

High Current Through-Hole Inductor, Edge-Wound Flat Wire With Coated Core



FEATURES

- Size: 27.50 mm x 18.80 mm x 22.6 mm
- Coated core offers improved resistance against high humidity and harsh environments
- Edge-wound flat wire achieves low DCR and high current capacity
- Isolation voltage rating 350 V_{DC}
- Powdered iron alloy core provides stable inductance and saturation over temperature
- High temperature operation up to 155 °C
- Termination: stripped and tinned through-hole (other configurations such as bare copper, SMD, and press fit pin are available upon request)
- 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



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

LINKS TO ADDITIONAL RESOURCES



MATERIAL SPECIFICATIONS

- Core: powdered iron alloy
- Wire: polyamide insulated copper
- Plating: terminals dipped in tin alloy (Sn99.3Cu0.7)
- Weight: 47 g to 55 g

APPLICATIONS

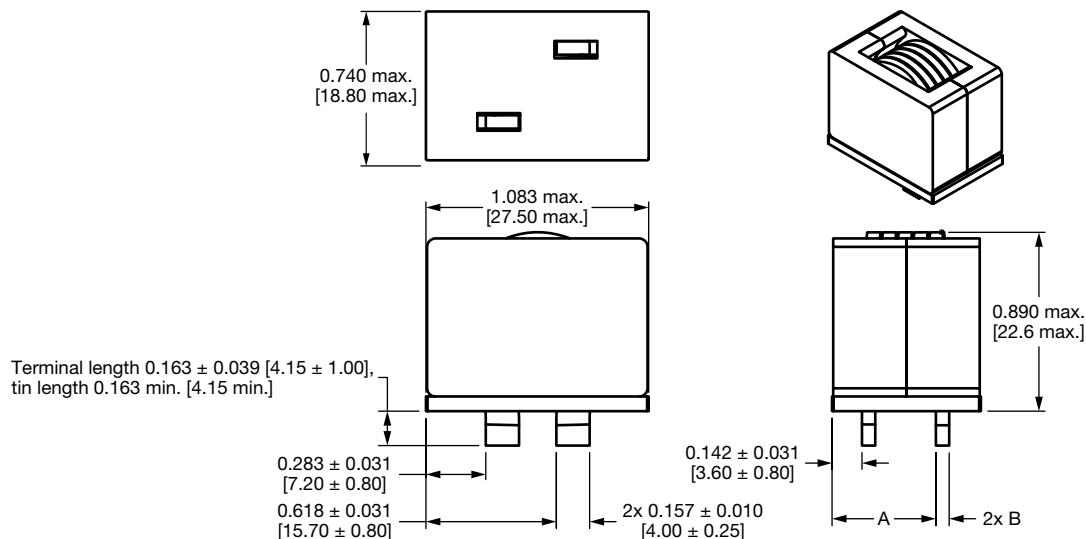
- Power factor correction (PFC)
- DC battery filter
- DC/DC converters
- High current differential mode chokes
- Inverters

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	L ₀ INDUCTANCE AT 0 A, ± 20 % (μH)	DCR AT 25 °C (mΩ)	DCR AT 25 °C (mΩ)	HEAT RATING CURRENT DC (A) ⁽¹⁾	SATURATION CURRENT DC (A) ⁽²⁾		SRF TYP. (MHz)
		TYP.	MAX.	TYP.	20 % DROP	30 % DROP	
BEST SATURATION AND CORE LOSS							
IHDC1107BBEVR47M20	0.47	0.22	0.27	113	298	370	198
IHDC1107BBEV1R1M20	1.1	0.3	0.36	92	197	250	94
IHDC1107BBEV2R0M20	2	0.52	0.58	70	150	203	66
IHDC1107BBEV3R0M20	3	0.75	0.83	59	121	164	41
IHDC1107BBEV4R3M20	4.3	1.05	1.16	49	101	137	30
IHDC1107BBEV5R6M20	5.6	1.44	1.53	42	86	117	27
IHDC1107BBEV7R5M20	7.5	2.11	2.2	33	73	100	27
LOWEST DCR							
IHDC1107BBEVR68M30	0.68	0.22	0.27	114	178	239	171
IHDC1107BBEV1R5M30	1.5	0.3	0.36	87	116	157	87
IHDC1107BBEV2R7M30	2.7	0.52	0.58	71	92	123	53
IHDC1107BBEV4R3M30	4.3	0.75	0.83	66	70	94	32
IHDC1107BBEV6R2M30	6.2	1.05	1.16	55	62	83	25
IHDC1107BBEV8R2M30	8.2	1.44	1.53	42	52	71	24
IHDC1107BBEV120M30	12	2.11	2.2	30	44	59	22

