High Current, Through-Hole Inductor, Edge-Wound Series

FEATURES

- High temperature operation, up to 180 °C continuous with no aging
- Low DCR to minimize losses and reduce temperature rise
- Powdered iron alloy core technology provides stable inductance and saturation over operating temperature with satisfactory core losses
- Soft saturation gives predictable inductance decrease with increasing DC current independent of temperature
- Two iron alloy materials are available for optimized performance; see notes for details
- Standard terminal is stripped and tinned for through-hole mounting but other terminal configurations such as bare copper, SMD, and press fit pin are available upon request
- Hot dipped Sn plating provides low risk of whisker growth
- Custom options for inductance, saturation current, current rating, DCR, mounting style and voltage rating can be developed upon request
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

APPLICATIONS

- High current and high temperature applications
- DC/DC converters
- High current differential mode chokes
- Inverters

STANDARD ELECTRICAL SPECIFICATIONS

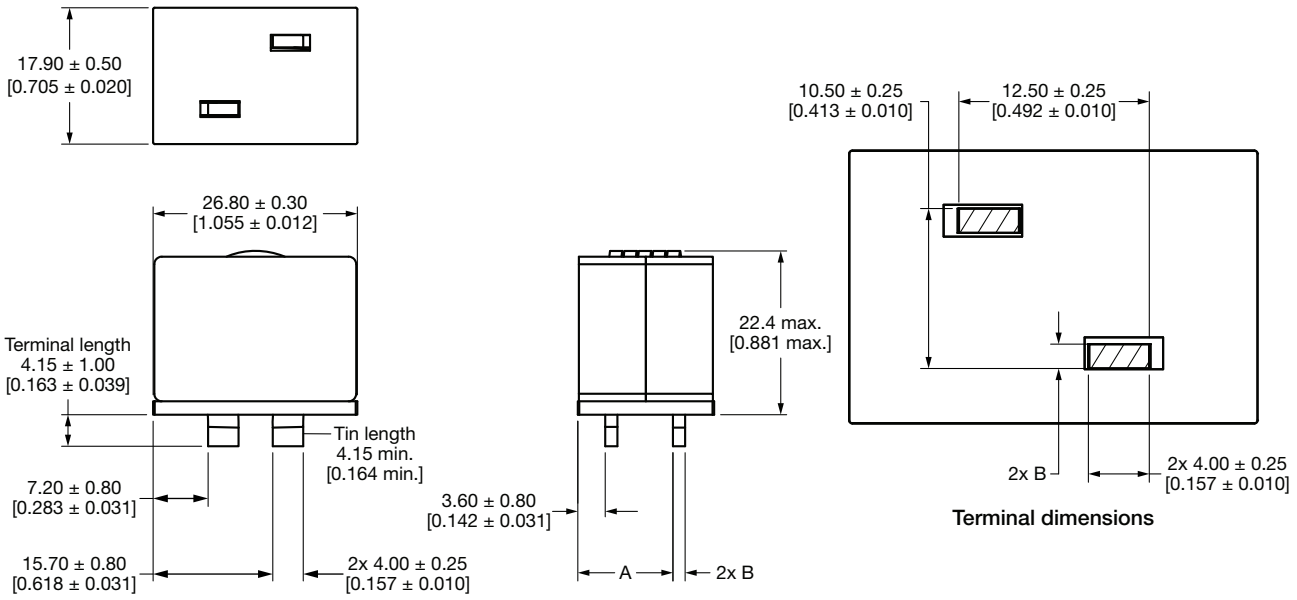
PART NUMBER	L_0 INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH)	DCR AT 25 °C TYP. (mΩ)	DCR AT 25 °C MAX. (mΩ)	HEAT RATING CURRENT DC TYP. (1) (A)	SATURATION CURRENT DC		SRF TYP. (MHZ)	DIMENSION	
					TYP. (2) (A)	TYP. (3) (A)		A ± 0.8 [mm]	B ± 0.3 [mm]
BEST SATURATION AND CORE LOSS									
IHDM1107BBEVR47M20	0.47	0.22	0.27	128	343	422	217	11.50	2.60
IHDM1107BBEV1R1M20	1.1	0.30	0.36	93	245	301	100	11.50	2.60
IHDM1107BBEV2R0M20	2.0	0.52	0.58	75	191	234	82	12.10	2.00
IHDM1107BBEV3R0M20	3.0	0.75	0.83	50	156	192	53	12.50	1.60
IHDM1107BBEV4R3M20	4.3	1.05	1.16	48	133	164	33	13.00	1.40
IHDM1107BBEV5R6M20	5.6	1.44	1.53	37	115	142	30	12.90	1.20
IHDM1107BBEV7R5M20	7.5	2.11	2.20	31	96	118	29	13.20	0.90
LOWEST DCR									
IHDM1107BBEVR68M30	0.68	0.22	0.27	125	202	248	181	11.50	2.60
IHDM1107BBEV1R5M30	1.5	0.30	0.36	91	134	165	80	11.50	2.60
IHDM1107BBEV2R7M30	2.7	0.52	0.58	72	103	127	62	12.10	2.00
IHDM1107BBEV4R3M30	4.3	0.75	0.83	64	85	105	44	12.50	1.60
IHDM1107BBEV6R2M30	6.2	1.05	1.16	56	74	91	25	13.00	1.40
IHDM1107BBEV8R2M30	8.2	1.44	1.53	39	59	73	22	12.90	1.20
IHDM1107BBEV120M30	12.0	2.11	2.20	35	49	61	21	13.20	0.90

