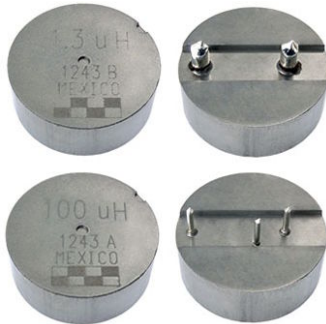


High Current Through Hole Inductor, High Temperature Series



RoHS COMPLIANT
HALOGEN FREE
GREEN
 (5-2008)

FEATURES

- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz
- Filter inductor applications up to SRF (see "Standard Electrical Specifications" table)
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- High temperature, up to 155 °C
- PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

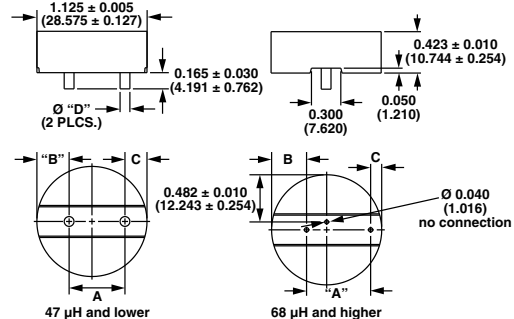
- PDA / notebook / desktop / server applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)

STANDARD ELECTRICAL SPECIFICATIONS					
L ₀ INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (μH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾	SRF TYP. (MHz)
0.47	0.26	0.30	125	112	57.25
1.0	0.43	0.50	90	65	29.30
2.2	0.70	0.77	72	64	17.25
3.3	1.40	1.50	57	62	15.8
4.7	1.70	1.82	50	52	11.36
6.8	1.84	1.97	44.5	44	9.35
8.2	2.82	3.00	34.5	32	9.24
10	3.20	3.64	33	30	7.76
15	4.45	4.76	26	20	6.17
22	6.39	6.83	21.0	23	5.61
33	10.6	11.3	15.9	18	4.20
47	13.2	14.6	14.0	16.2	2.99
68	25.6	27.4	10.5	9.6	2.95
100	30.7	32.2	8.8	6.0	2.04

Notes

- All test data is referenced to 25 °C ambient
 - Operating temperature range -55 °C to +155 °C
 - The part temperature (ambient + temp. rise) should not exceed 155 °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
- (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 %

