High Current, Through-Hole Inductor Edge-Wound Series

APPLICATIONS

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

FEATURES

- High temperature continuous operation, up to 180 °C 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
- Series includes multiple powdered iron core materials for optimized performance in circuit application
- Standard terminal 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 are available
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

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 TYP. (2) (A)	SATURATION CURRENT DC TYP. (3) (A)	SRF TYP. (MHZ)	DIMENSION A ± 0.4 [mm]	DIMENSION B ± 0.5 [mm]
BEST BALANCE OF CORE LOSS AND SATURATION									
IHDM1008BCEV1R3M20	1.3	0.40	0.48	84	201	259	95	2.6	14.5
IHDM1008BCEV2R2M20	2.2	0.63	0.70	63	158	204	69	2.0	15.0
IHDM1008BCEV3R0M20	3.0	0.86	0.95	57	131	169	48	1.8	15.2
IHDM1008BCEV4R3M20	4.3	1.00	1.15	51	110	142	37	1.6	15.4
IHDM1008BCEV5R6M20	5.6	1.35	1.50	45	97	125	34	1.4	15.6
IHDM1008BCEV6R8M20	6.8	1.70	2.00	37	85	110	30	1.2	15.9
LOWEST CORE LOSS									
IHDM1008BCEV1R2M30	1.2	0.25	0.30	100	157	205	91	3.2	13.8
IHDM1008BCEV2R2M30	2.2	0.40	0.48	85	132	168	70	2.6	14.5
IHDM1008BCEV3R3M30	3.3	0.63	0.70	70	90	116	43	2.0	15.0
IHDM1008BCEV4R7M30	4.7	0.86	0.95	62	78	100	35	1.8	15.2
IHDM1008BCEV6R8M30	6.8	1.00	1.15	55	64	83	29	1.6	15.4
IHDM1008BCEV8R2M30	8.2	1.35	1.50	48	56	71	24	1.4	15.6
IHDM1008BCEV100M30	10	1.70	2.00	40	53	68	22	1.2	15.9

Notes

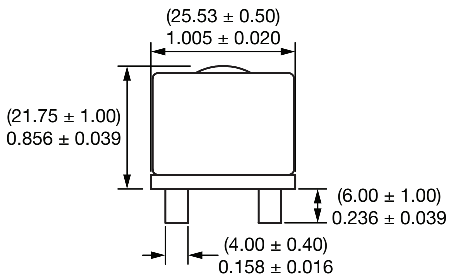
- The -20 series provides a good balance between core losses, saturation current, and high frequency stability up to 800 kHz
- The -30 series provides lower core losses with slightly lower saturation current
- All test data is referenced to 25 °C ambient
- Operating temperature range -40 °C to +180 °C
- The part temperature (ambient + temp. rise) should not exceed 180 °C under worst case operating conditions. Circuit design, component placement, PWB 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.

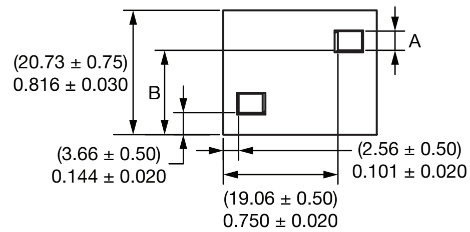
(1) DC current (A) that will cause an approximate ΔT of 40 °C

(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 inches (millimeters)





DESCRIPTION

IHDM-1008BC-30	1.2 µH	± 20 %	EV	e3
MODEL	INDUCTANCE	INDUCTANCE TOLERANCE	PACKAGE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I	H	D	M	1	0	0	8	B	C	E	V	1	R	2	M	3	0
MODEL				SIZE						LEAD (Pb)- FREE	STYLE V: vertical	INDUCTANCE VALUE			TOL.	SERIES	

