HM70

NEW

High Power Shielded Low Profile Surface Mount Inductors

Electrical / Environmental

- Operating Temperature Range -40°C to +180°C
- Temperature Rise, Maximum 50°C

Specifications

Part Number	Inductance 100kHz @ 0 Adc (µH±20%) Typ.	Inductance 0.1V @ I_{rated} (µH) Min.	Inductance 0.1V @ I_{rated} (µH) Typ.	DCR (1) (mΩ) Typ.	DCR (1) (mΩ) Max.	I_{rated} (2) @ 25°C (Adc)	Heating (3) Current (Adc) @Δ50°C	Core Loss (4) Factor K1	Core Loss (4) Factor K2	Fig.
HM70-101R0	1.00	0.63	0.70	2.53	2.90	16	15	9.07E-11	86.721	1
HM70-201R3	1.33	0.93	1.16	3.38	3.74	16	13	1.24E-10	79.134	1
HM70-201R9	1.94	1.28	1.60	4.71	5.42	12	11	1.24E-10	95.591	1
HM70-25R80	0.83	0.488	0.61	1.75	2.01	18	19	1.29E-10	68.630	1
HM70-301R5	1.50	0.80	1.00	2.16	2.48	16	17	1.33E-10	97.919	1
HM70-302R0	2.10	1.12	1.40	3.48	4.00	12	14	1.33E-10	113.246	1
HM70-401R2	1.25	0.92	1.02	1.75	1.80	34	22	2.12E-10	72.072	2
HM70-401R6	1.68	1.15	1.44	2.13	2.36	20	20	2.12E-10	76.245	2
HM70-50R70	0.70	0.40	0.52	1.05	1.26	30	31	2.85E-10	42.602	2
HM70-501R2	1.20	0.80	0.90	1.68	2.00	24	25	2.85E-10	53.556	2

Notes: (1) DC Resistance measured at 25°C

(2) The rated current (I_{rated}) is the current at which the inductance will be decreased by 20% from its initial (zero DC) value.

(3) 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 apply the current to the device for 30 minutes.

(4) Core Loss approximation is based on published core data:

Core Loss (Pfe) = $K1 * (f)^{1.338} * (K2\Delta I)^{2.2546}$

Where: core loss = in watt; f = frequency in kHz; K1 and K2 = core loss factor; ΔI = delta I across the component in Amp.; K2ΔI = one half of the peak to peak flux density across the component in Gauss

Outline Dimensions (mm)

Figure 1

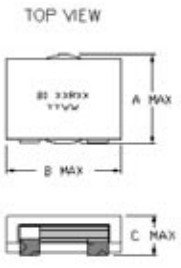
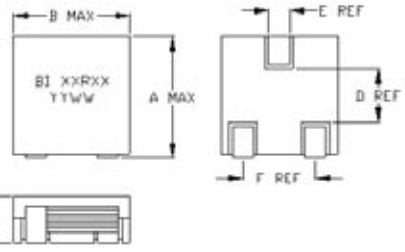
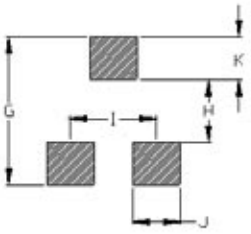


Figure 2



Recommended Solder Pad Layout



Case size	A	B	C	D	E	F	G	H	I	J	K
10	9.00	10.5	3.70	4.80	1.70	6.00	8.30	2.30	6.00	2.80	3.00
20	9.00	10.5	4.50	4.80	1.70	6.00	8.00	2.00	6.00	2.80	3.00
25	9.00	10.5	5.00	4.80	1.70	6.00	8.30	2.30	6.00	2.80	3.00
30	9.00	10.5	5.20	4.80	1.70	6.00	8.00	2.00	6.00	2.80	3.00
40	11.0	12.6	5.20	6.20	2.30	7.50	10.7	3.70	7.50	3.10	3.50
50	13.5	12.9	5.50	6.50	2.30	7.50	13.5	6.50	7.50	3.00	3.50

Packaging

Standard: Embossed Tape & Reel

Reel:	Diameter		=	13" (330.2mm)
	Capacity	Case Size 10,20,25,30	=	500 Units
		Case Size 40,50	=	400 Units

Ordering Information

HM70 50 1R2

Model Series

Case Size

Inductance Code:

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