Notes

- The -20 series provides the best saturation and lowest core loss (compared to a similar inductance value from the -30 series)
- The -30 series provides lowest DC losses (compared to similar inductance value from -20 series)
- All test data is referenced to 25 °C ambient
- Operating temperature range -40 °C to +180 °C
- The part temperature (ambient + temp. rise) should not exceed 180 °C under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application
- Isolation voltage, coil to core: 350 V_{DC}, 60 s, 5 mA max.

(1) DC current (A) that will cause an approximate ΔT of 40 °C
(2) DC current (A) that will cause L_0 to drop approximately 20 %
(3) DC current (A) that will cause L_0 to drop approximately 30 %

DIMENSIONS in millimeters [inches]



Terminal dimensions

DESCRIPTION

IHDM-1107BB-30	1.2 µH	± 20 %	EV	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I	H	D	M	1	1	0	7	B	B	E	V	1	R	2	M	3	0
PRODUCT FAMILY				SIZE						LEAD (Pb)-FREE	STYLE	INDUCTANCE VALUE			INDUCTANCE TOLERANCE	SERIES	
											V = vertical	**1R2** = 1.2 µH			**M** = ± 20 %		

PERFORMANCE GRAPHS

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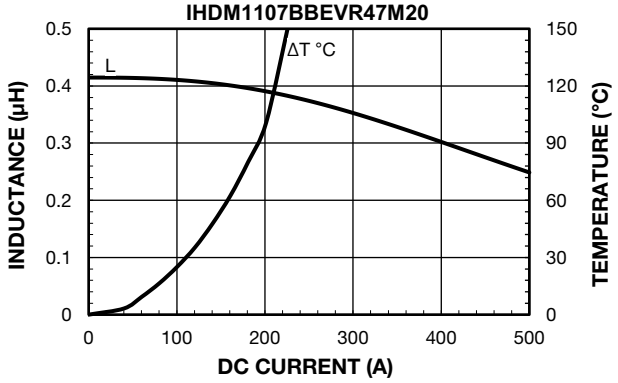

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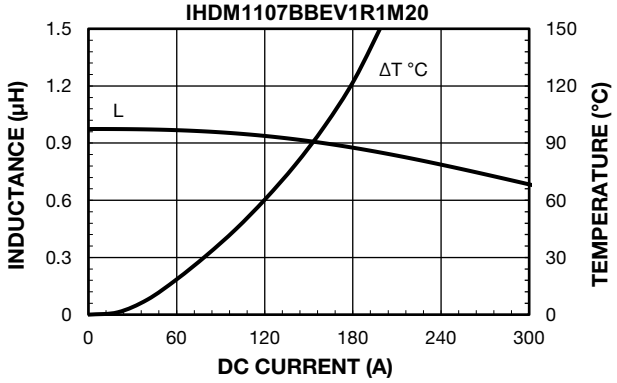

