.5	.094 ± .020 2.4 ± 0.5

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