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
 - Inductance test condition: 100 kHz, 0.25 V
 - Operating temperature range -40 °C to +155 °C
 - 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 L₀ to drop approximately 20 % and 30 %, respectively

**DIMENSIONS** in inches [millimeters]

PART NUMBER	A \pm 0.8 (mm)	B \pm 0.3 (mm)
BEST SATURATION AND CORE LOSS		
IHDC1107BBEVR47M20	11.5	2.6
IHDC1107BBEV1R1M20	11.5	2.6
IHDC1107BBEV2R0M20	12.1	2.0
IHDC1107BBEV3R0M20	12.5	1.6
IHDC1107BBEV4R3M20	13.0	1.4
IHDC1107BBEV5R6M20	12.9	1.2
IHDC1107BBEV7R5M20	13.2	0.9
LOWEST DCR		
IHDC1107BBEVR68M30	11.5	2.6
IHDC1107BBEV1R5M30	11.5	2.6
IHDC1107BBEV2R7M30	12.1	2.0
IHDC1107BBEV4R3M30	12.5	1.6
IHDC1107BBEV6R2M30	13.0	1.4
IHDC1107BBEV8R2M30	12.9	1.2
IHDC1107BBEV120M30	13.2	0.9

DESCRIPTION

IHDC1107BB-20	7.5 μ H	\pm 20 %	EV	e2
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