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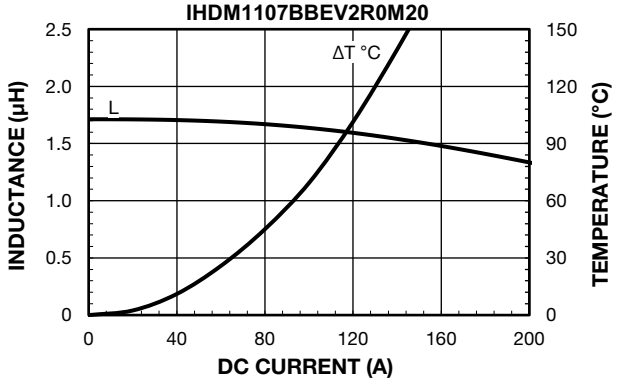

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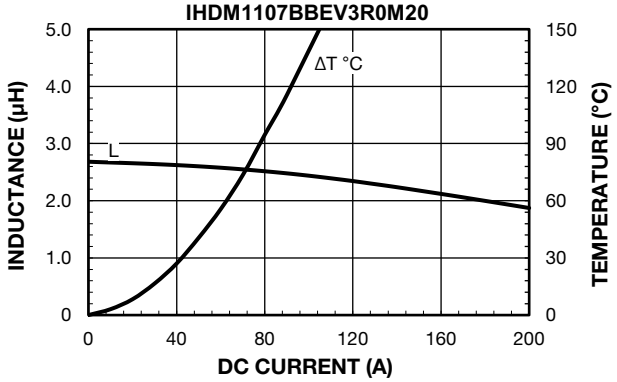

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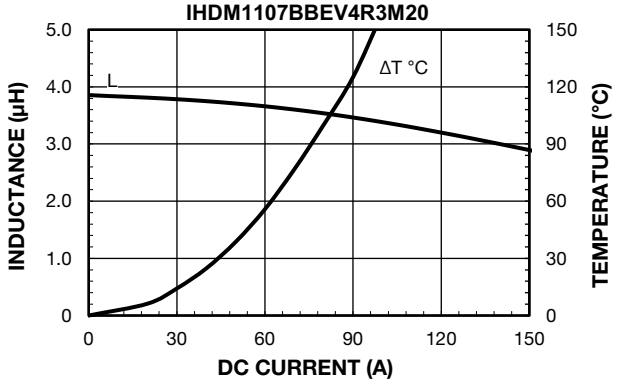

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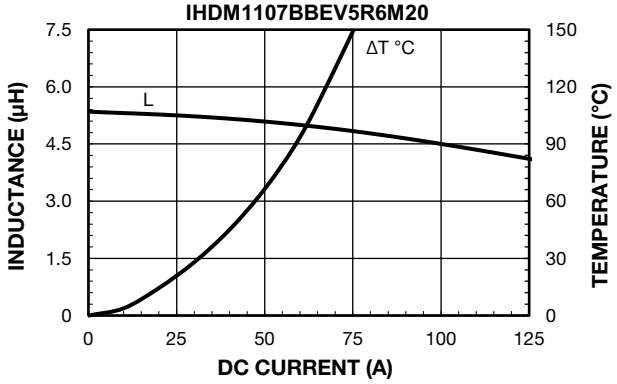

