

Electrical / Environmental

HM69



High Current Low Profile Surface Mount Inductors

- **Operating Temperature Range** -40°C to +125°C Temperature Rise, Maximum 40°C
 - Ambient Temperature, Maximum
- Insulation System

80°C

Class F, 155°C

Specifications

	Inductance ——— IOOkHz, O.IV						Heating Current ⁽³⁾		
Part	@ 0 Adc (nH±20%)	@ I _{rated} (nH)		DCR ⁽¹⁾ (mΩ)		_{rated} ⁽²⁾ @ 25 °C		Core Loss ⁽⁴⁾ Factor	
Number	Тур.	Min.	Тур.	Тур.	Max.	(Adc)	(A)	KI	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

(1) DC resistance is measured at 25° C. Notes:

(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 40° C. This current is determined by soldering the component on a typical application PCB, and then apply 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 $\Delta I = delta I across the component in Amp.$ K1 and K2 = core loss factor

 $K2\Delta I$ = one half of the peak to peak flux density across the component in Gauss

Packaging

60

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

Ordering Information <u>50</u> <u>HM69</u> <u>R10</u> <u>LF</u> <u>TR13</u> Model Series TR - Tape & Reel Packing 13 - 13" reel Case Size Lead-Free

Inductance Code:

First 2 digits are significant.

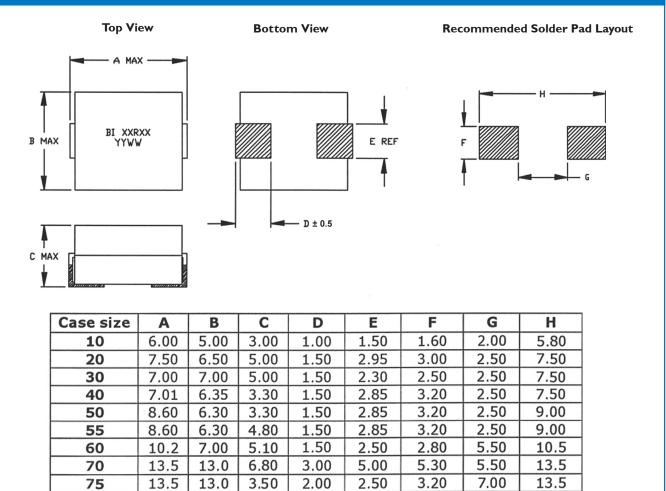
Last digit denotes the number of trailing zeros.

For values below 10µH, "R" denotes the decimal point.





Outline Dimensions (mm)



5.30

5.00

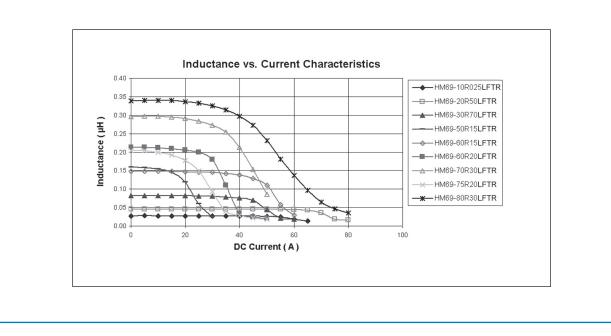
5.50

13.8

Electrical Characteristics @ 25°C

13.8

80



8.20

2.00

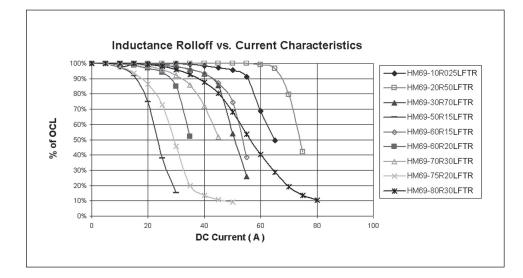
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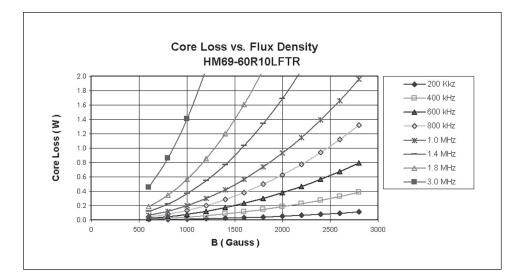


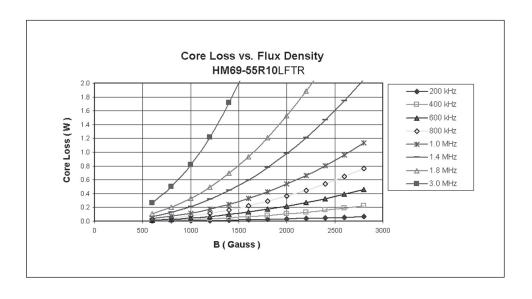
61



Electrical Characteristics @ 25 °C (Cont'd)









62