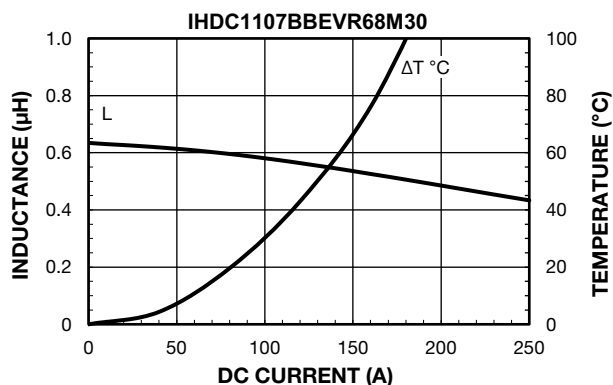
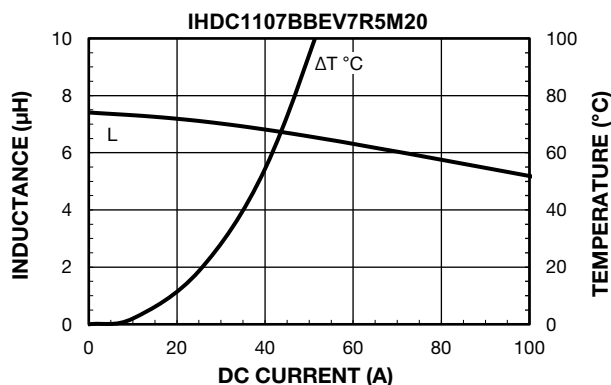
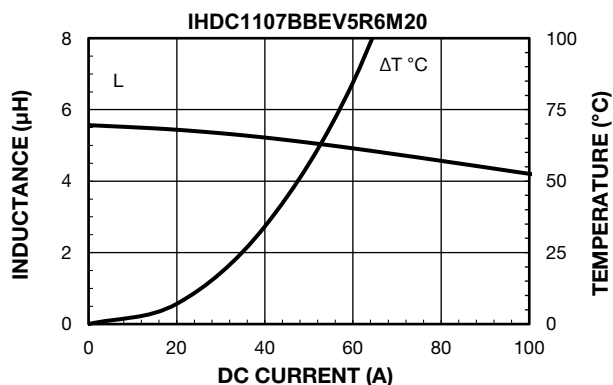
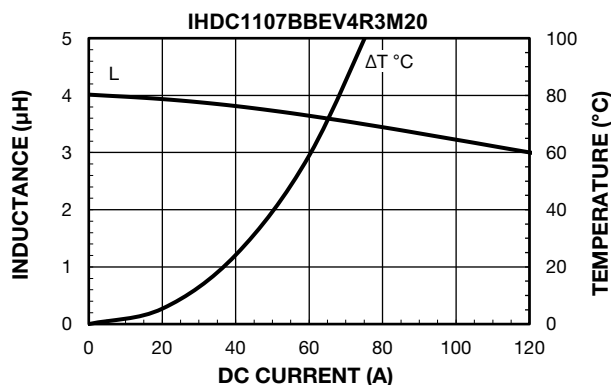
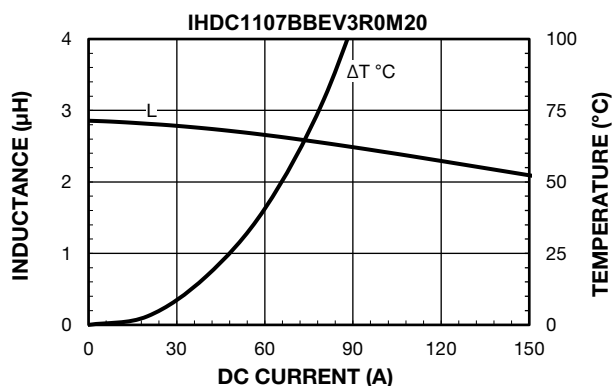
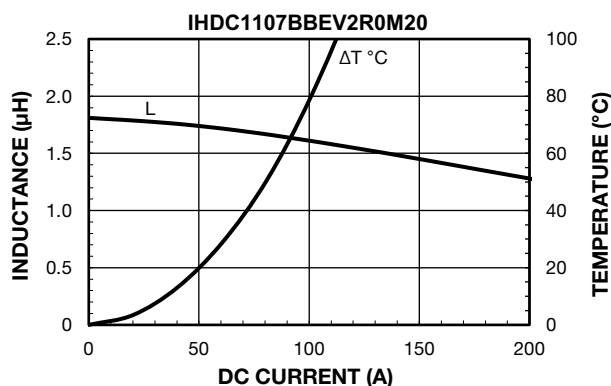
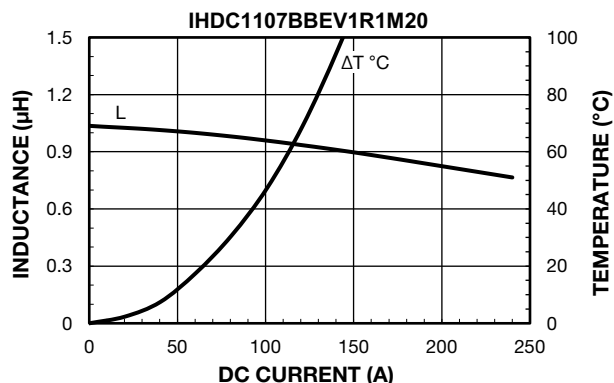
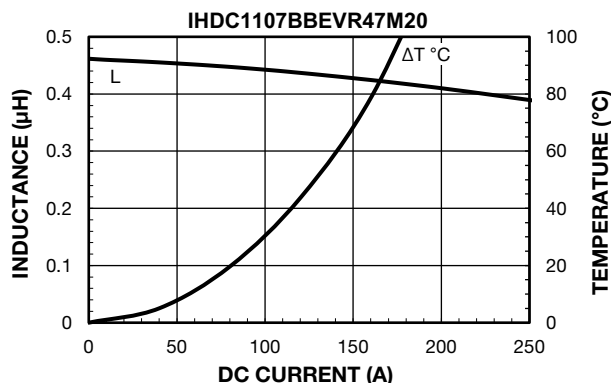
I	H	D	C	1	1	0	7	B	B	E	V	7	R	5	M	2	0
PRODUCT FAMILY				FOOTPRINT				HEIGHT		LEAD (Pb)-FREE	STYLE	INDUCTANCE			INDUCTANCE TOLERANCE		SERIES
				1107 = 1.1" x 0.7"				BB = 22 mm			V = vertical	7R5 = 7.5 μ H			M = \pm 20 %		20 = best saturation 30 = lowest DCR