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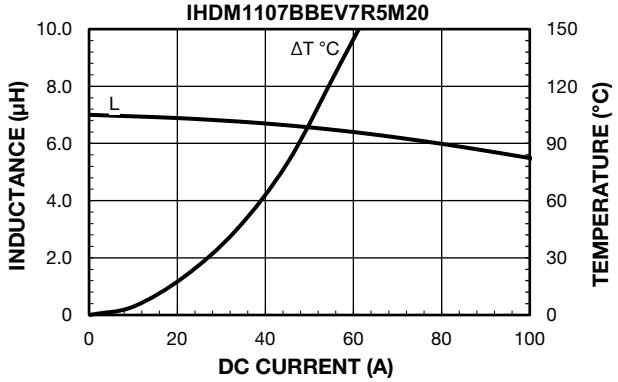
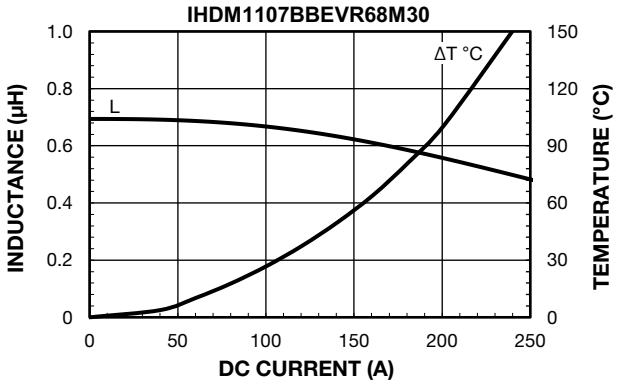
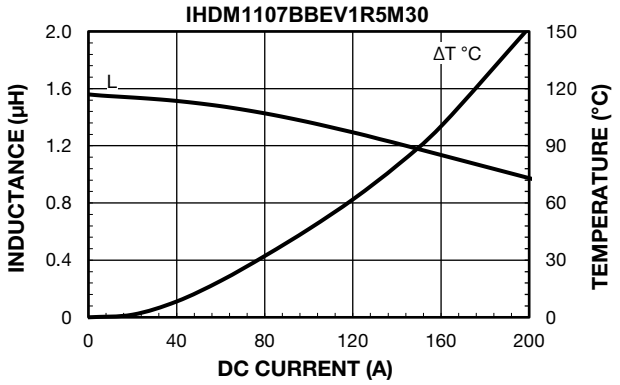
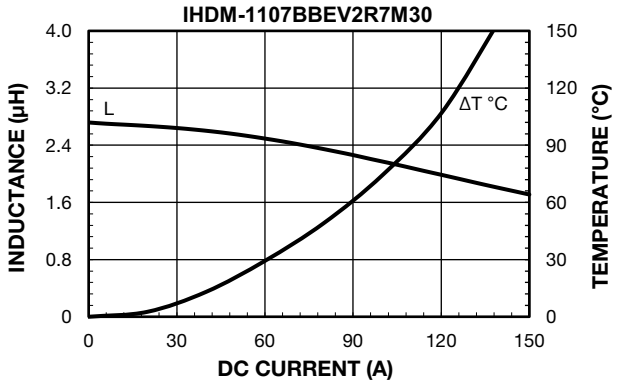
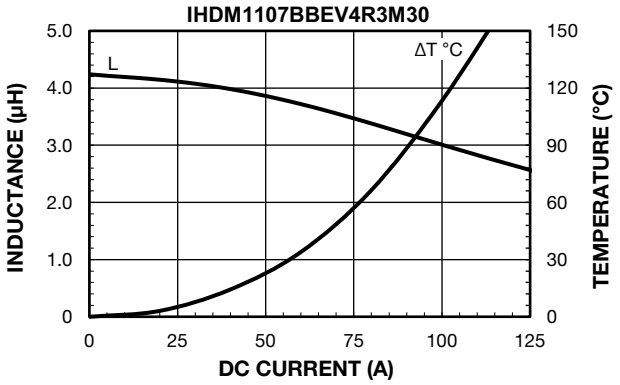


