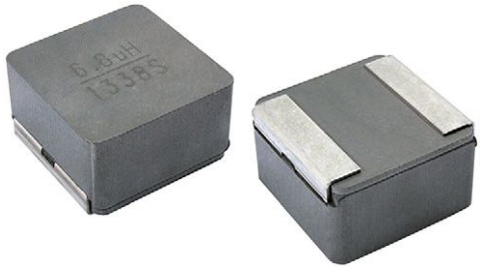
IHLP® Automotive Inductors, High Temperature (155 °C) Series



DESIGN SUPPORT TOOLS click logo to get started

3D Models Available

Design Tools Available

FEATURES

- High temperature rating, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up the SRF (see Standard Electrical Specifications table).
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- AEC-Q200 qualified
- IHLP design. PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

APPLICATIONS

- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment / navigation systems
- Noise suppression for motors: windshield wipers / power seats / power mirrors / heating and ventilation blower / HID lighting
- LED drivers

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	0.56	0.67	80.0	100.0	47.5
1.0	0.82	0.89	69.0	71.0	25.7
2.2	1.23	1.25	58.0	48.0	17.5
3.3	1.63	1.77	49.0	41.0	12.8
4.7	1.69	1.84	47.0	37.0	10.2
6.8	2.84	3.09	36.0	36.0	8.03
10	4.04	4.14	28.0	28.0	6.04
15	5.62	6.11	23.5	24.0	4.71
22	10.60	10.80	17.5	16.0	3.88
33	15.10	15.40	15.5	10.5	3.01
47	17.30	17.70	13.5	10.0	2.99
75	29.76	32.35	10.6	9.5	2.01
82	31.46	34.20	10.2	9.0	2.07
100	36.25	39.40	9.1	7.0	2.01

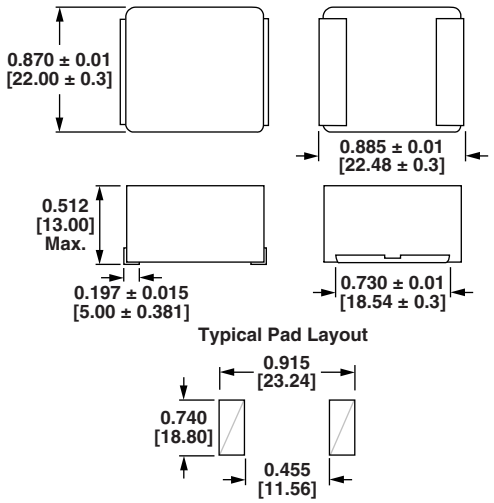
Notes

- 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
- Rated operating voltage (across inductor) = 75 V

(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 %

DIMENSIONS in inches [millimeters]



