

IHTH1125KZEB680M5A Datasheet



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DiGi Electronics Part Number	IHTH1125KZEB680M5A-DG
Manufacturer	Vishay Dale
Manufacturer Product Number	IHTH1125KZEB680M5A
Description	FIXED IND 68UH 10.5A 27.4MOHM TH
Detailed Description	68 μ H Shielded Inductor 10.5 A 27.4mOhm Max Radial, Vertical Cylinder, 3 Leads

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Purchase and inquiry

Manufacturer Product Number:

IHTH1125KZEB680M5A

Series:

IHTH-1125KZ-5A

Type:

-

Inductance:

68 μ H

Current Rating (Amps):

10.5 A

Shielding:

Shielded

Q @ Freq:

-

Ratings:

AEC-Q200

Inductance Frequency - Test:

100 kHz

Mounting Type:

Through Hole

Supplier Device Package:

-

Height - Seated (Max):

0.433" (11.00mm)

Manufacturer:

Vishay Dale

Product Status:

Active

Material - Core:

Metal Composite

Tolerance:

\pm 20%

Current - Saturation (Isat):

9.6A

DC Resistance (DCR):

27.4mOhm Max

Frequency - Self Resonant:

2.95MHz

Operating Temperature:

-55°C ~ 155°C

Features:

-

Package / Case:

Radial, Vertical Cylinder, 3 Leads

Size / Dimension:

1.125" Dia (28.58mm)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.4000

Moisture Sensitivity Level (MSL):

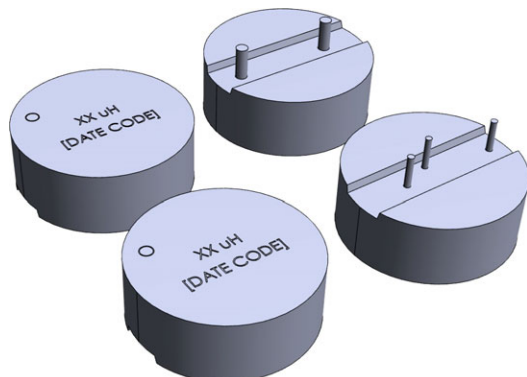
Not Applicable

ECCN:

EAR99



Automotive High Current, Radial, Through-Hole Power Inductor



Single-coil inductor



FEATURES

- Magnetically shielded, metal alloy construction
- Size: 28.575 mm (dia.) x 10.744 mm
- Radial through-hole termination (THT) with third support lead for added mounting stability (for 68 μ H and higher)
- Flat surface for heat sink mounting
- Coil orientation mark for consistent EMI performance (dot indicates inside start lead)
- High temperature up to 155 °C
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

LINKS TO ADDITIONAL RESOURCES



Product Page



Calculators

APPLICATIONS

- 48 V / 12 V bi-directional converters
- DC/DC converters using GaN FETs
- Noise suppression for motors

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	L ₀ INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (μ H)	DCR TYP. 25 °C (m Ω)	DCR MAX. 25 °C (m Ω)	HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾		SRF TYP. (MHz)
					20 % DROP	30 % DROP	
IHTH1125KZEBR47M5A	0.47	0.26	0.30	125	112	135	57.25
IHTH1125KZEB1R0M5A	1.0	0.43	0.50	90	65	100	29.30
IHTH1125KZEB2R2M5A	2.2	0.70	0.77	72	64	90	17.25
IHTH1125KZEB3R3M5A	3.3	1.40	1.50	57	62	89	15.8
IHTH1125KZEB4R7M5A	4.7	1.70	1.82	50	52	75	11.36
IHTH1125KZEB6R8M5A	6.8	1.84	1.97	44.5	44	55	9.35
IHTH1125KZEB8R2M5A	8.2	2.82	3.00	34.5	32	35	9.24
IHTH1125KZEB100M5A	10	3.20	3.64	33	30	32	7.76
IHTH1125KZEB150M5A	15	5.80	6.20	18.5	16	25	6.70
IHTH1125KZEB220M5A	22	6.39	6.83	21.0	23	29	5.61
IHTH1125KZEB330M5A	33	10.6	11.3	15.9	18	26	4.20
IHTH1125KZEB470M5A	47	13.2	14.6	14.0	16.2	24	2.99
IHTH1125KZEB680M5A	68	25.6	27.4	10.5	9.6	13	2.95
IHTH1125KZEB101M5A	100	30.7	32.2	8.8	6.0	9.0	2.04

