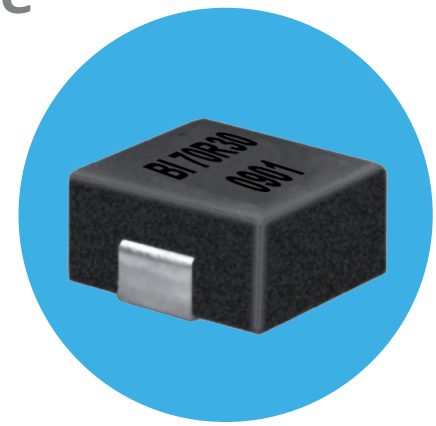
Magnetics

High Current Low Profile Surface Mount Inductors



Model HM69

Features and Benefits

- Operating Temperature Range -40°C to +125°C
- Temperature Rise, Maximum 40°C
- Operating Frequency Up to 3MHz
- RoHS Compliant

Specifications

Part Number	Inductance 100kHz, 0.1V @ 0 Adc (nH ± 20%)	@ I_{rated} (nH)		DCR (1) (mΩ)		I_{rated} (2) @ 25°C (Adc)	Heating Current(3) (A)	Core Loss (4) Factor	
	Typ.	Min.	Typ.	Min.	Typ.			K1	K2
HM69-10R025LF	25	18	25	0.27	0.33	42	22	3.847E-14	59.444
HM69-20R050LF	50	28	36	0.20	0.24	70	35	1.074E-13	50.117
HM69-30R070LF	70	50	67	0.40	0.48	46	25	1.074E-13	70.164
HM69-40R10LF	100	60	75	0.31	0.39	28	25	7.124E-14	156.891
HM69-50R10LF	100	72	95	0.40	0.48	29	24	8.733E-14	127.990
HM69-50R15LF	150	96	120	0.40	0.48	18	24	8.733E-14	191.986
HM69-55R10LF	100	64	80	0.45	0.56	45	25	1.337E-13	96.541
HM69-55R20LF	200	140	175	0.45	0.56	21	25	1.337E-13	160.902
HM69-60R10LF	100	69	87	0.42	0.50	68	31	2.311E-13	52.336
HM69-60R15LF	150	104	130	0.42	0.50	48	31	2.311E-13	78.503
HM69-60R20LF	200	144	180	0.42	0.50	31	31	2.311E-13	104.671
HM69-70R30LF	300	200	250	0.17	0.20	37	70	6.784E-13	98.921
HM69-75R20LF	200	150	175	0.40	0.50	20	40	3.559E-13	134.203
HM69-80R30LF	300	216	285	0.17	0.25	40	76	9.107E-13	72.674

Notes: (1) DC resistance is measured at 25°C.
(2) The rated current (Irated) 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 40°C. This current is determined by soldering the component on a typical application PCB, and then applying the device for 30 minutes.
(4) Core Loss approximation is based on published core data:
Core Loss = $K1 * (f)^{1.77} * (K2\Delta I)^{2.21}$
Where: core loss in watt f = switching 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

Packaging

Standard	Embossed Tape & Reel			
	Reel:	Diameter:	=	13" (330.2mm)
		Capacity: Case size 10,40	=	1000 Units
		Case size 20,30,60	=	800 Units
		Case size 50,55,75	=	500 Units
		Case size 70,80	=	350 Units

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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Rev. 02 8.17

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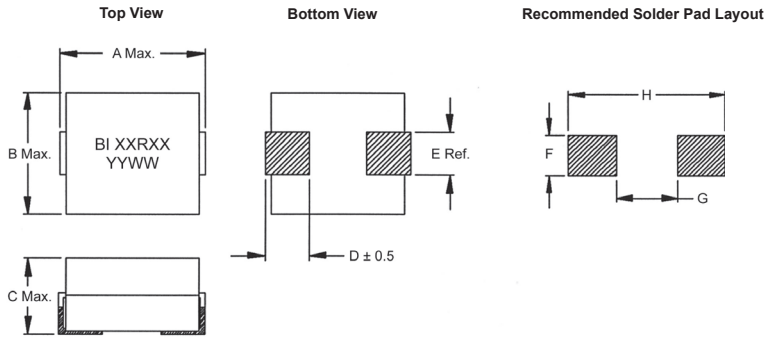
Ordering Information

HM69 - 50 R10 LF TR13

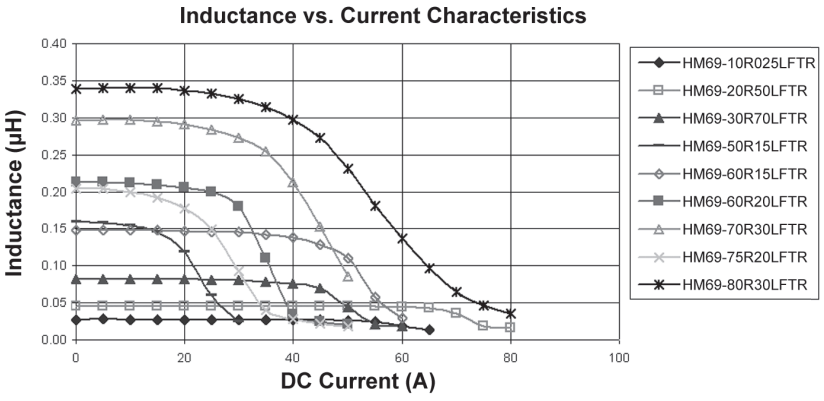
- Model Series
- Case Size :
- Inductance Code:
  First 2 digits are significant.
  Last digit denotes the number of trailing zeros.
  For values below 10µH, "R" denotes the decimal point.
- Lead-Free
- TR - Tape & Reel Packing
  13 - 13" reel