DESCRIPTION

IHLP-8787MZ-5A	100 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

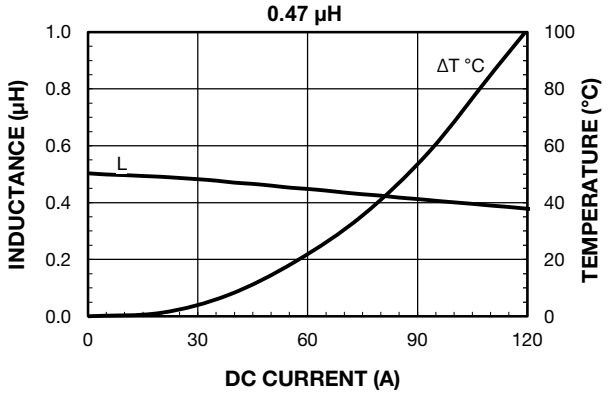
GLOBAL PART NUMBER

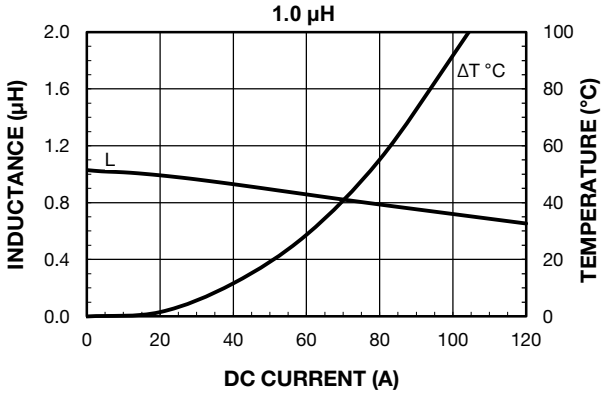
I	H	L	P	8	7	8	7	M	Z	E	R	1	0	1	M	5	A
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES	

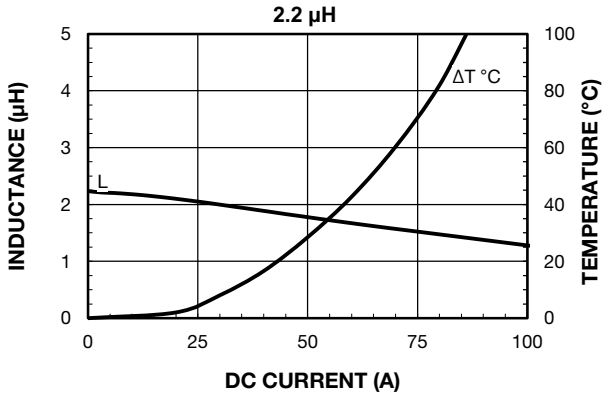
PATENT(S): www.vishay.com/patents

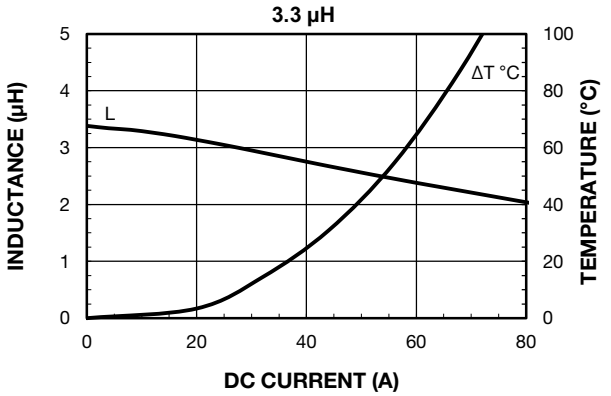
This Vishay product is protected by one or more United States and international patents.