Notes

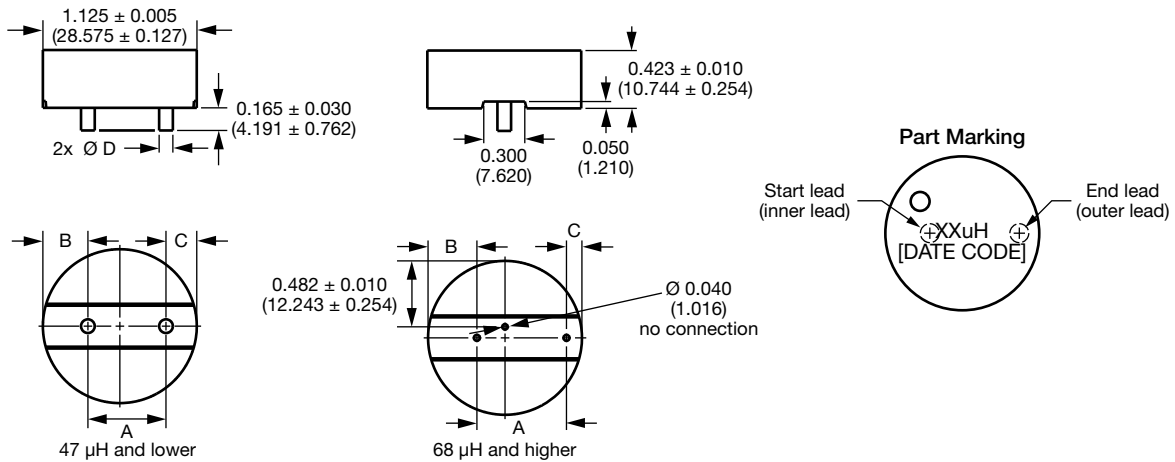
- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +155 °C
- Operating voltage rating (across inductor) = 100 V
- The part temperature (ambient + temp. rise) should not exceed 155 °C under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application

⁽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]



VALUE	A ± 0.010 (± 0.254)	B ± 0.010 (± 0.254)	C ± 0.010 (± 0.254)	D ± 0.010 (± 0.254)
0.47 µH	0.579 (14.707)	0.273 (6.934)	0.273 (6.934)	0.130 (3.302)
1.0 µH	0.569 (14.453)	0.329 (8.357)	0.225 (5.715)	0.100 (2.540)
2.2 µH	0.679 (17.247)	0.273 (6.934)	0.169 (4.293)	0.100 (2.540)
3.3 µH	0.660 (16.764)	0.274 (6.960)	0.189 (4.801)	0.079 (2.007)
4.7 µH	0.660 (16.764)	0.274 (6.960)	0.189 (4.801)	0.079 (2.007)
6.8 µH	0.720 (18.288)	0.244 (6.198)	0.159 (4.039)	0.079 (2.007)
8.2 µH	0.702 (17.831)	0.248 (6.299)	0.172 (4.369)	0.071 (1.803)
10 µH	0.702 (17.831)	0.248 (6.299)	0.172 (4.369)	0.071 (1.803)
15 µH	0.586 (14.884)	0.372 (9.436)	0.168 (4.255)	0.063 (1.600)
22 µH	0.693 (17.602)	0.318 (8.077)	0.113 (2.870)	0.063 (1.600)
33 µH	0.702 (17.831)	0.292 (7.417)	0.128 (3.251)	0.050 (1.270)
47 µH	0.702 (17.831)	0.292 (7.417)	0.128 (3.251)	0.050 (1.270)
68 µH	0.653 (16.586)	0.357 (9.068)	0.113 (2.87)	0.044 (1.118)
100 µH	0.653 (16.586)	0.357 (9.068)	0.113 (2.87)	0.044 (1.118)