PERFORMANCE GRAPHS

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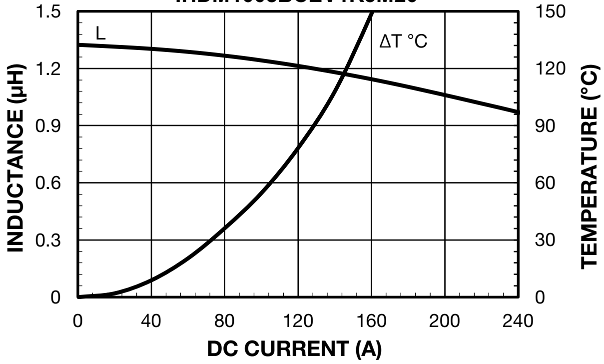

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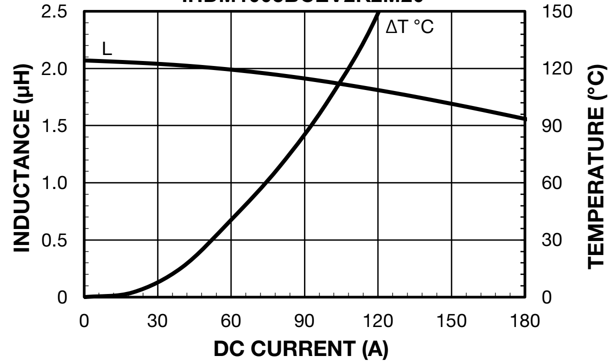

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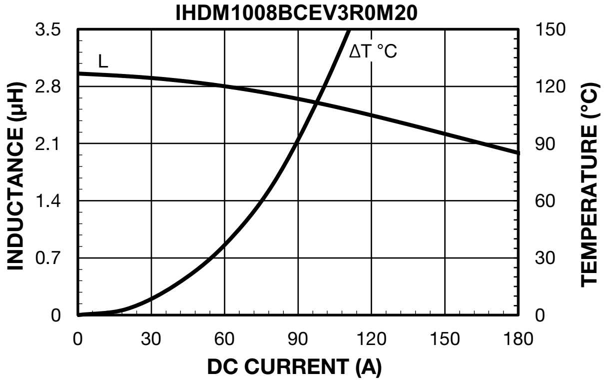

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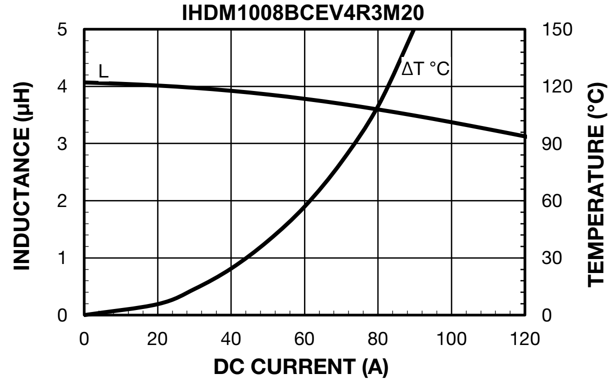

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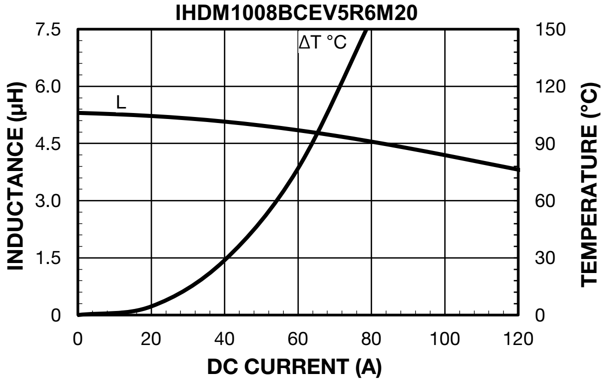