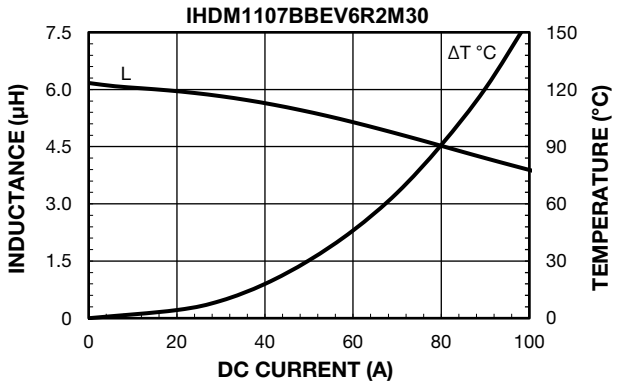
PERFORMANCE GRAPHS

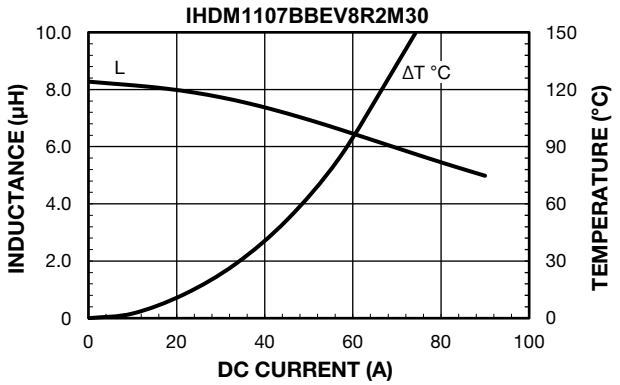


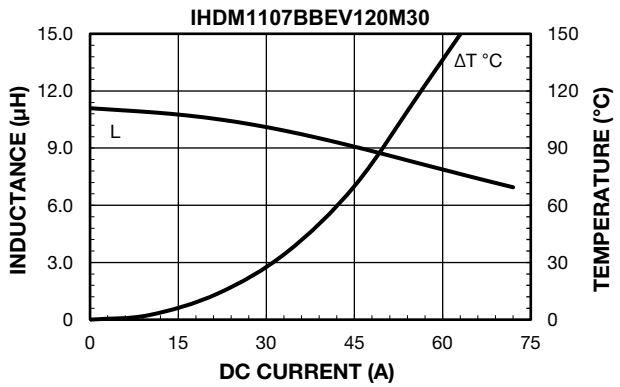












PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

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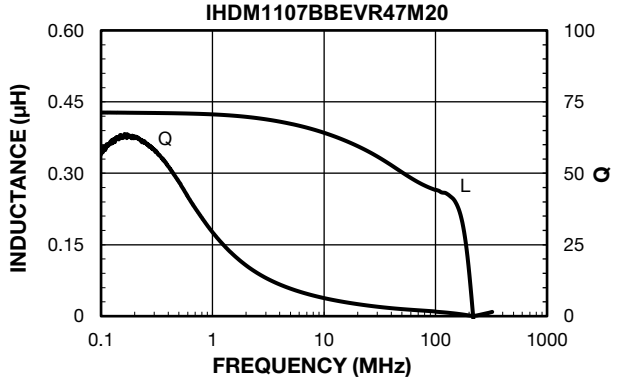

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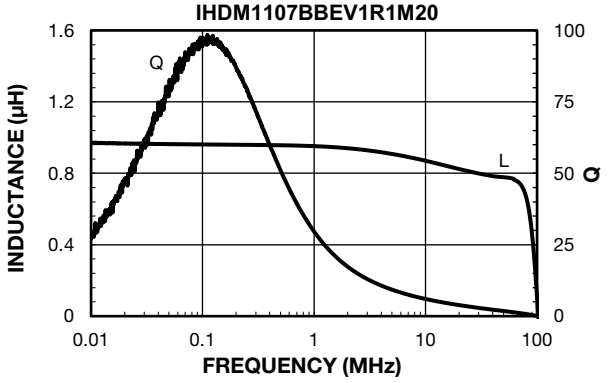

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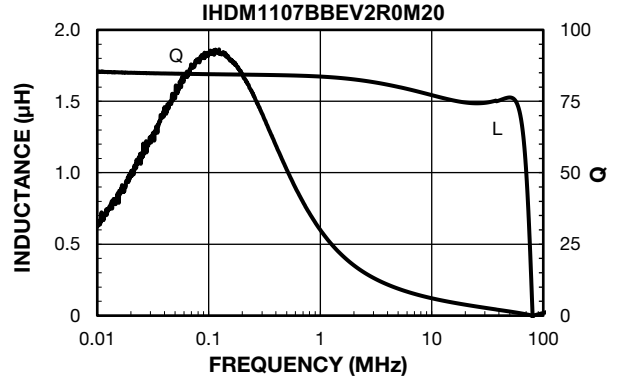