DESCRIPTION

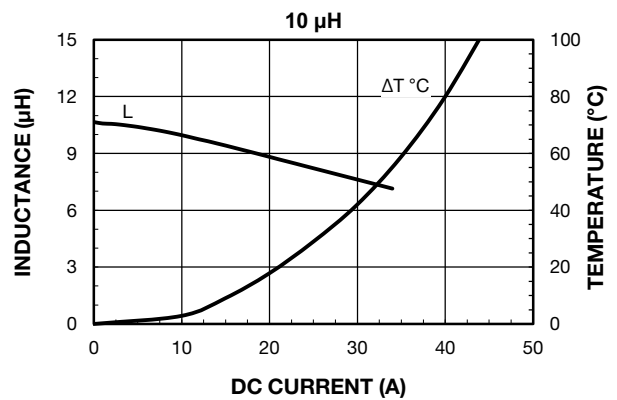
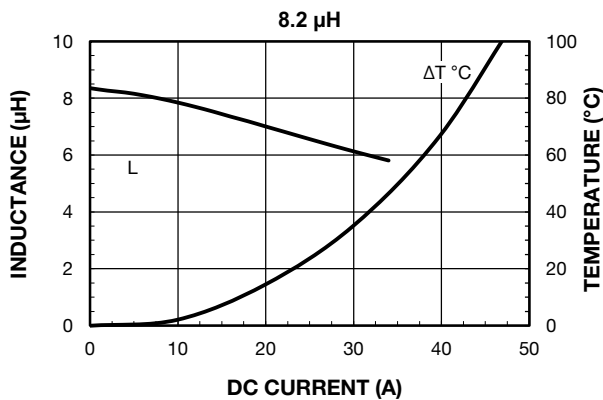
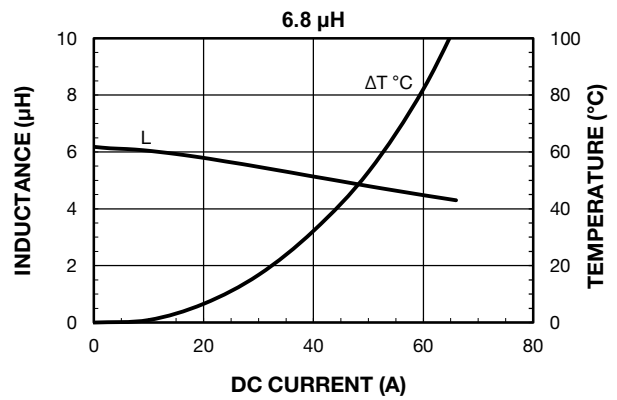
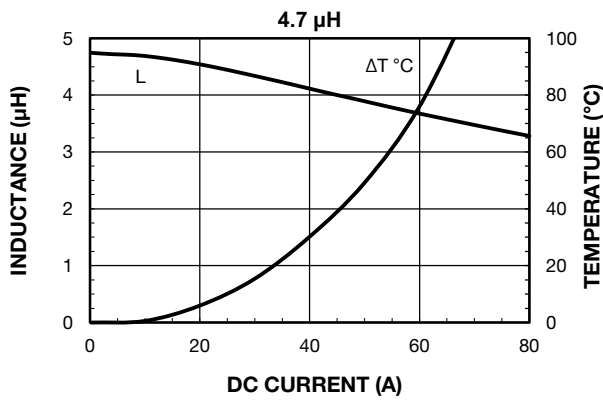
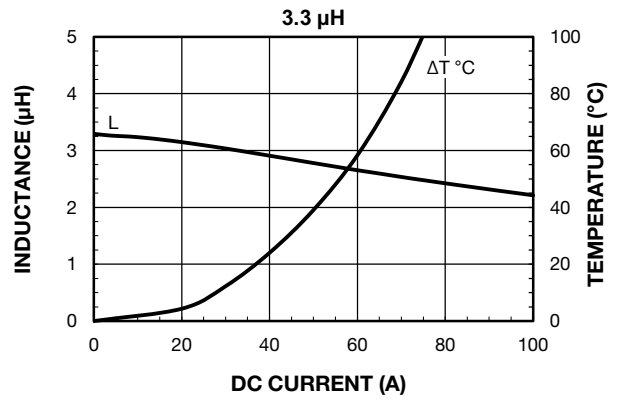
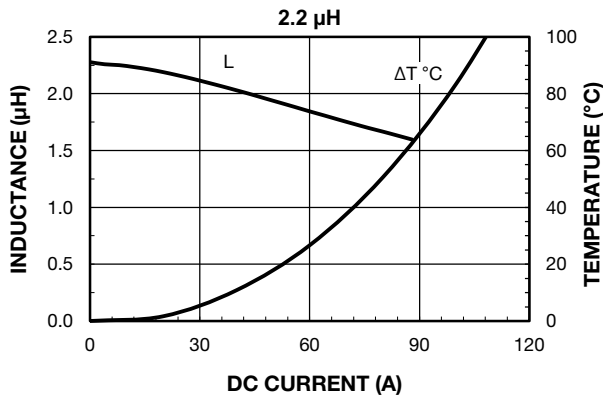
