

High Current Through Hole Inductor, High Temperature Series



Manufactured under one or more of the following:
US Patents; 6,198,375/6,204,744/6,449,829/6,460,244.
 Several foreign patents, and other patents pending.

STANDARD ELECTRICAL SPECIFICATIONS					
L_0 INDUCTANCE $\pm 20\%$ AT 100 kHz, 0.25 V, 0 A (μH)	DCR TYP. 25 °C (m Ω)	DCR MAX. 25 °C (m Ω)	HEAT RATING CURRENT DC TYP. (A) ⁽³⁾	SATURATION CURRENT DC TYP. (A) ⁽⁴⁾	SRF TYP. (MHz)
0.47	0.47	0.52	83.0	44.0	67.00
1.0	0.87	0.92	66.0	44.0	35.70
2.2	1.51	1.63	45.0	38.0	17.85
3.3	2.28	2.40	40.0	33.0	16.70
4.7	2.85	3.00	30.0	26.0	13.22
6.8	3.97	4.18	24.5	22.0	9.50
8.2	5.7	6.14	20.0	14.5	11.60
10	7.32	7.70	17.7	13.0	9.77
22	12.56	13.22	12.7	11.5	6.42
33	22.61	23.80	9.5	10.0	4.58
47	35.34	37.20	6.8	6.5	4.28
68	46.47	48.92	6.2	6.2	2.74
82	55.20	58.10	5.2	6.0	3.09
100	60.80	64.00	5.0	5.2	2.63

Notes

- (1) All test data is referenced to 25 °C ambient
- (2) Operating temperature range -55 °C to +155 °C
- (3) DC current (A) that will cause an approximate ΔT of 40 °C
- (4) DC current (A) that will cause L_0 to drop approximately 20 %
- (5) 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.

FEATURES

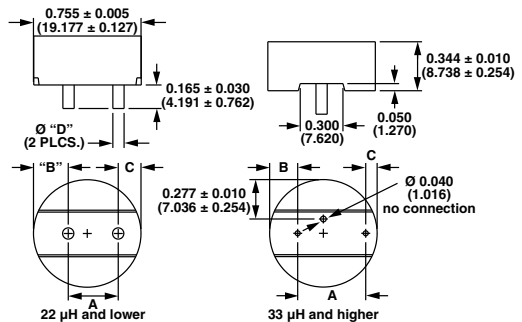
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz
- Filter inductor applications up to SRF (see "Standard Electrical Specifications" table)
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- High Temperature,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



RoHS
 COMPLIANT
 HALOGEN
FREE
GREEN
 (5-2008)

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)