Note

- For additional packaging details see "[Packaging Methods](#)"

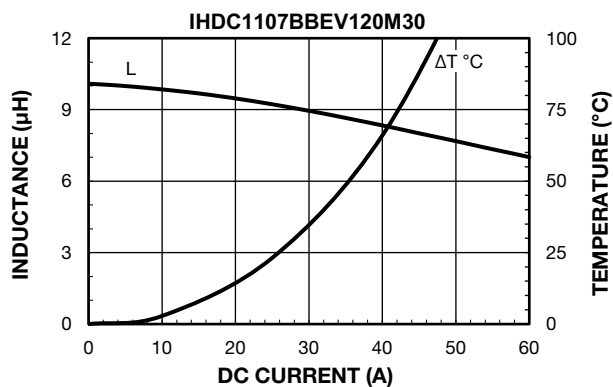
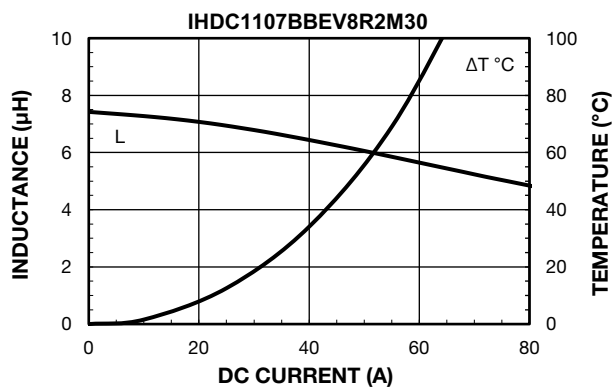
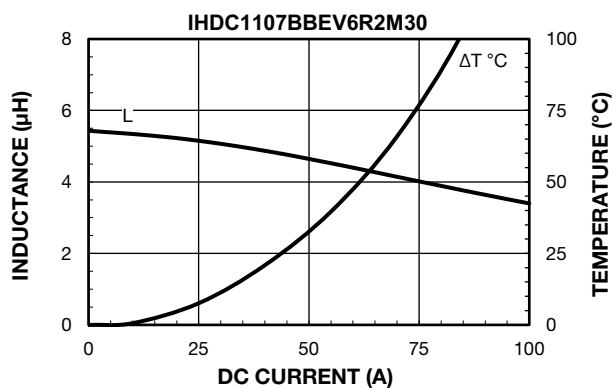
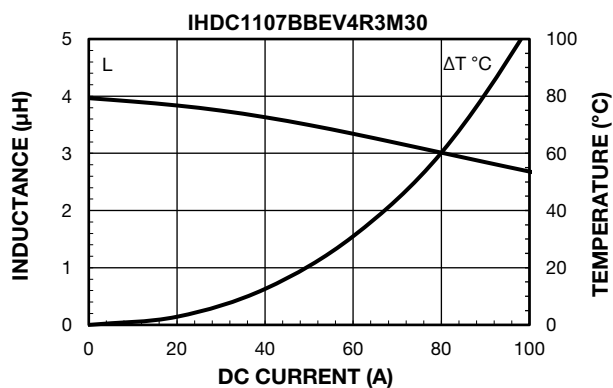
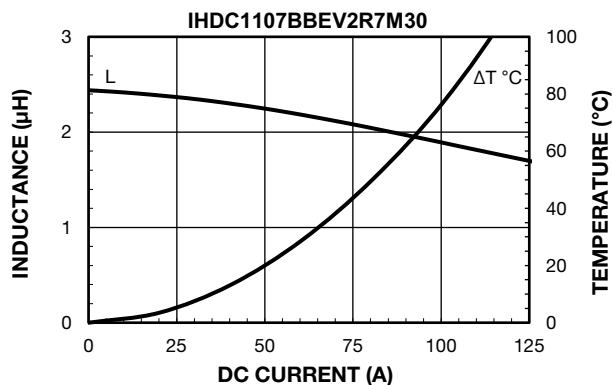
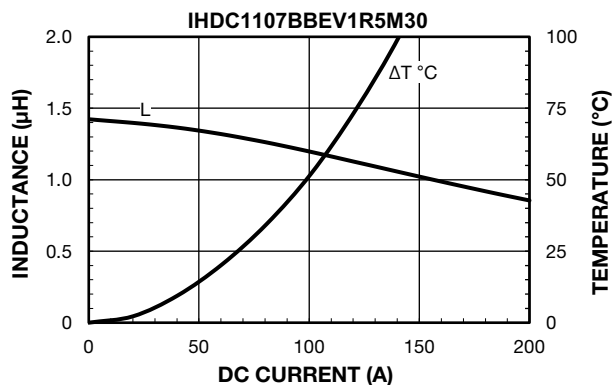