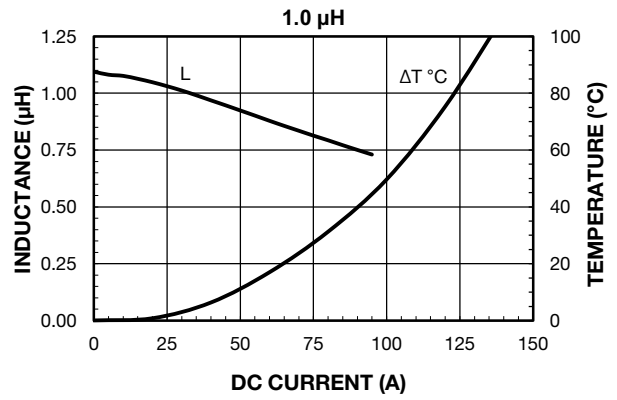
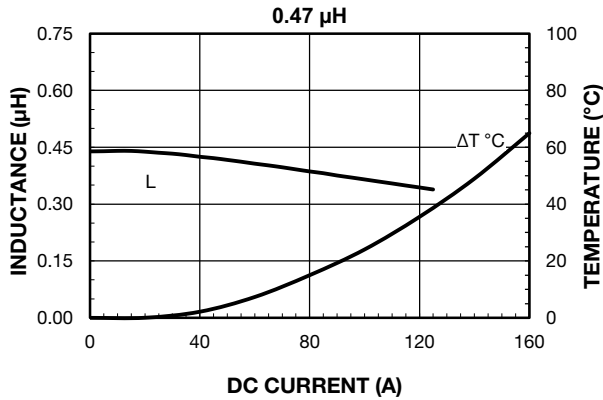
IHTH-1125KZ-5A MODEL	4.7 µH INDUCTANCE VALUE	± 20 % INDUCTANCE TOLERANCE
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GLOBAL PART NUMBER