DIMENSIONS in inches



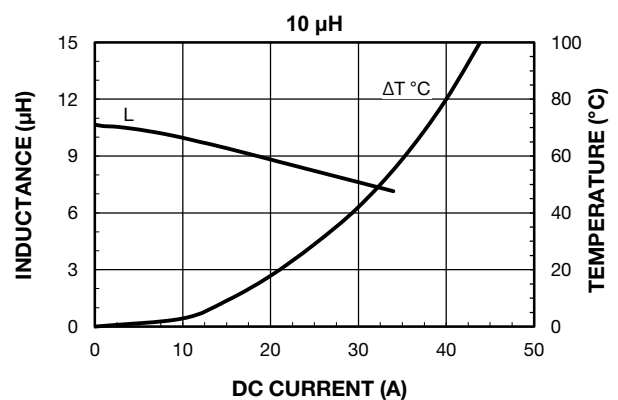
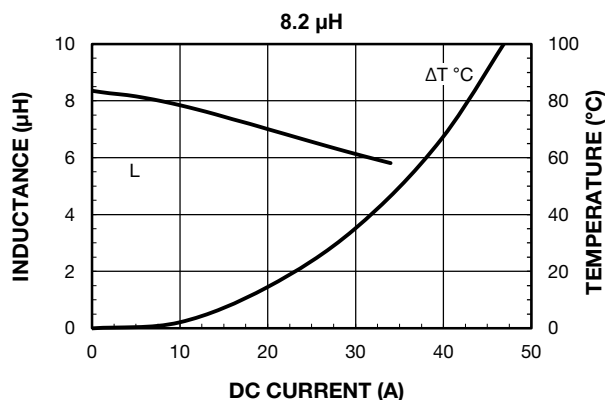
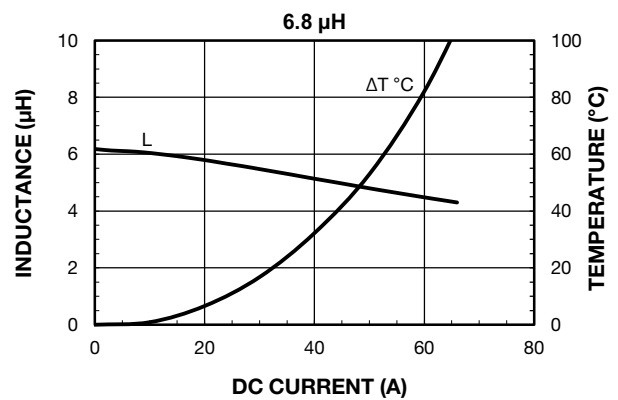
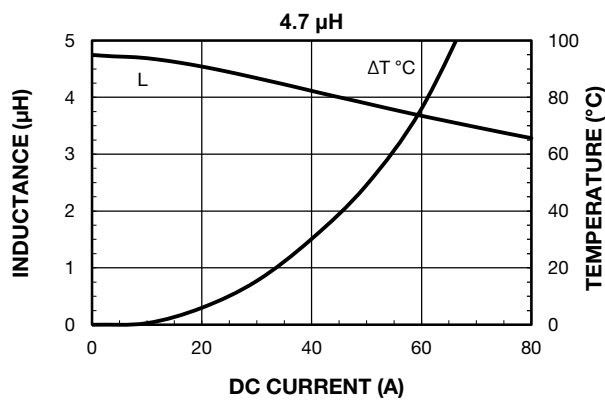
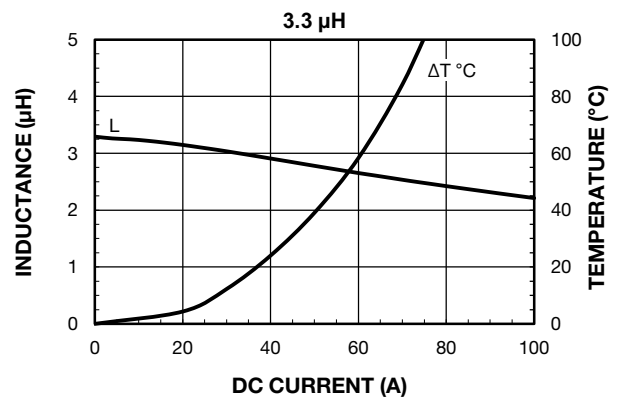
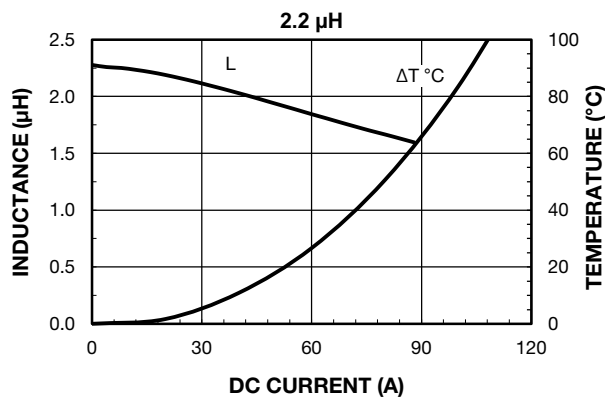
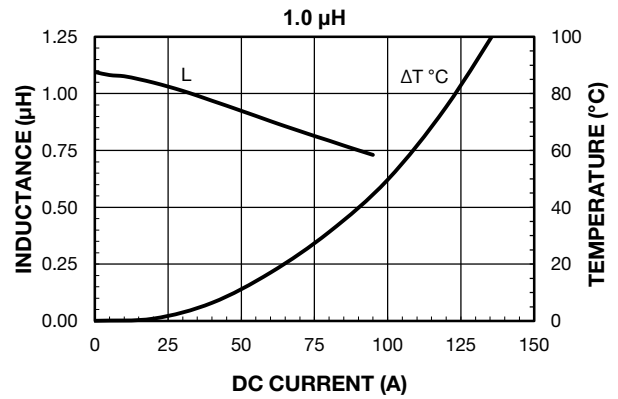
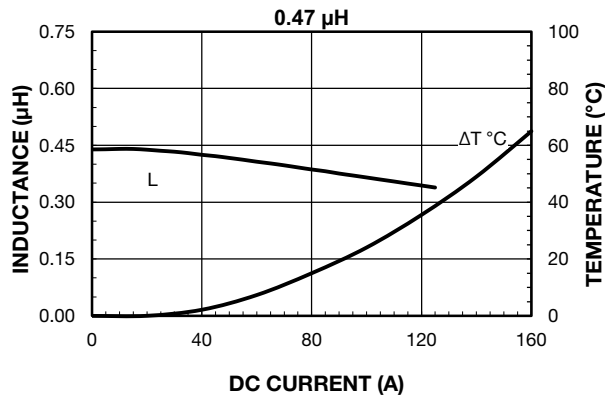
VALUE	A ± 0.010 (± 0.254)	B ± 0.010 (± 0.254)	C ± 0.010 (± 0.254)	D ± 0.010 (± 0.254)
0.47 μH	0.579 (14.707)	0.273 (6.934)	0.273 (6.934)	0.130 (3.302)
1.0 μH	0.569 (14.453)	0.329 (8.357)	0.225 (5.715)	0.100 (2.540)
2.2 μH	0.679 (17.247)	0.273 (6.934)	0.169 (4.293)	0.100 (2.540)
3.3 μH	0.660 (16.764)	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	0.649 (16.485)	0.351 (8.915)	0.124 (3.150)	0.071 (1.803)
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-51 MODEL	4.7 μH INDUCTANCE VALUE
	± 20 % INDUCTANCE TOLERANCE
GLOBAL PART NUMBER	
I H T H 1 1 2 5 K Z E B 4 R 7 M 5 1	
MODEL	SIZE
PACKAGE CODE	INDUCTANCE VALUE
INDUCT. TOL.	SERIES