PERFORMANCE GRAPHS



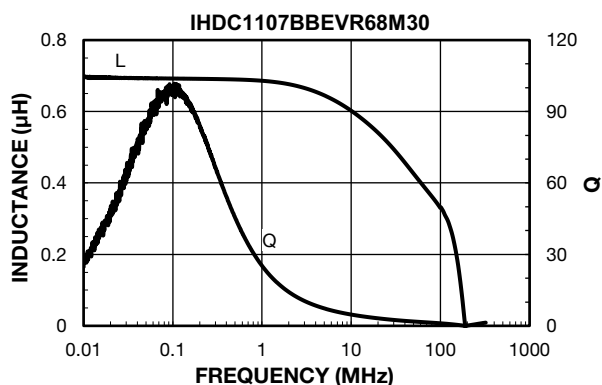
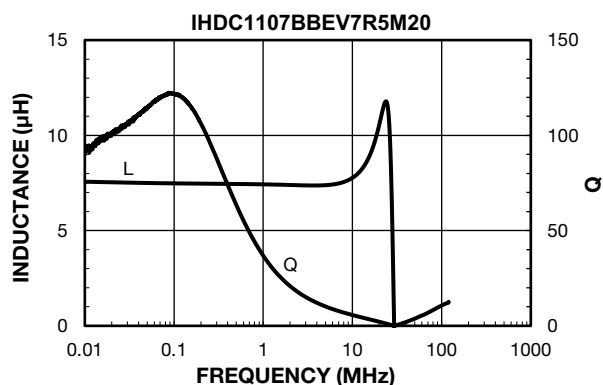
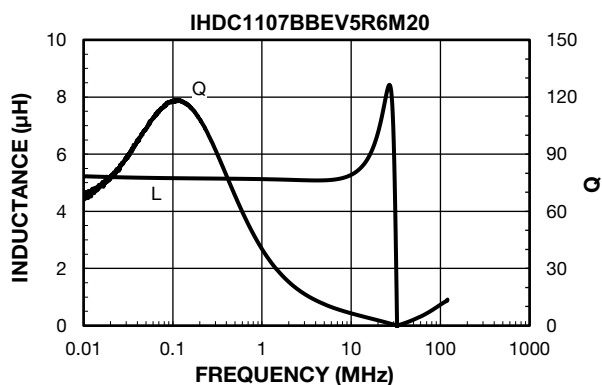
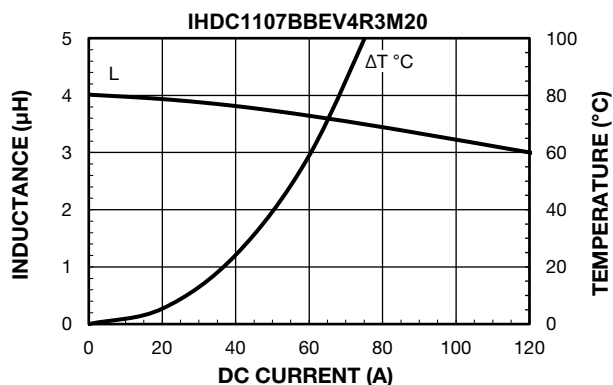
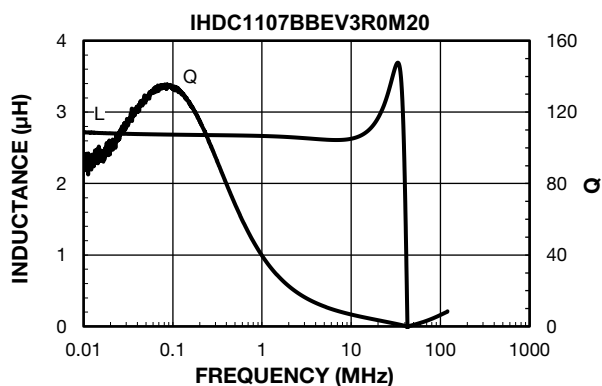
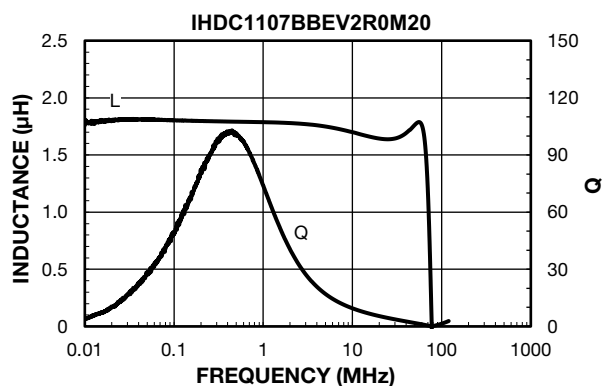
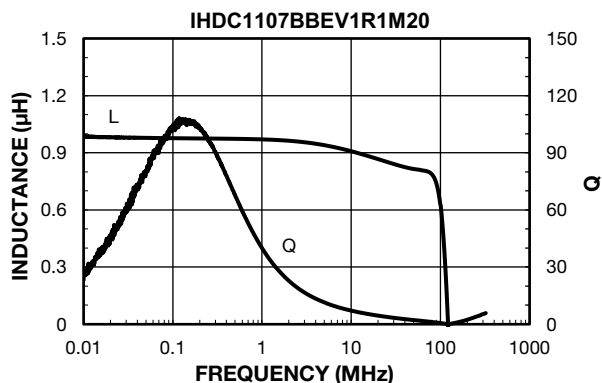
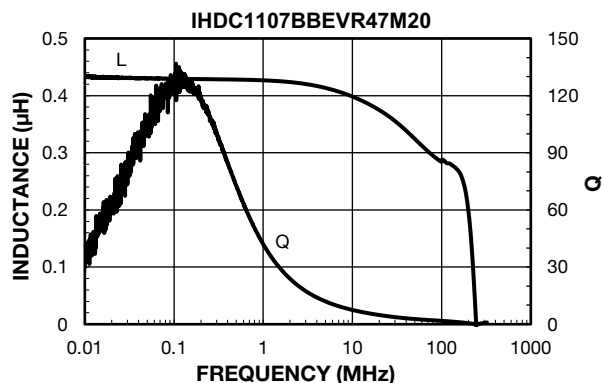