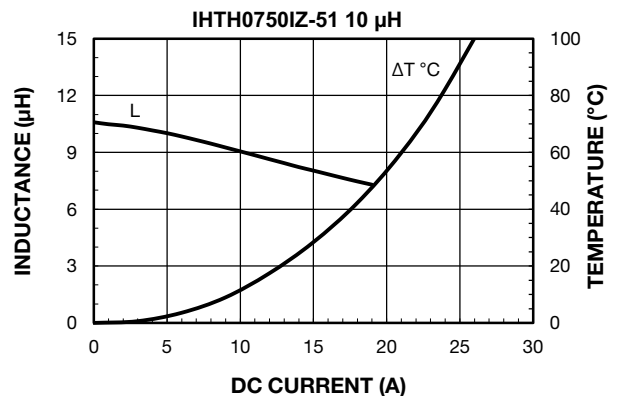
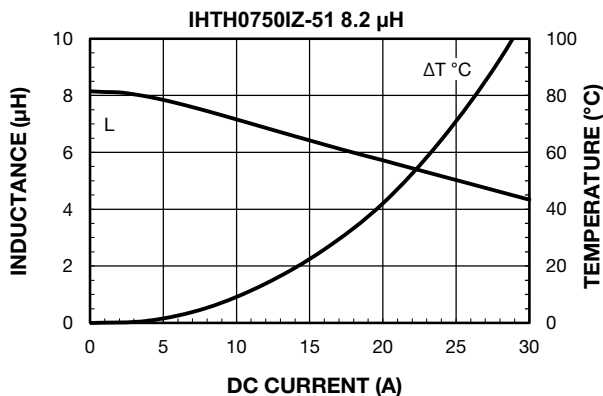
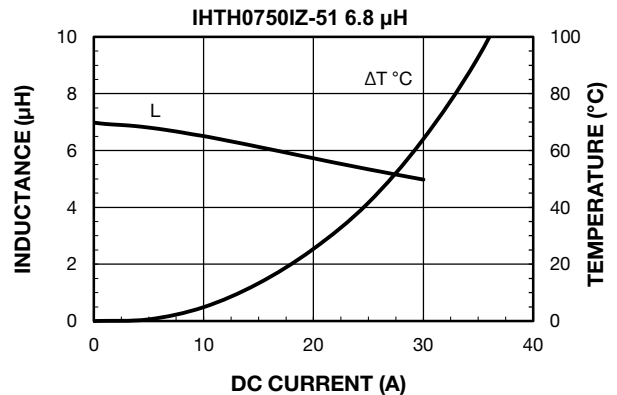
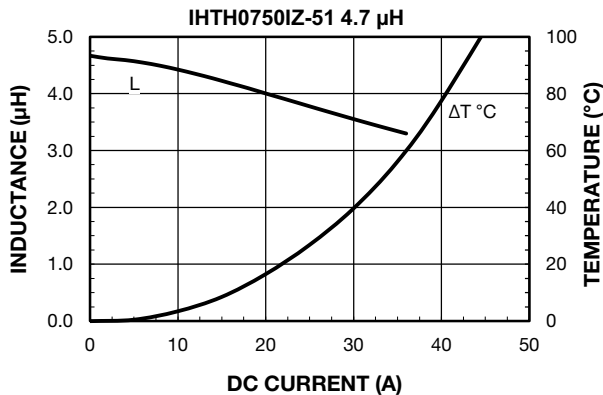
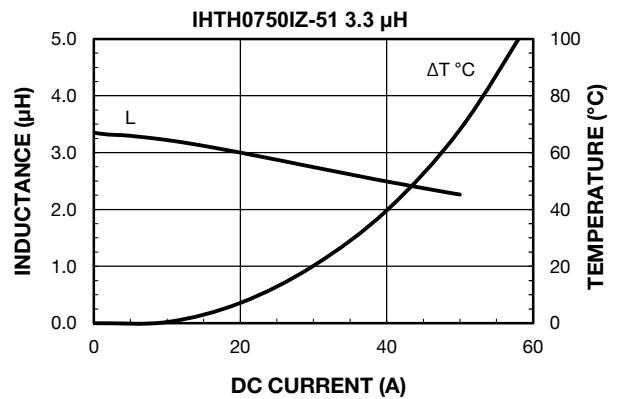
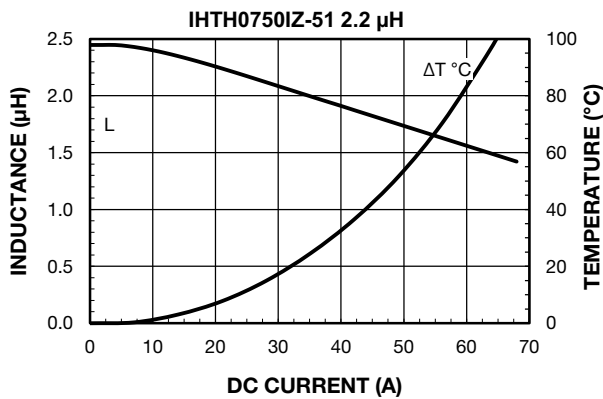
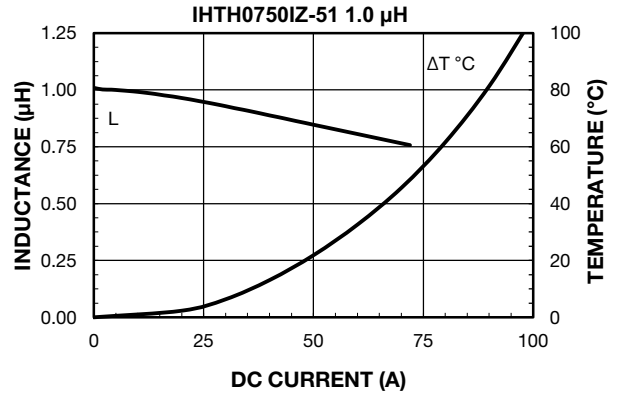
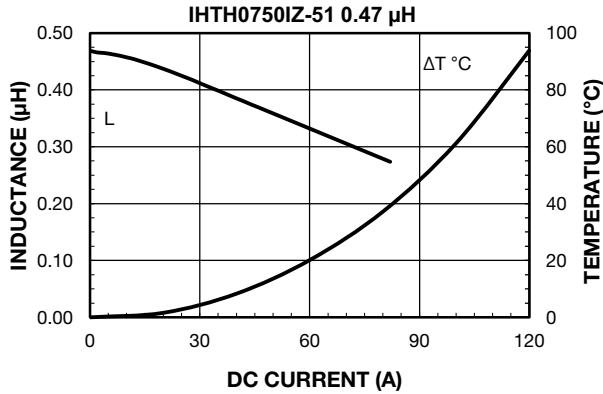
DIMENSIONS in inches (millimeters)