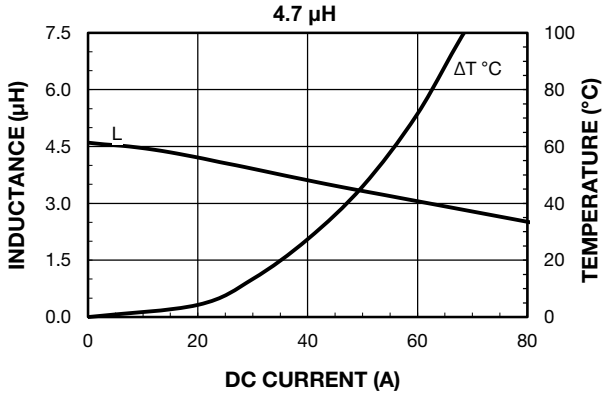
PERFORMANCE GRAPHS

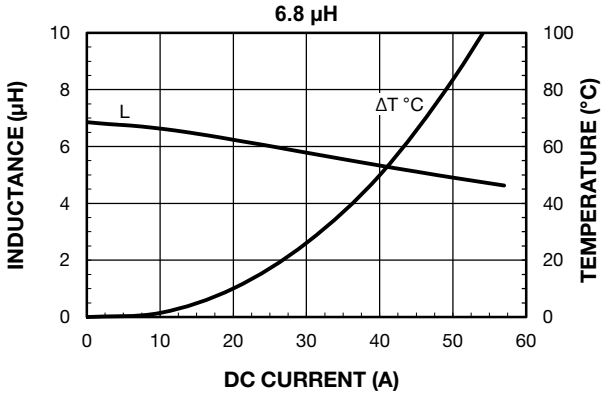


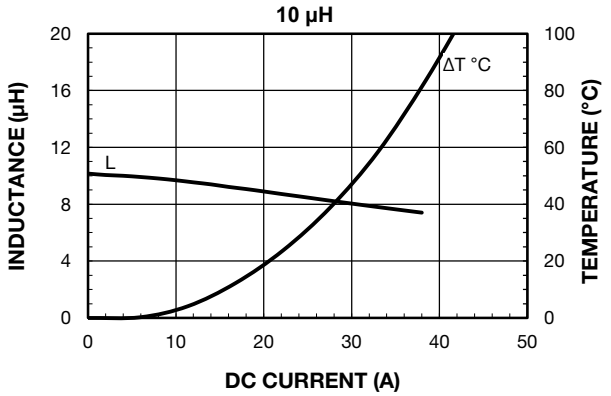


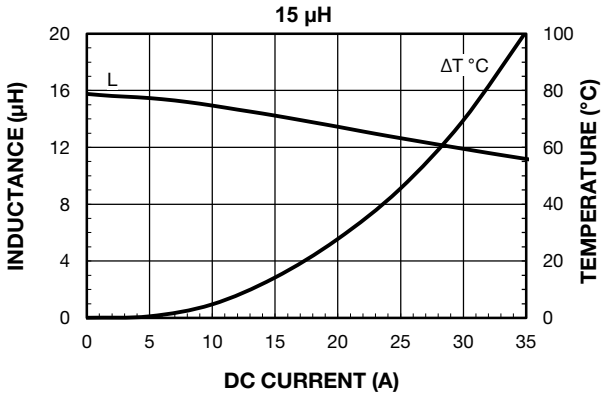












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