I H T H	1 1 2 5 K Z	E B	4 R 7	M	5 A
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	SERIES
		EB = tray	4R7 = 4.7 µH	M = ± 20 %	

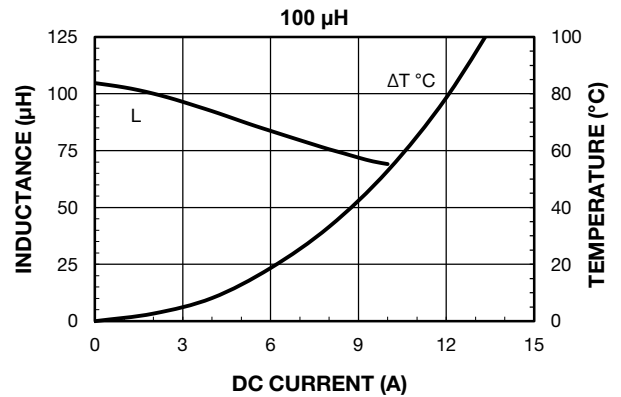
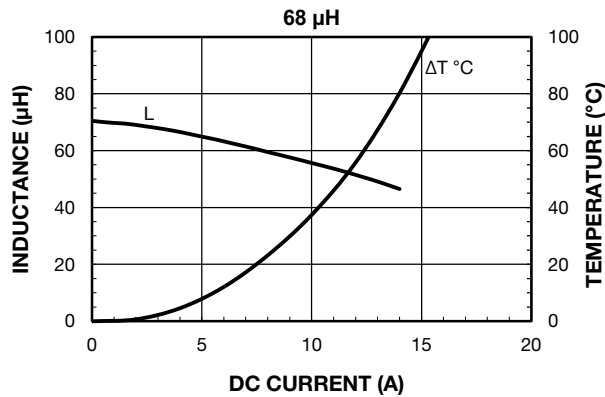
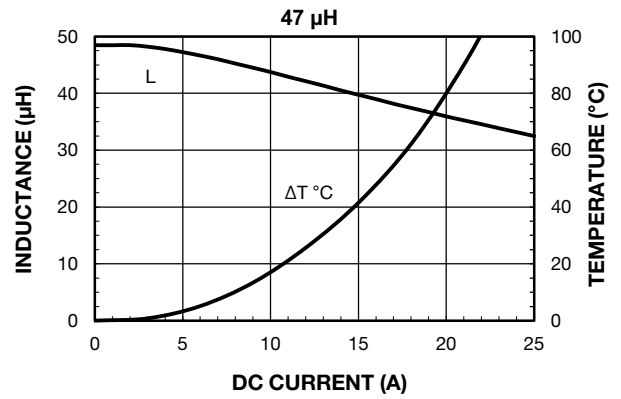
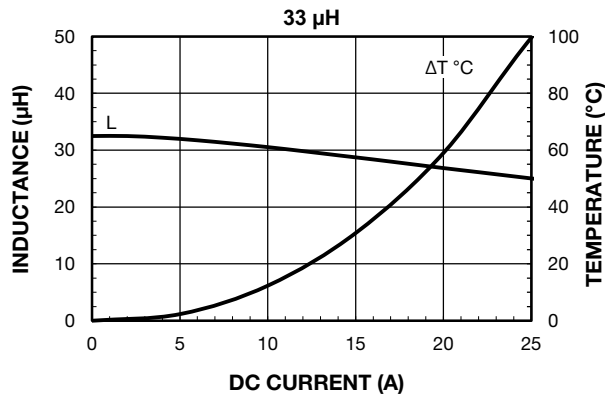
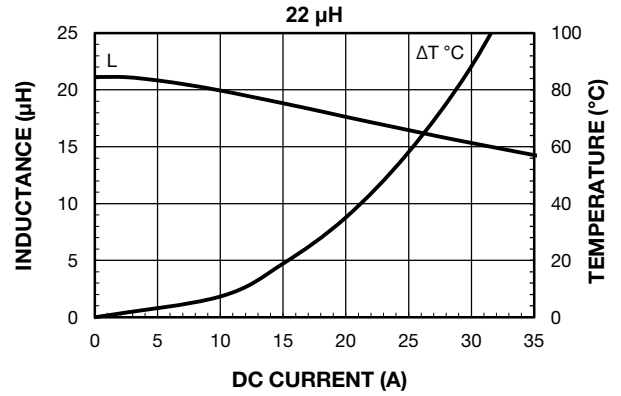
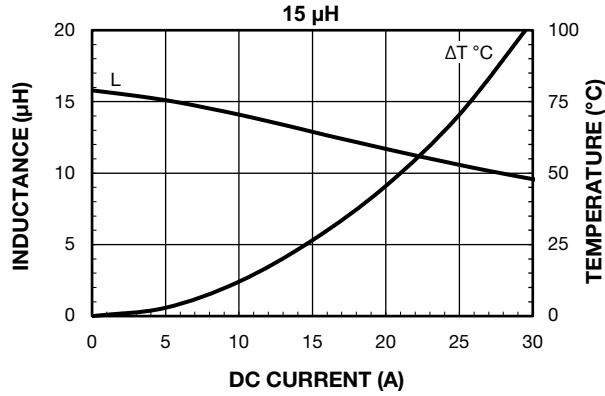