PERFORMANCE GRAPHS



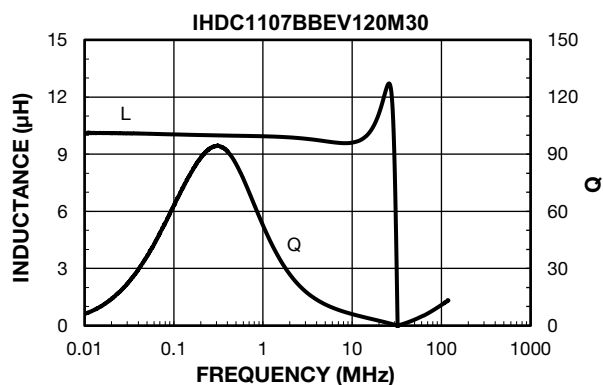
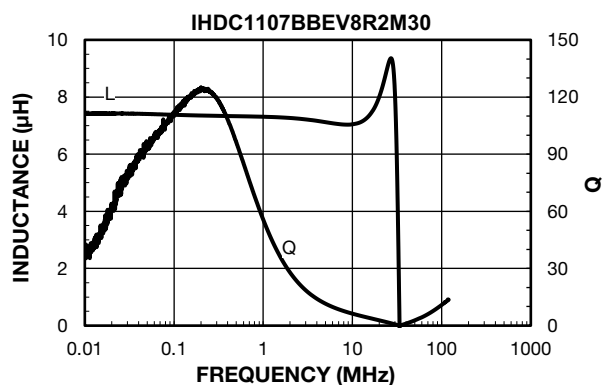
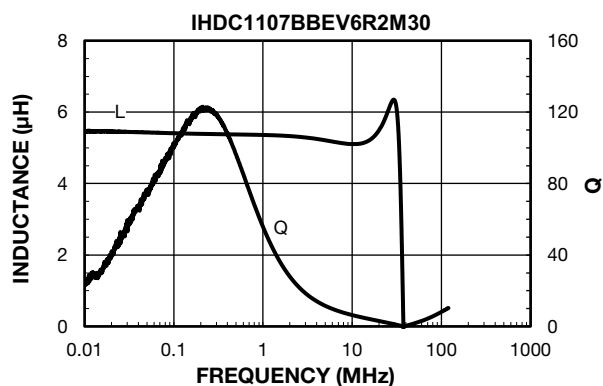
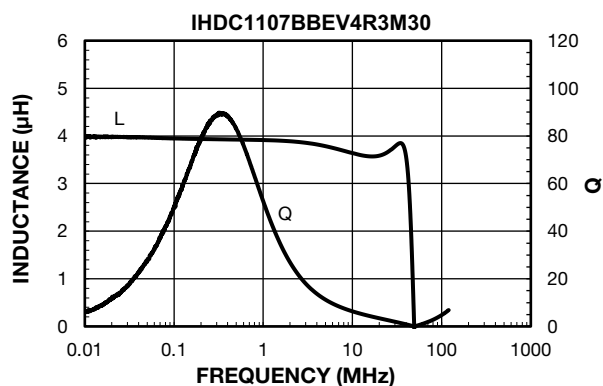
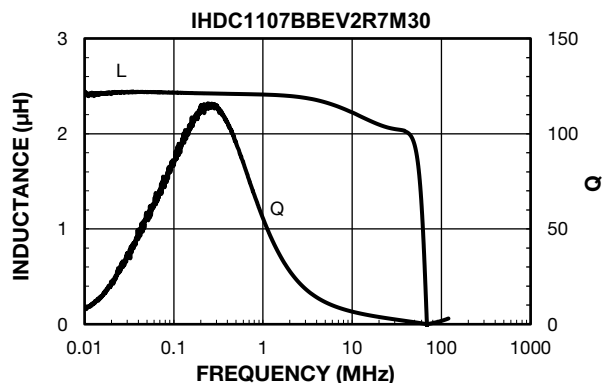
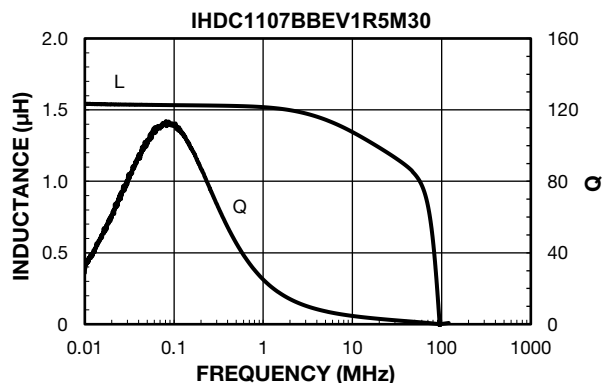


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.