PATENT(S): www.vishay.com/patents

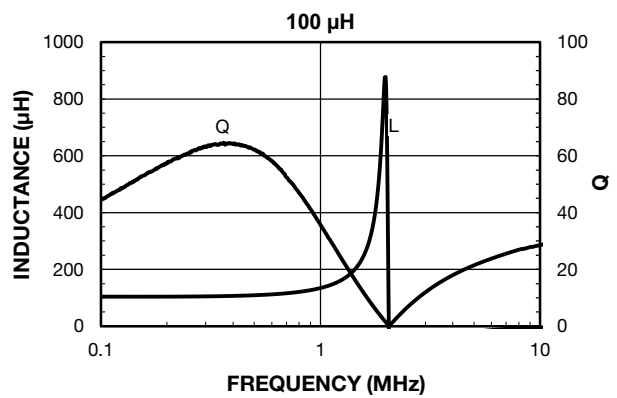
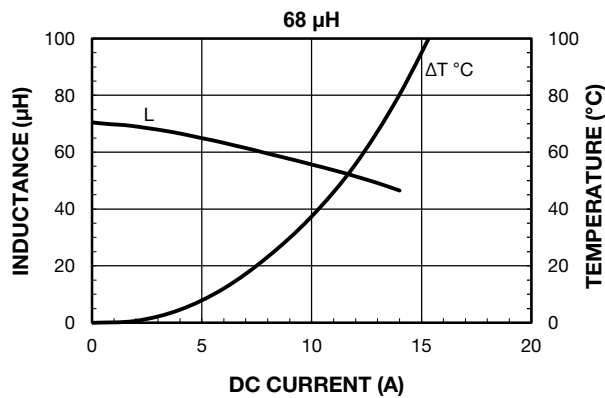
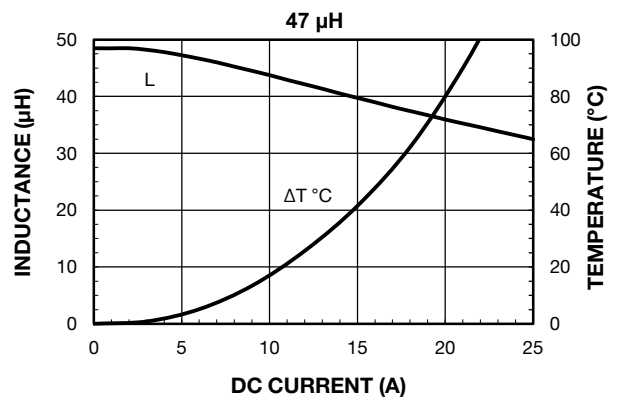
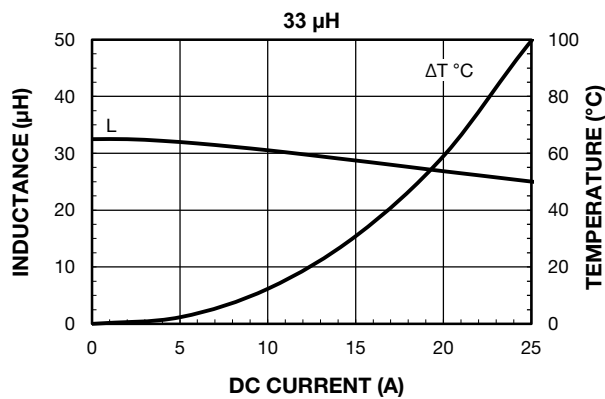
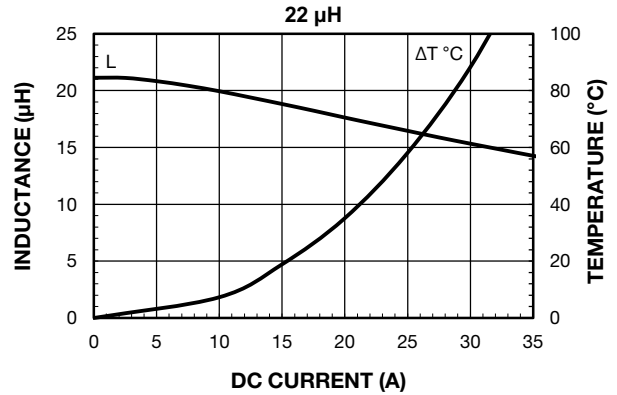
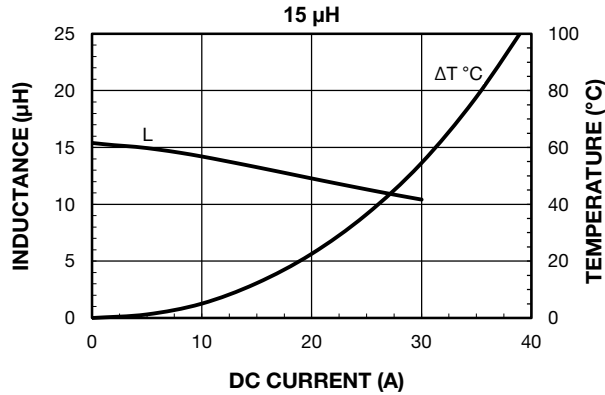
This Vishay product is protected by one or more United States and international patents.