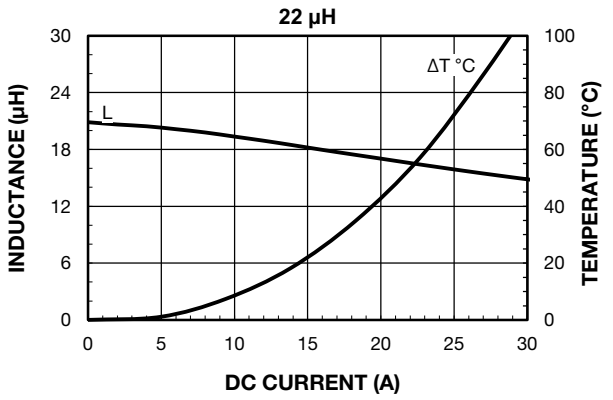
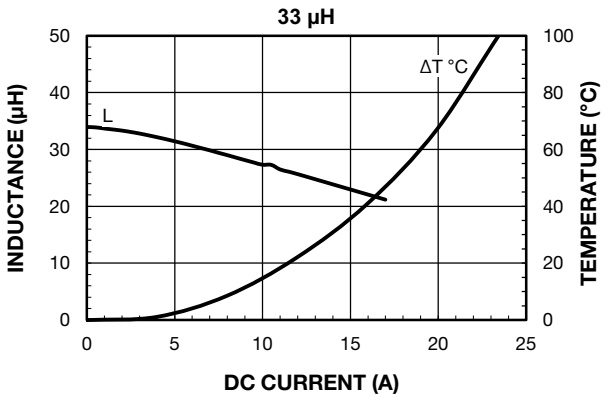
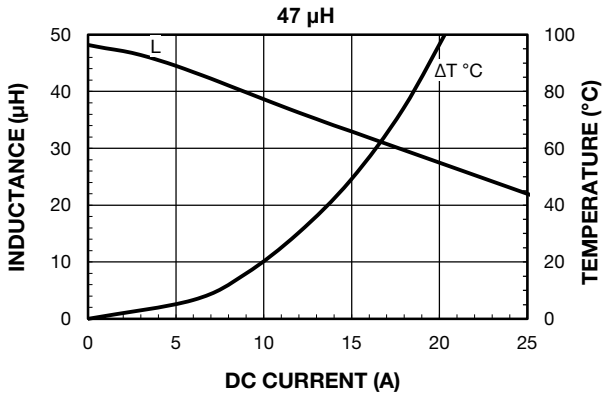
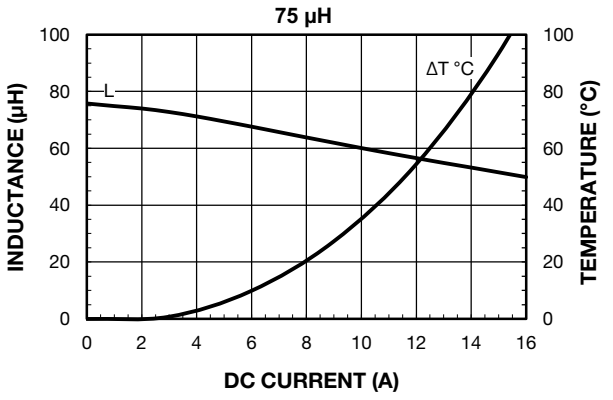
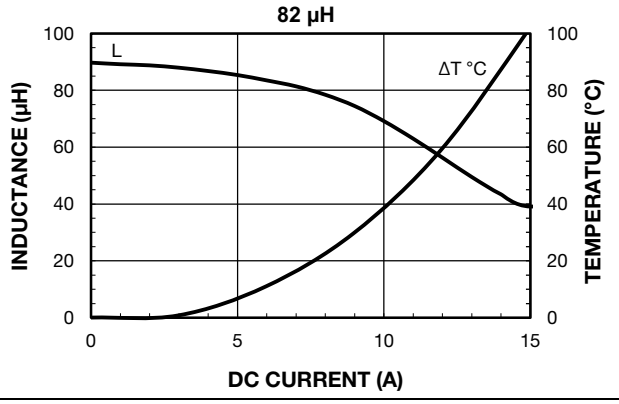
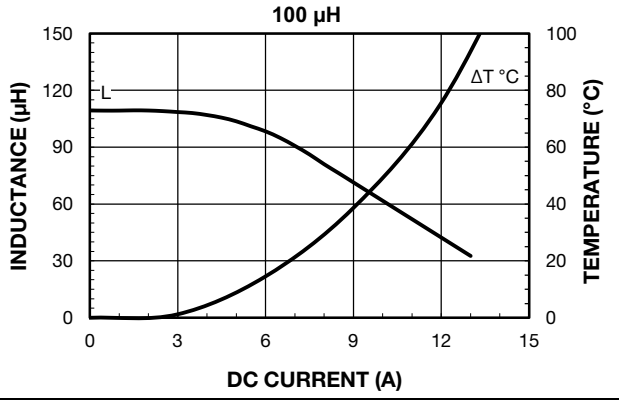