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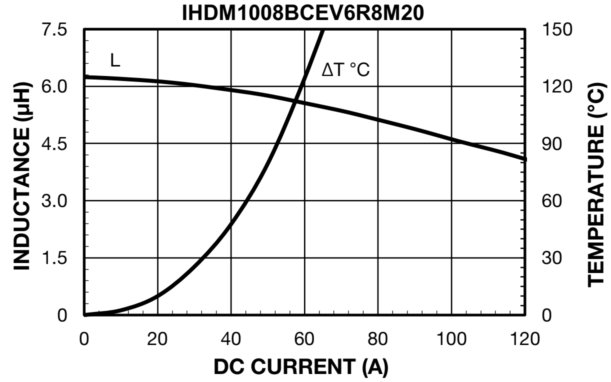

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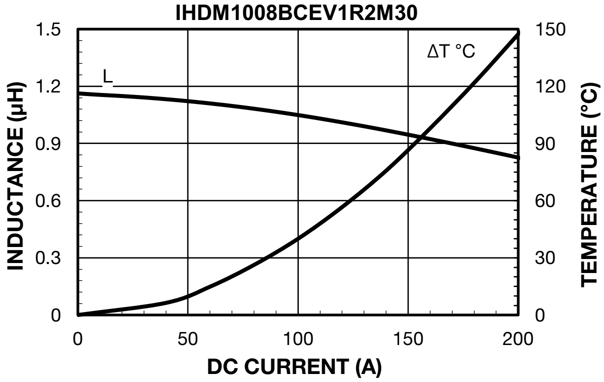

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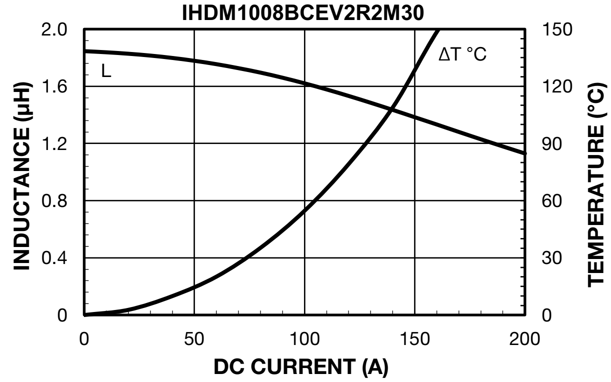
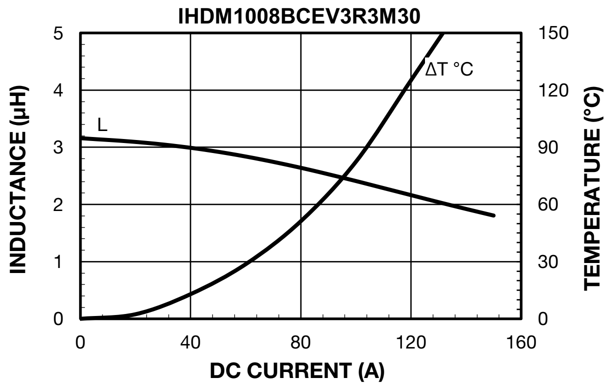
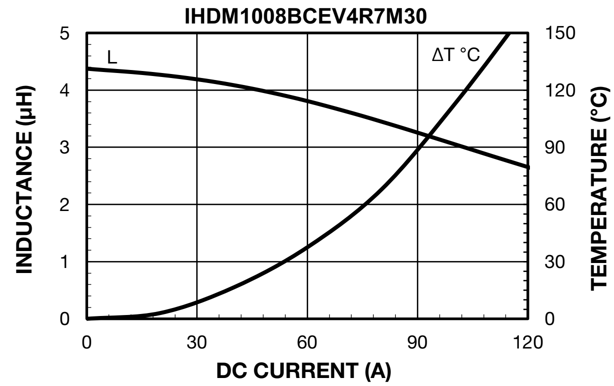
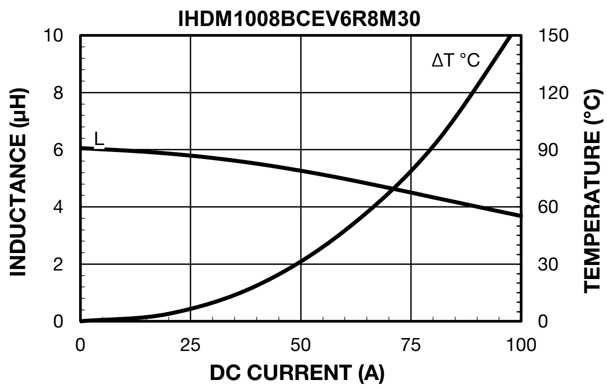
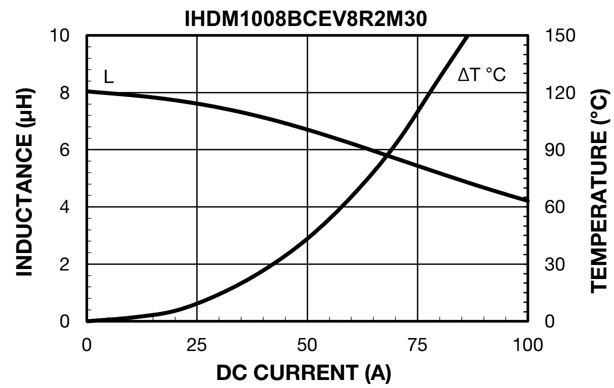