PERFORMANCE GRAPHS



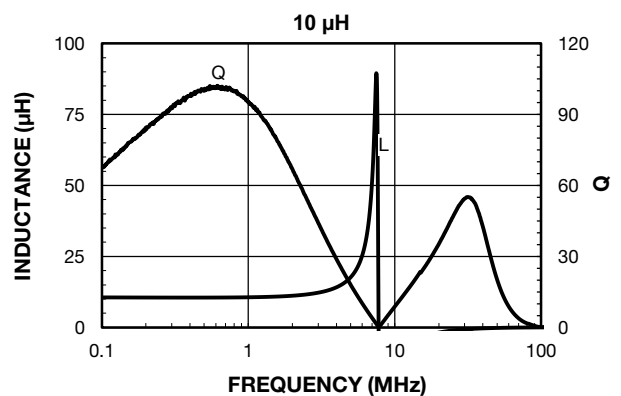
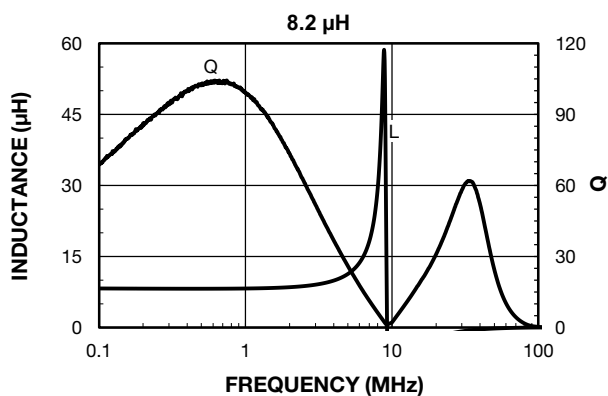
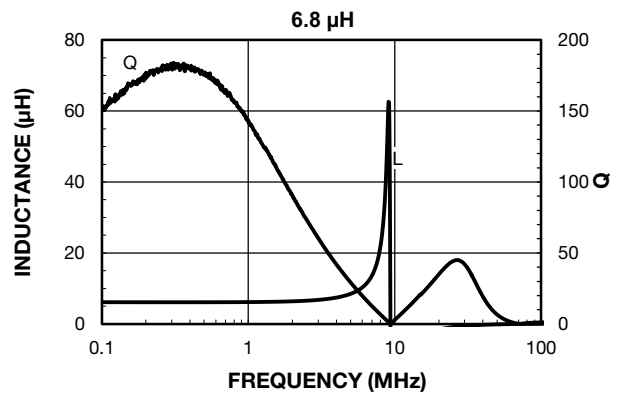
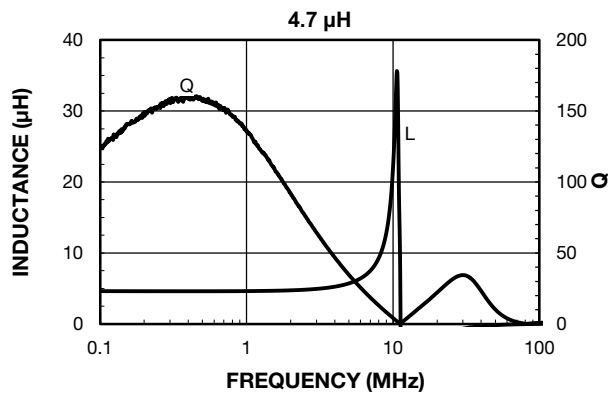