Outline Dimensions (mm)



Case Size	A	B	C	D	E	F	G	H
10	6.00	5.00	3.00	1.00	1.50	1.60	2.00	5.80
20	7.50	6.50	5.00	1.50	2.95	3.00	2.50	7.50
30	7.00	7.00	5.00	1.50	2.3	2.50	2.50	7.50
40	7.01	6.35	3.30	1.50	2.85	3.20	2.50	7.50
50	8.60	6.30	3.30	1.50	2.85	3.20	2.50	9.00
55	8.60	6.30	4.80	1.50	2.85	3.20	2.50	9.00
60	10.2	7.00	5.10	1.50	2.50	2.80	5.50	10.5
70	13.5	13.0	6.80	3.00	5.00	5.30	5.50	13.5
75	13.5	13.0	3.50	2.00	2.50	3.20	7.00	13.5
80	13.8	13.0	8.20	2.00	5.00	5.30	5.50	13.8

Electrical Characteristics @ 25°C



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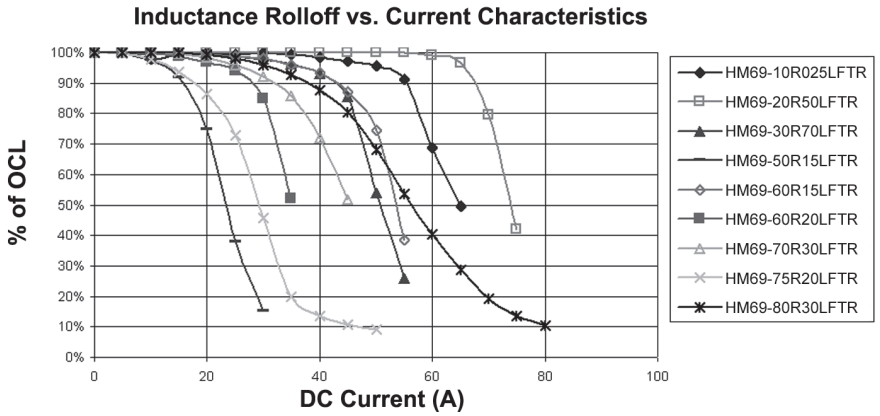
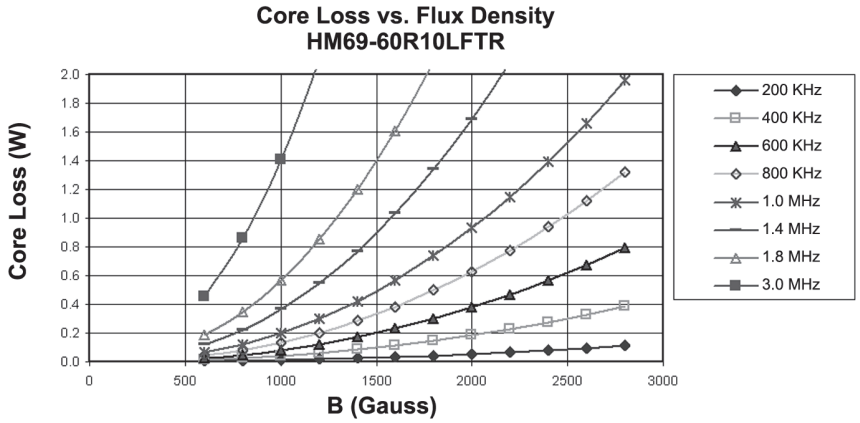
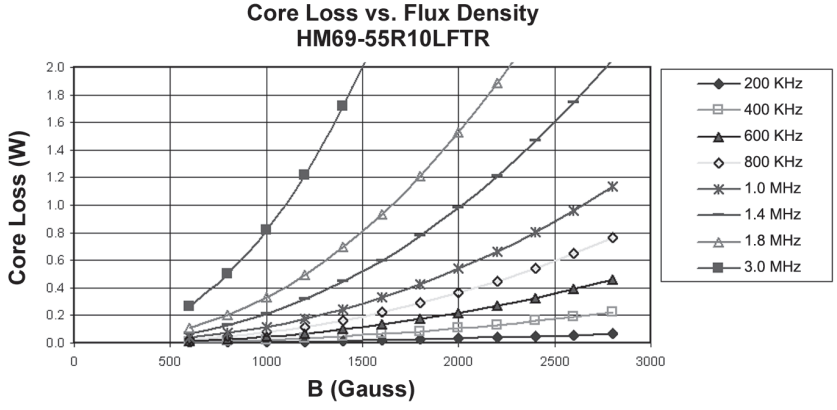
Electrical Characteristics @ 25°C (Cont'd)







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