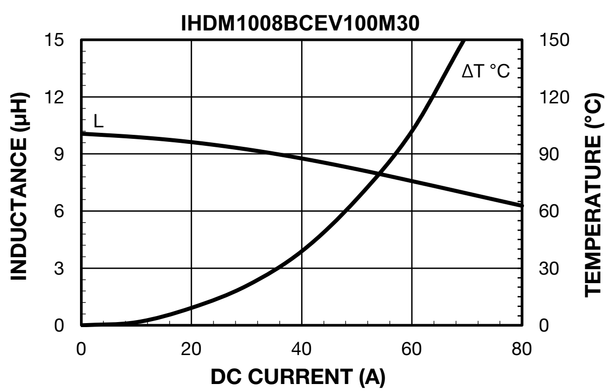
PERFORMANCE GRAPHS











PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

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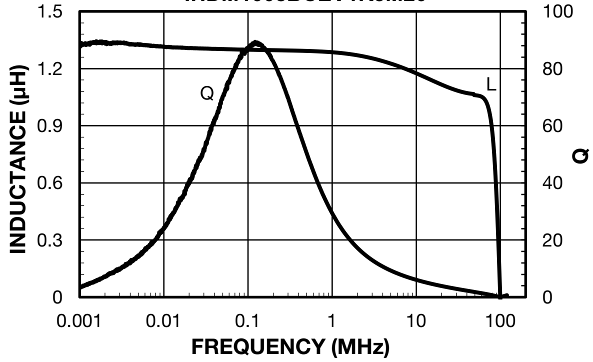

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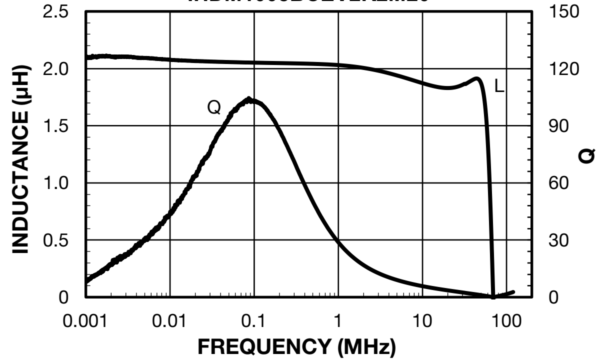

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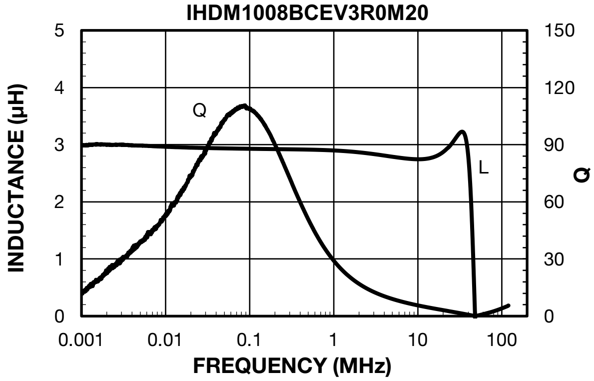