VALUE	A ± 0.010 (± 0.254)	B ± 0.010 (± 0.254)	C ± 0.010 (± 0.254)	D ± 0.005 (± 0.127)
0.47 μH	0.351 (8.915)	0.244 (6.198)	0.160 (4.064)	0.079 (2.007)
1.0 μH	0.487 (12.370)	0.172 (4.369)	0.096 (2.438)	0.071 (1.803)
2.2 μH	0.487 (12.370)	0.172 (4.369)	0.096 (2.438)	0.071 (1.803)
3.3 μH	0.464 (11.786)	0.179 (4.547)	0.111 (2.819)	0.063 (1.600)
4.7 μH	0.464 (11.786)	0.179 (4.547)	0.111 (2.819)	0.056 (1.422)
6.8 μH	0.522 (13.259)	0.147 (3.734)	0.085 (2.159)	0.056 (1.422)
8.2 μH	0.427 (10.846)	0.245 (6.223)	0.082 (2.083)	0.050 (1.210)
10 μH	0.427 (10.846)	0.245 (6.223)	0.082 (2.083)	0.050 (1.210)
22 μH	0.450 (11.430)	0.226 (5.740)	0.079 (2.007)	0.039 (0.991)
33 μH	0.477 (12.116)	0.197 (5.004)	0.080 (2.032)	0.035 (0.889)
47 μH	0.435 (11.049)	0.247 (6.274)	0.072 (1.829)	0.031 (0.787)
68 μH	0.435 (11.049)	0.247 (6.274)	0.072 (1.829)	0.031 (0.787)
82 μH	0.458 (11.633)	0.227 (5.766)	0.070 (1.778)	0.028 (0.711)
100 μH	0.458 (11.633)	0.227 (5.766)	0.070 (1.778)	0.028 (0.711)

DESCRIPTION																	
IHTH-0750IZ-51			1.0 μH			$\pm 20\%$											
MODEL			INDUCTANCE VALUE			INDUCTANCE TOLERANCE											
GLOBAL PART NUMBER																	
I	H	T	H	0	7	5	0	I	Z	E	B	1	R	0	M	5	1
MODEL			SIZE			PACKAGE CODE		INDUCTANCE VALUE		INDUCT. TOL.		SERIES					