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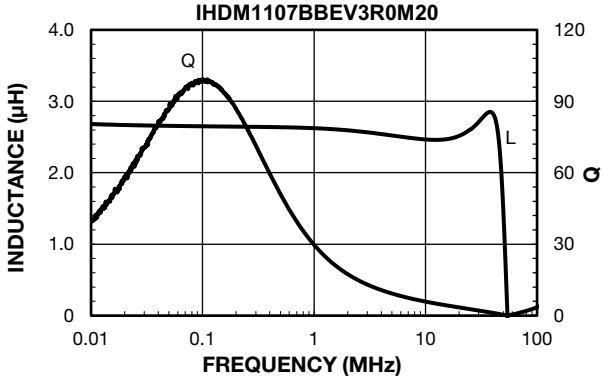

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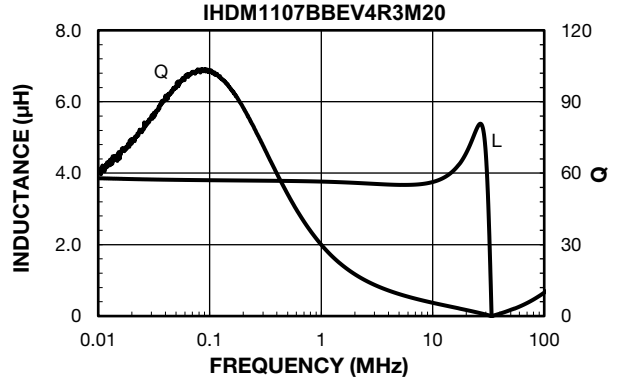

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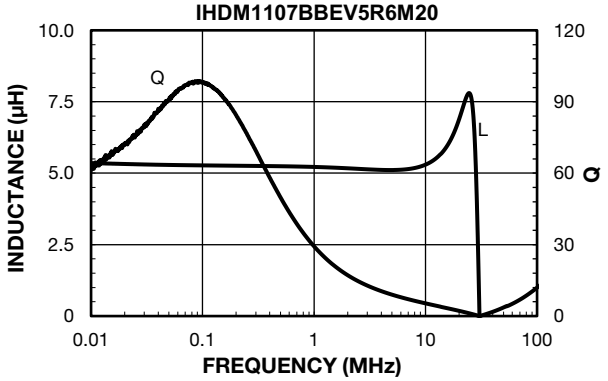

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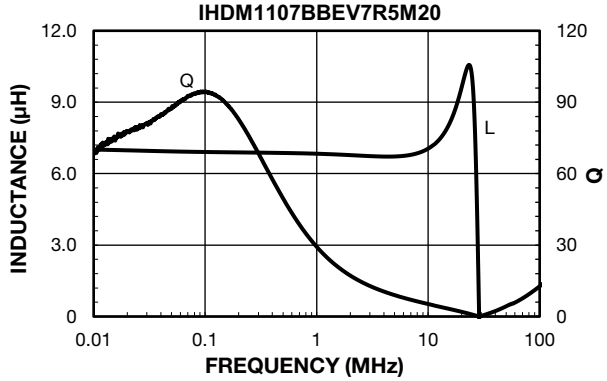

PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

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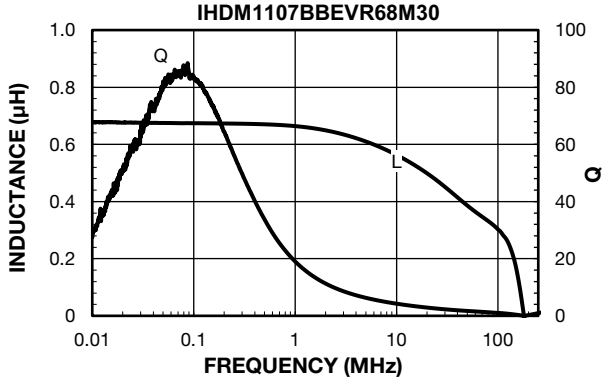

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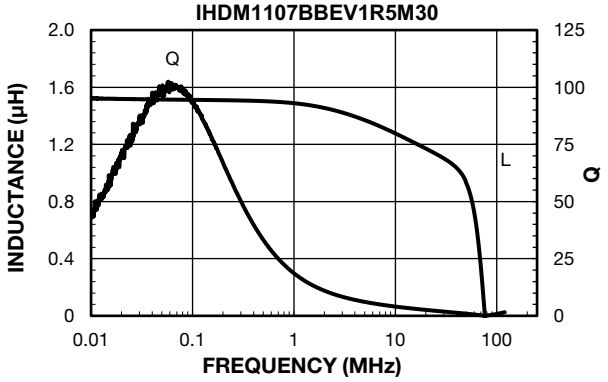