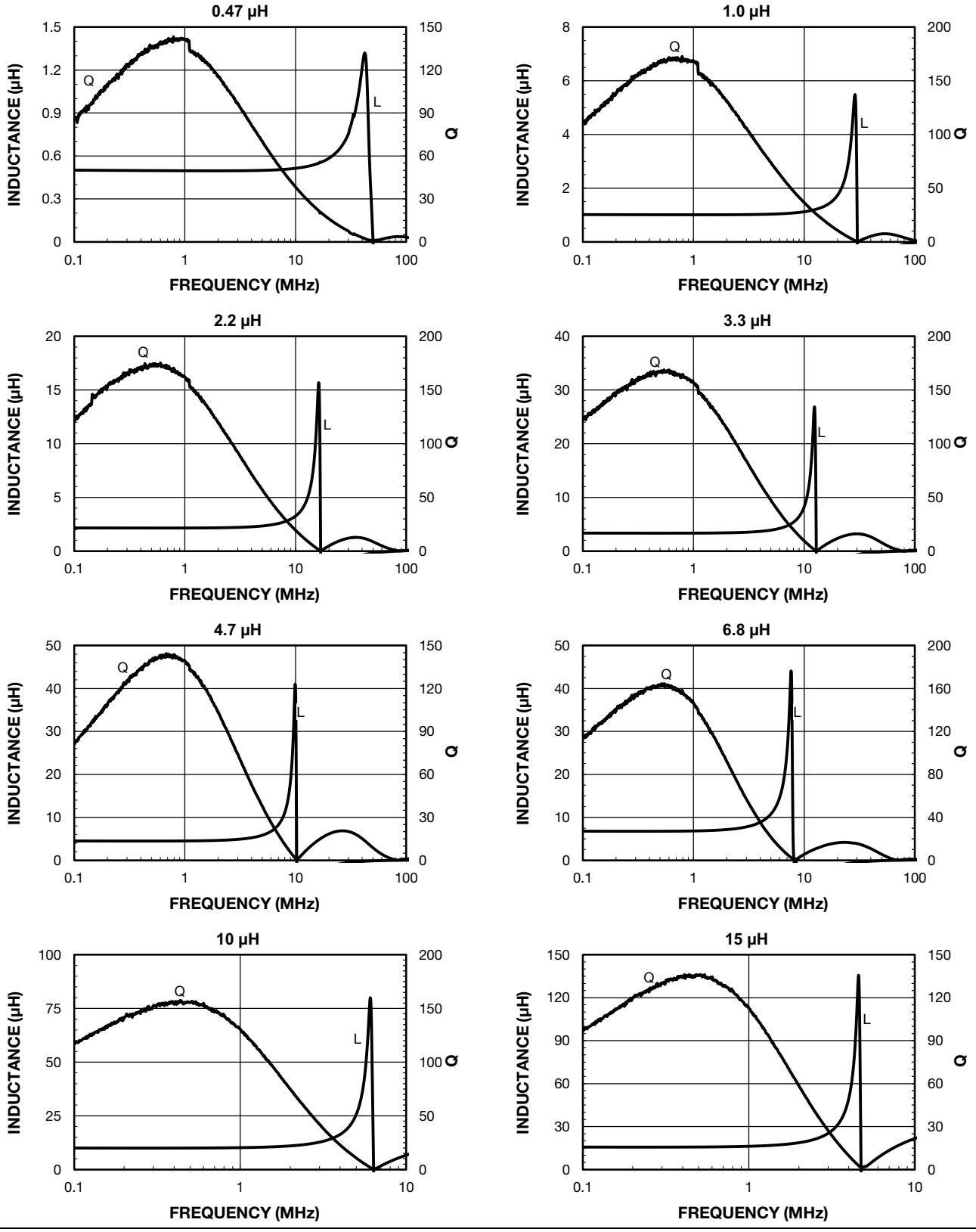








PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY



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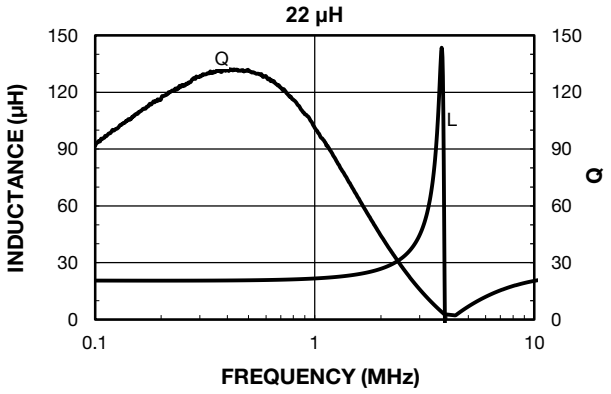