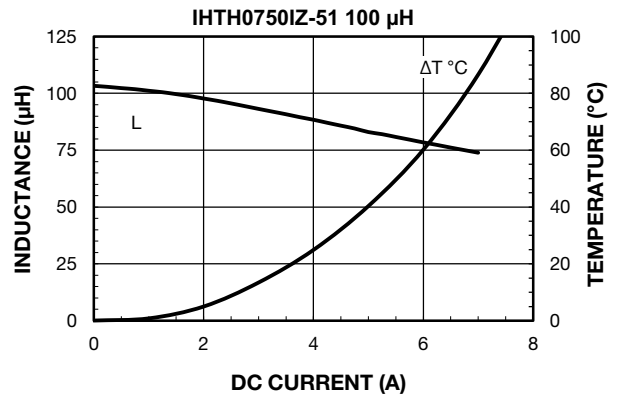
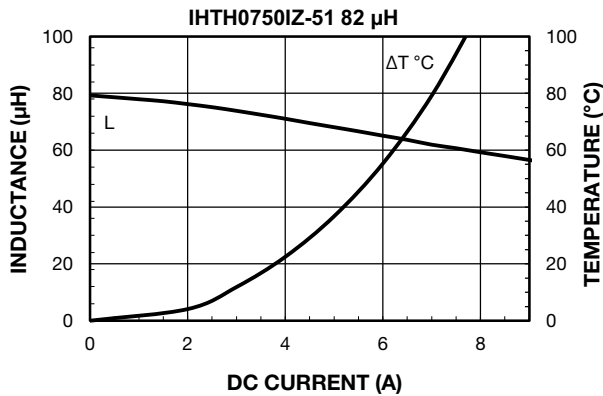
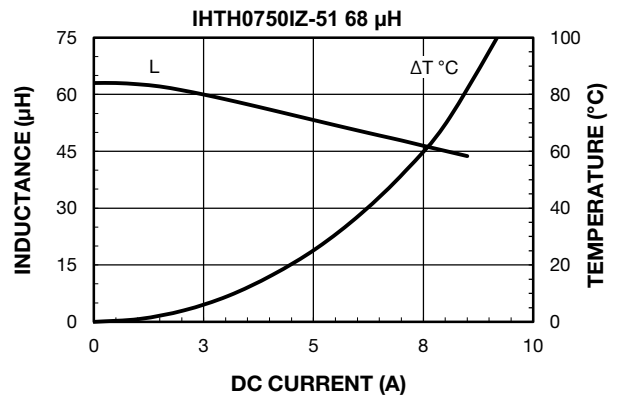
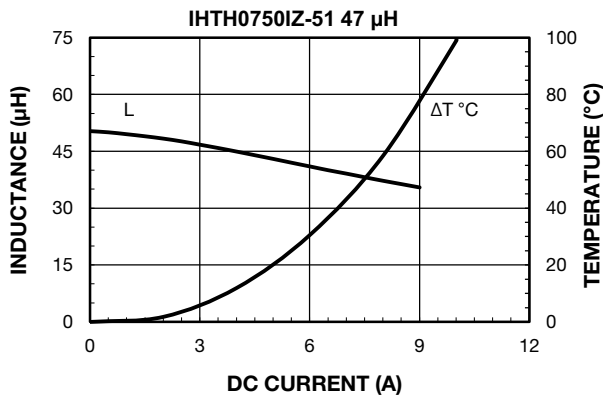
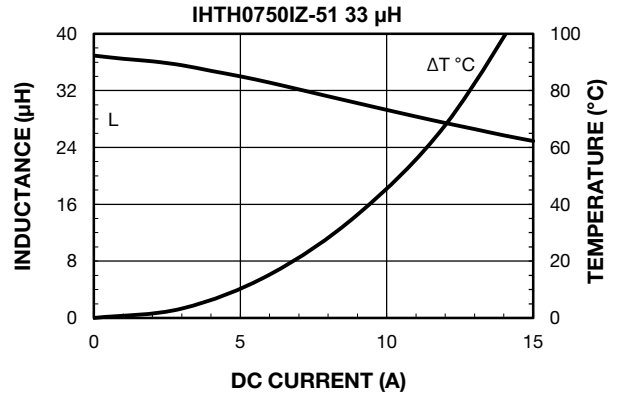
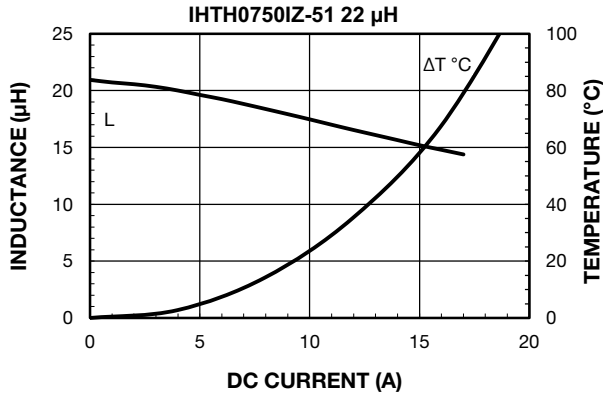