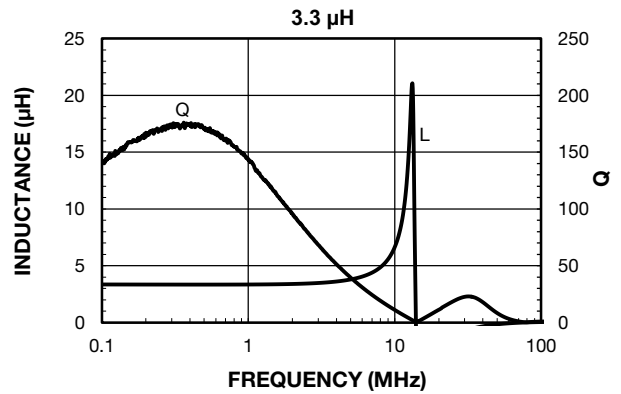
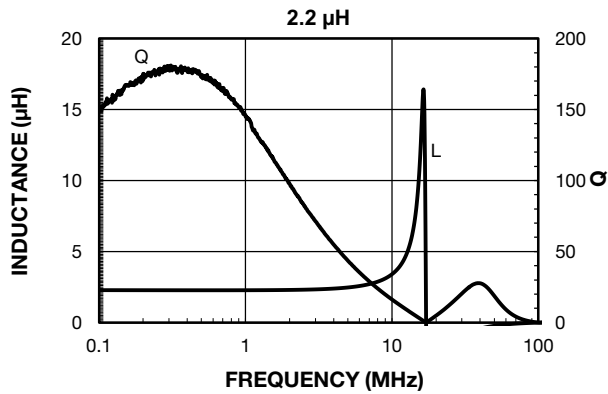
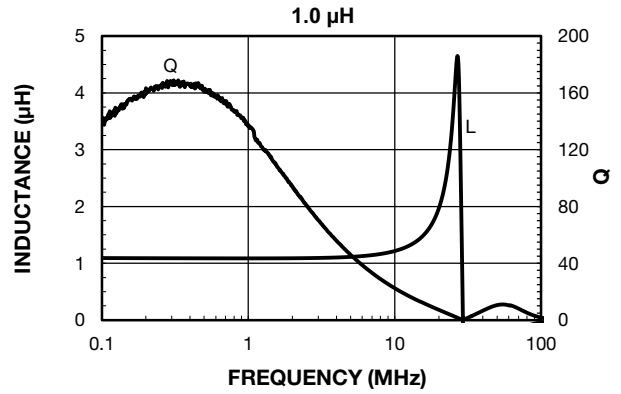
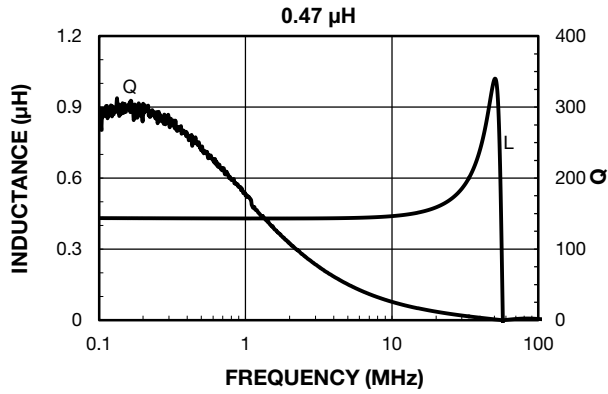