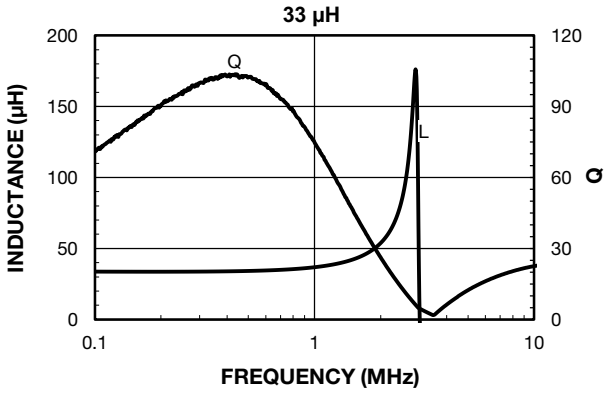

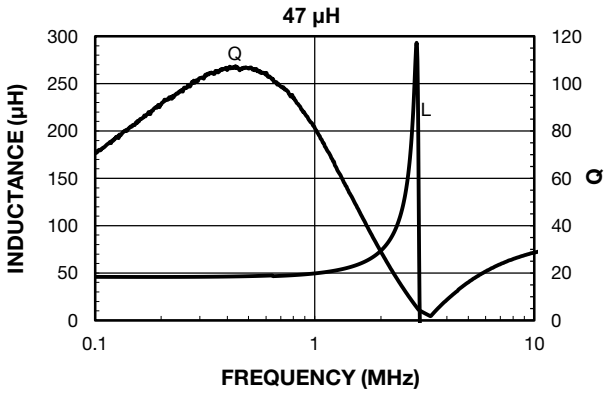

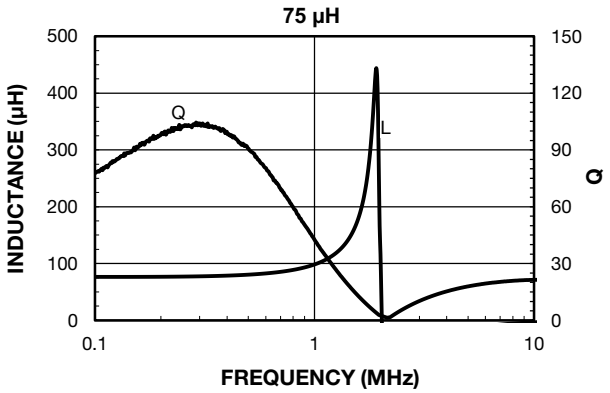

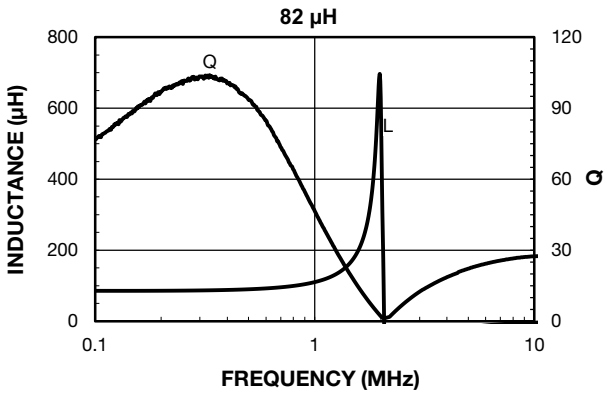

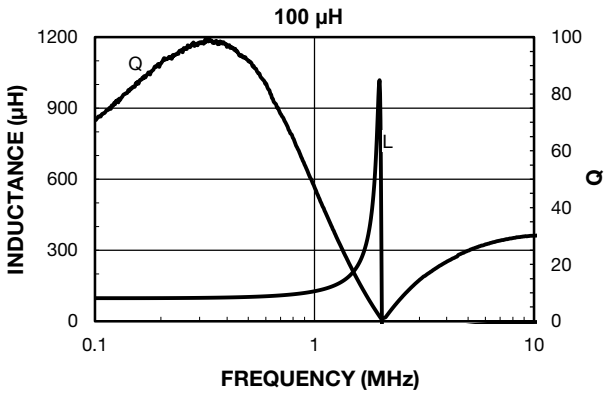

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