PERFORMANCE GRAPHS

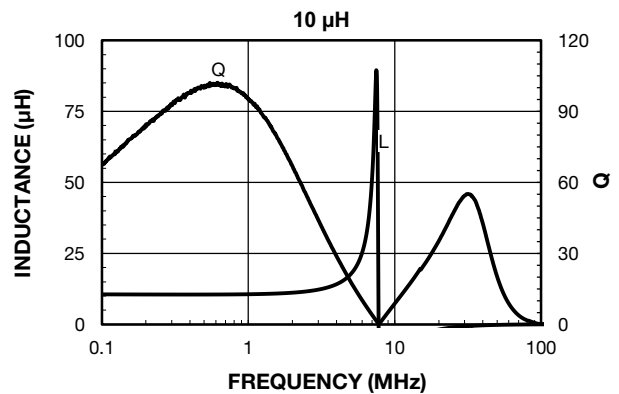
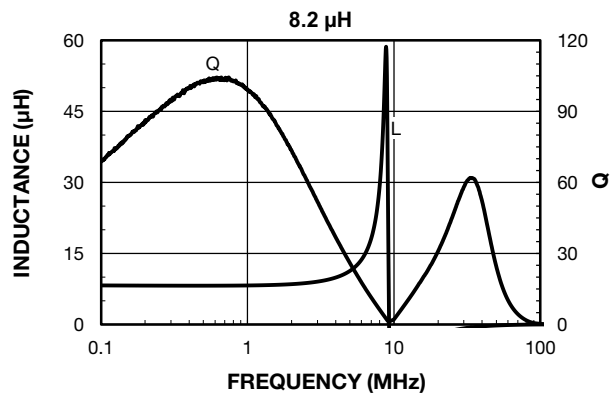
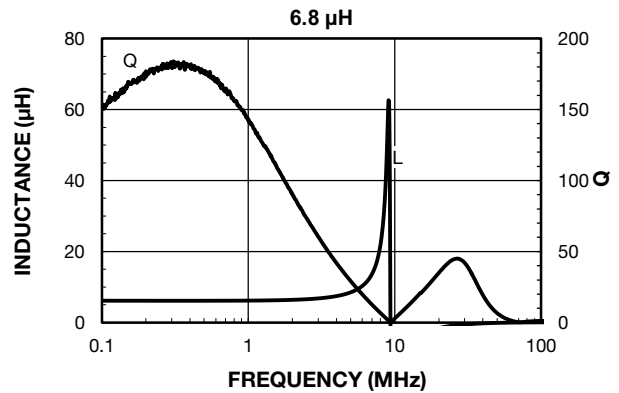
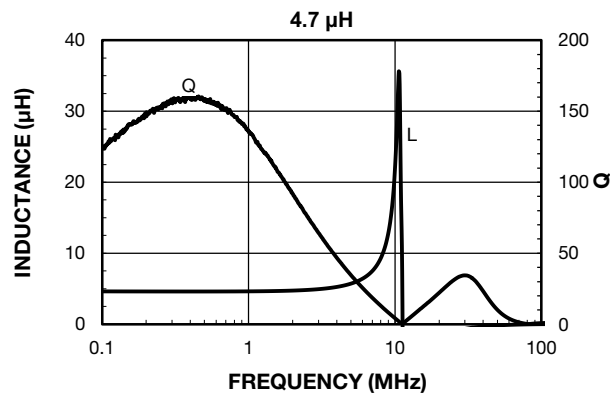