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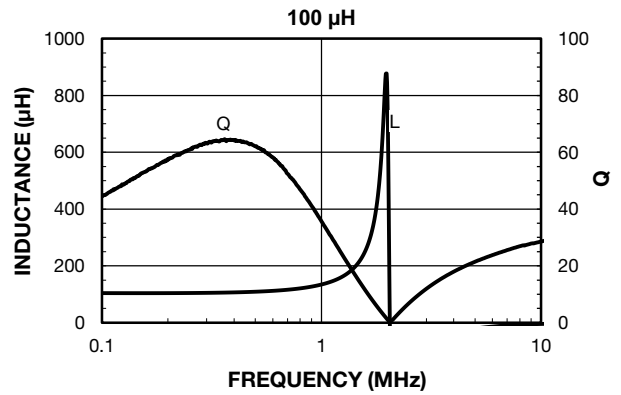
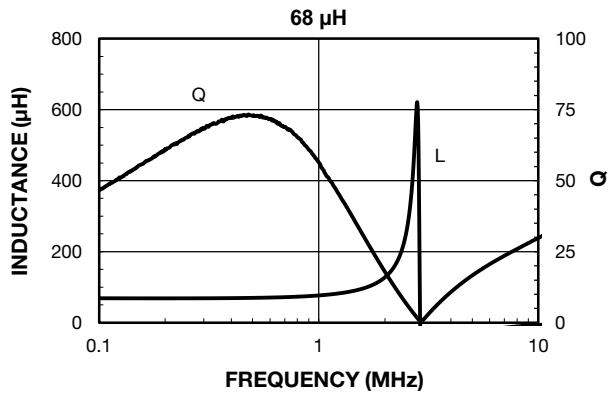
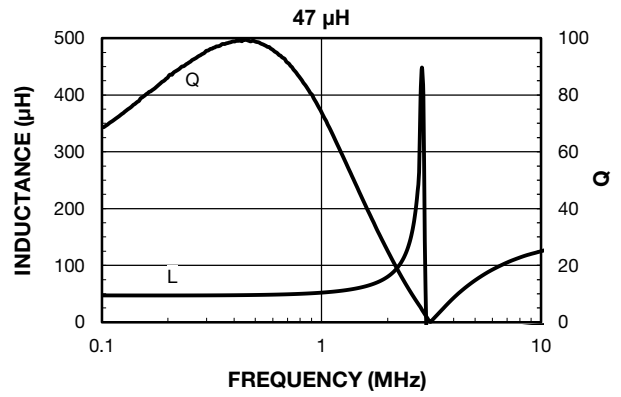
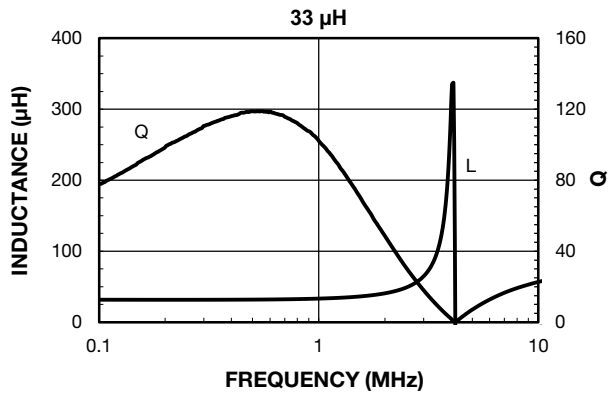
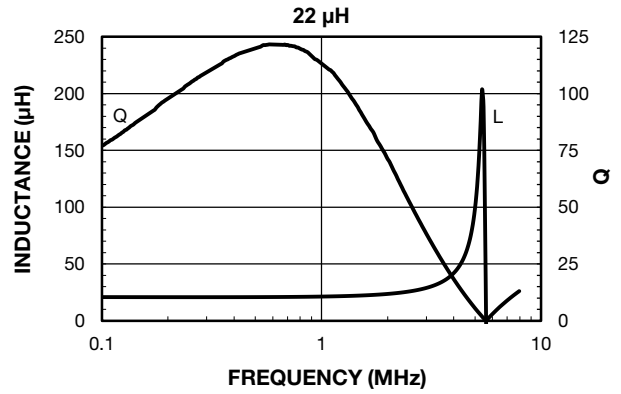
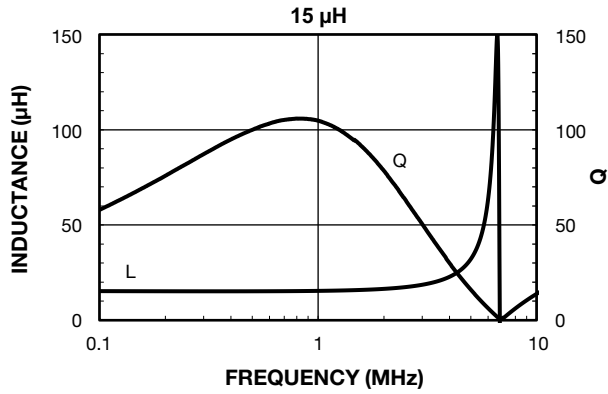


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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