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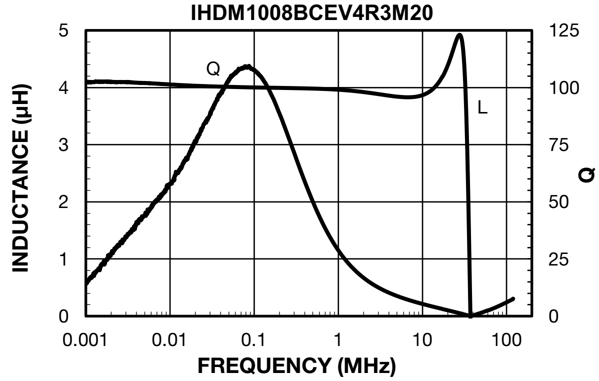

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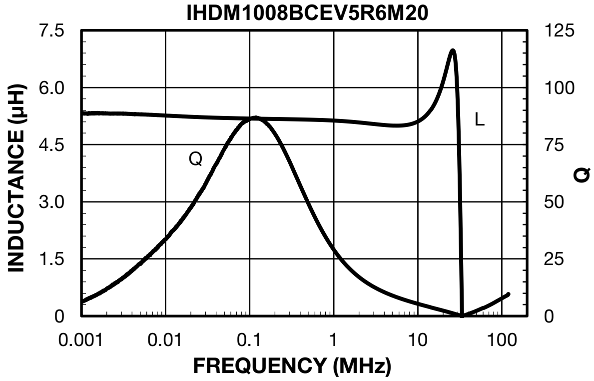

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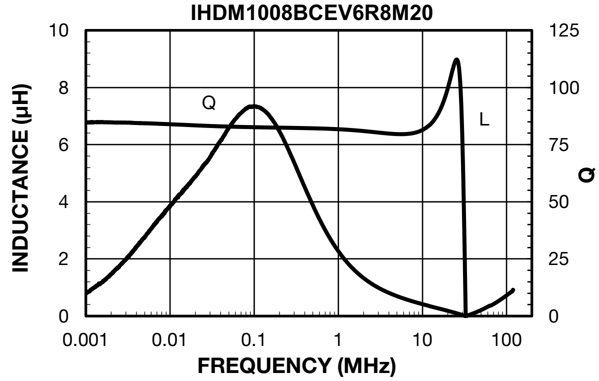

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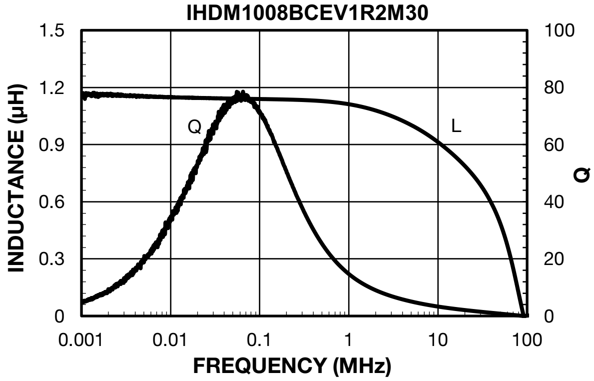

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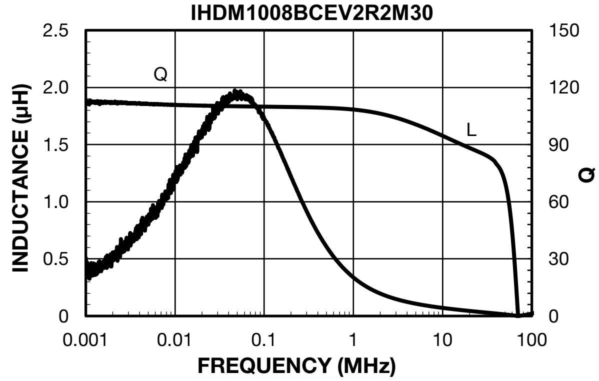

PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

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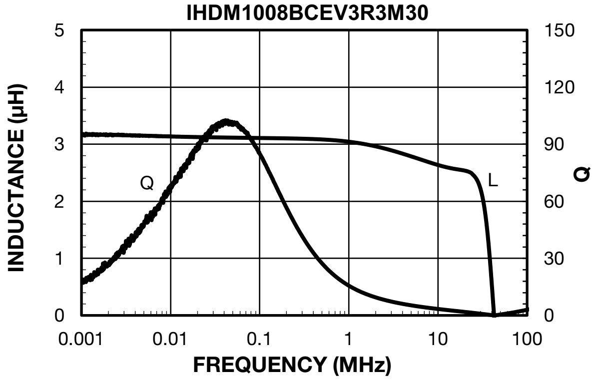

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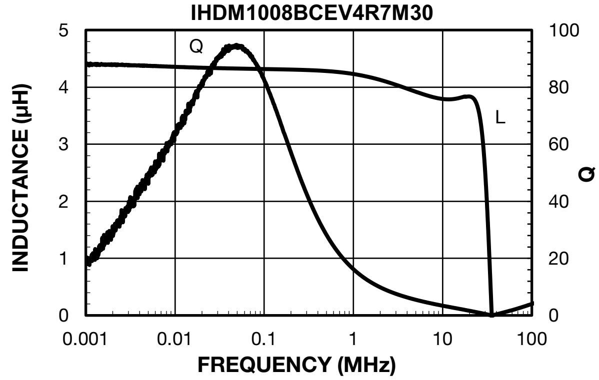

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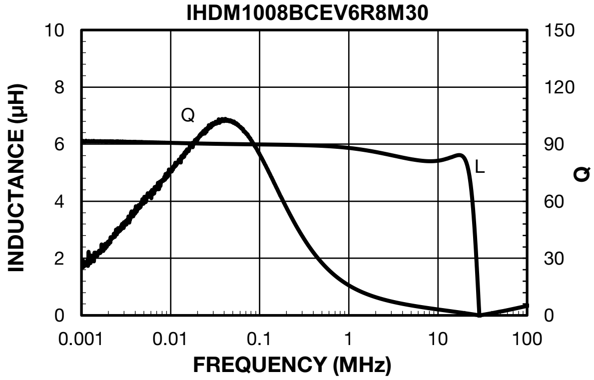

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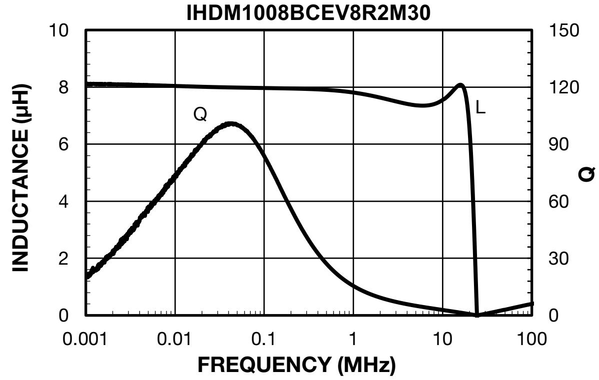

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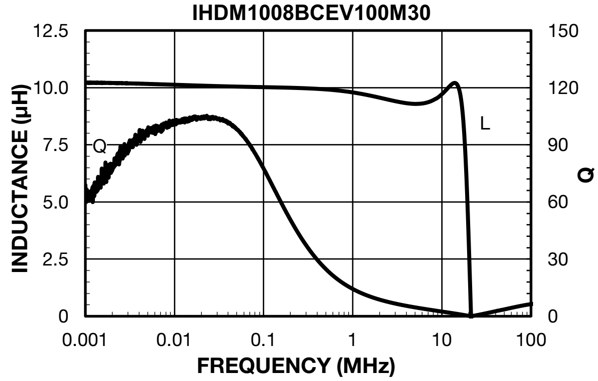

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