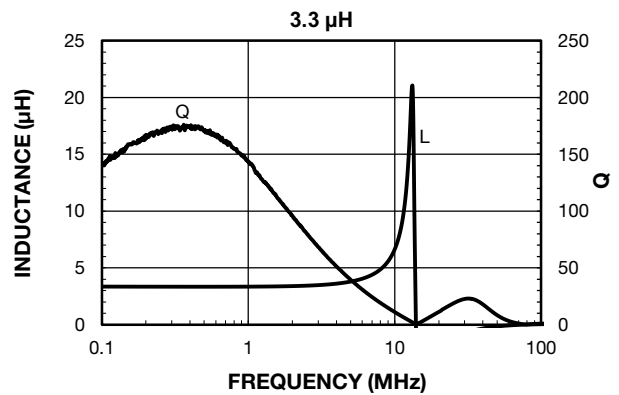
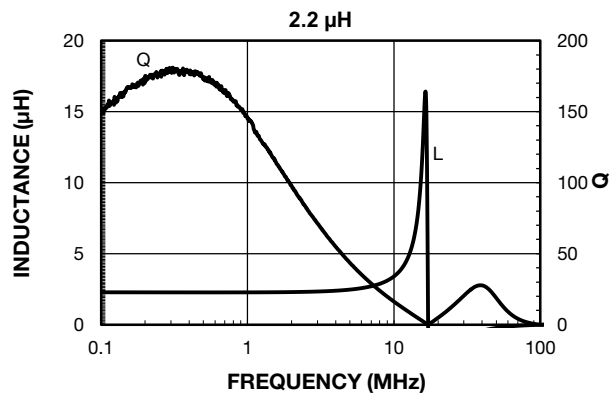
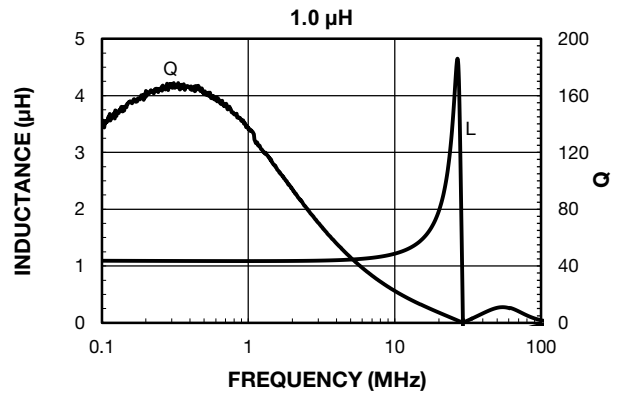
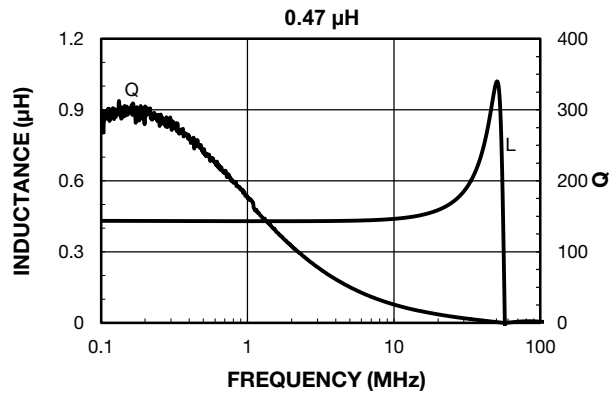