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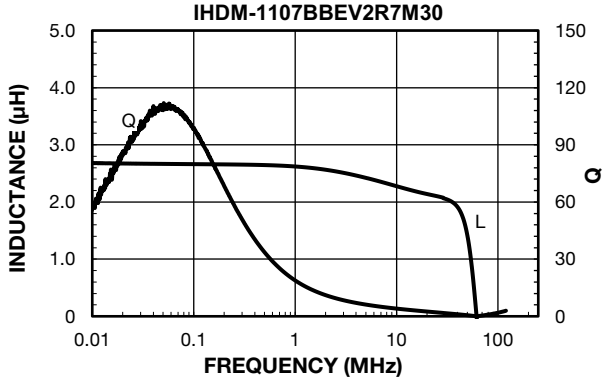

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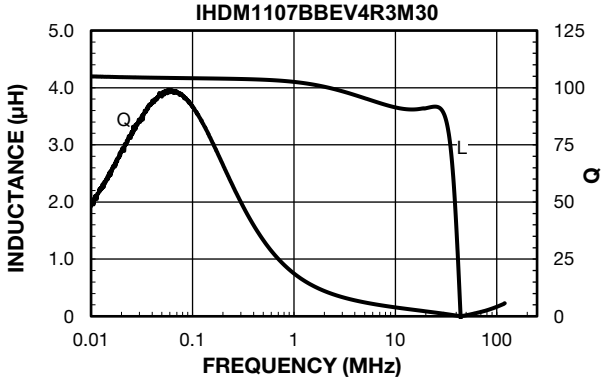

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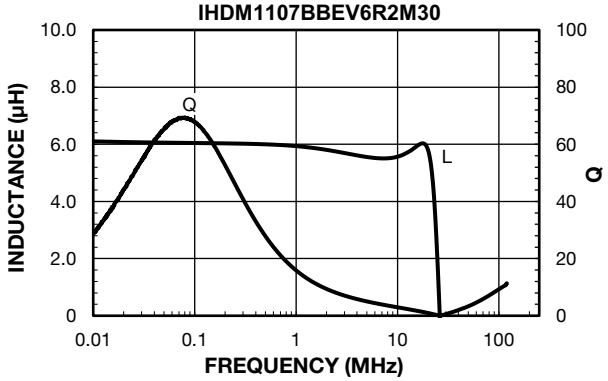

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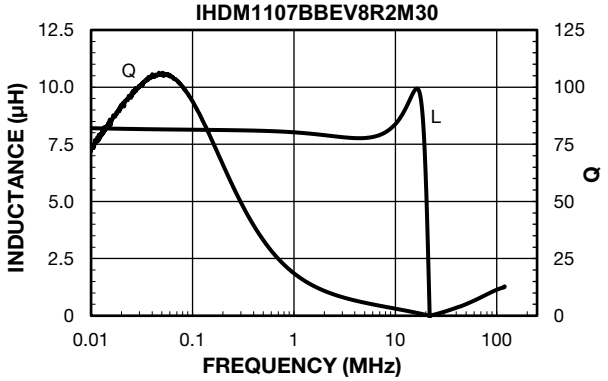

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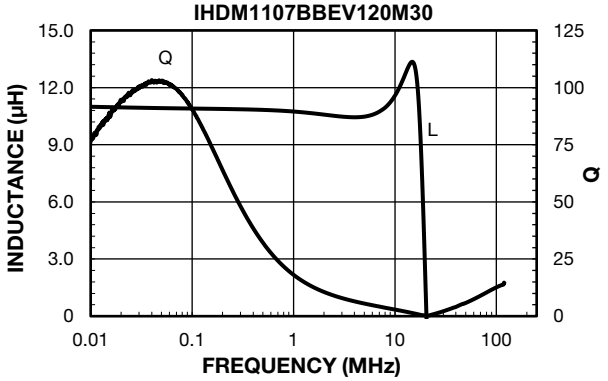

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