PERFORMANCE GRAPHS

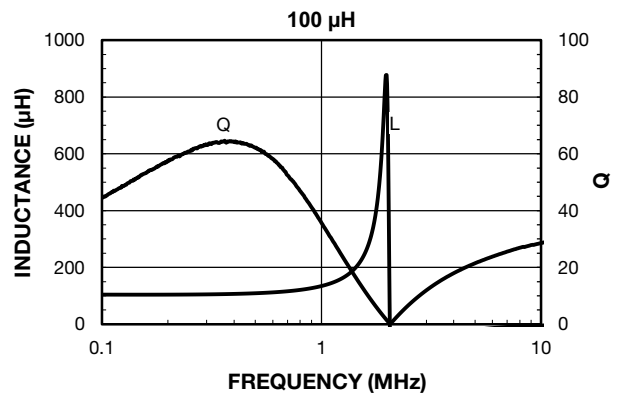
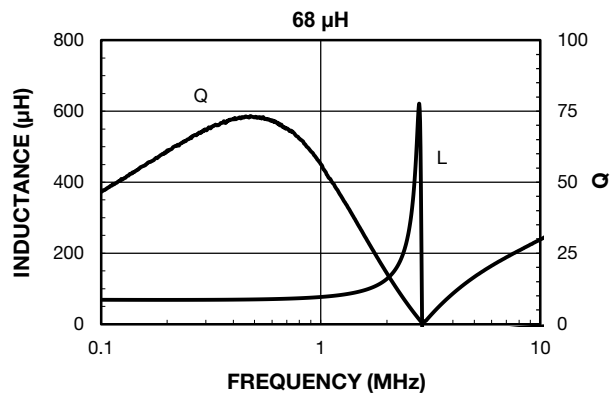
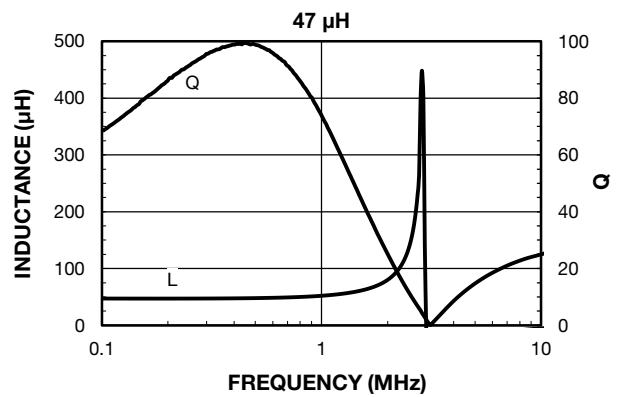
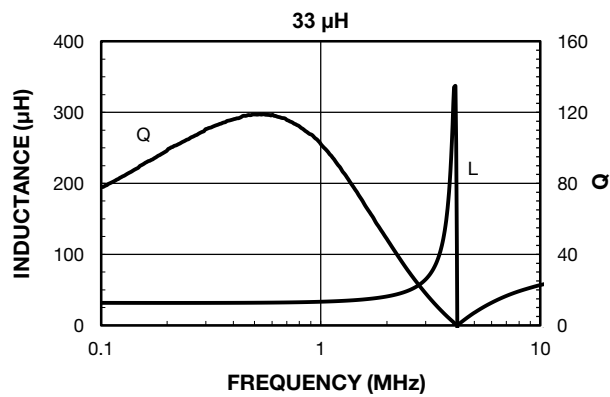
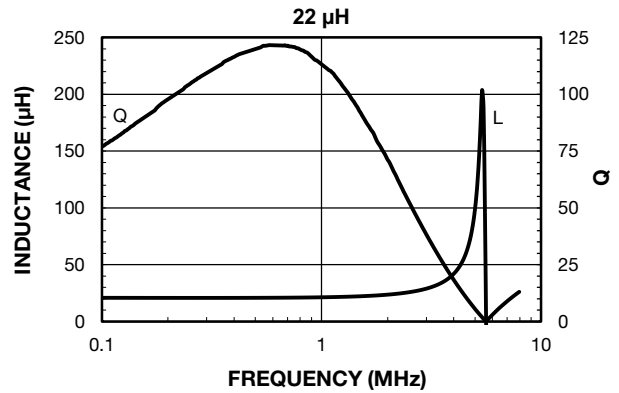
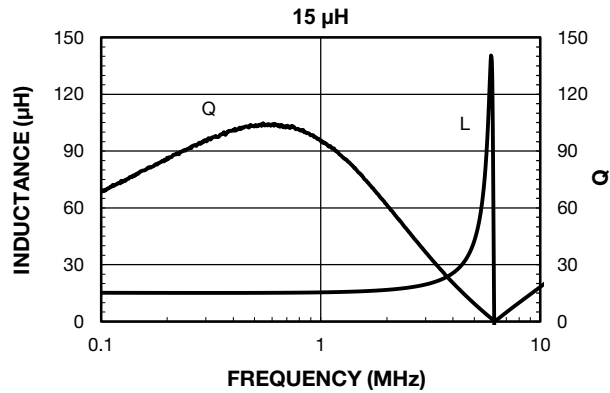


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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