PERFORMANCE GRAPHS



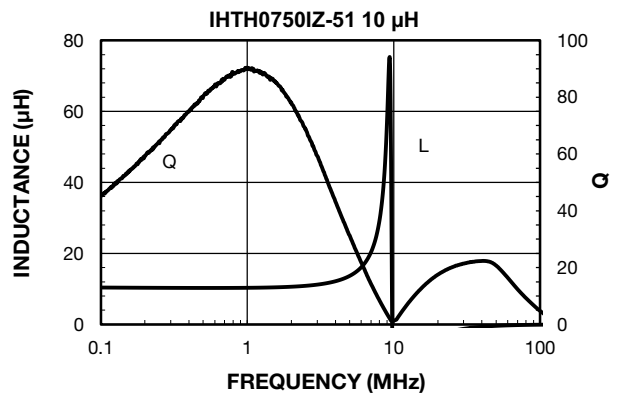
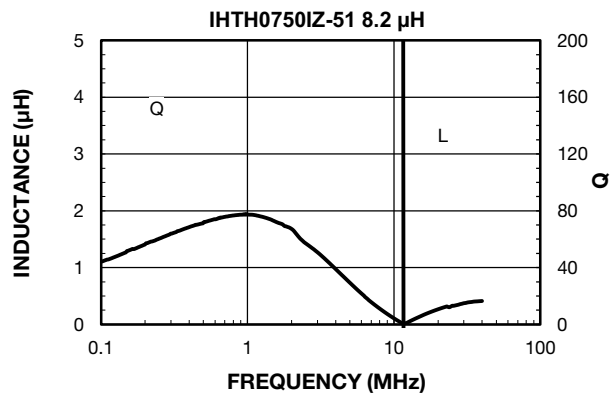
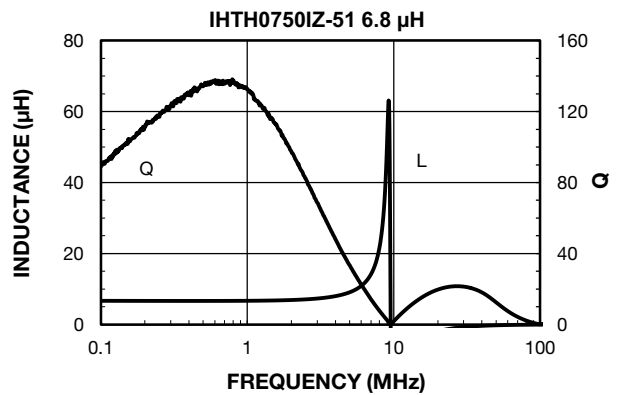
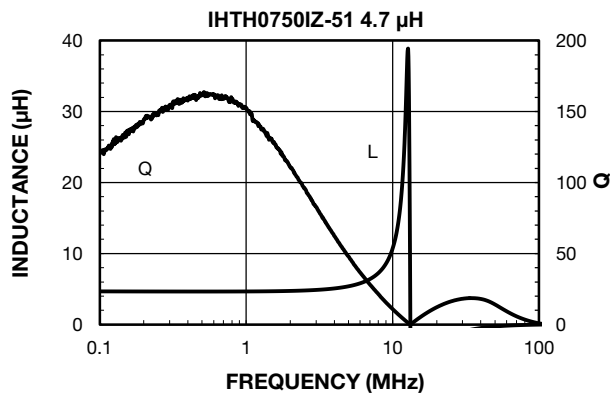
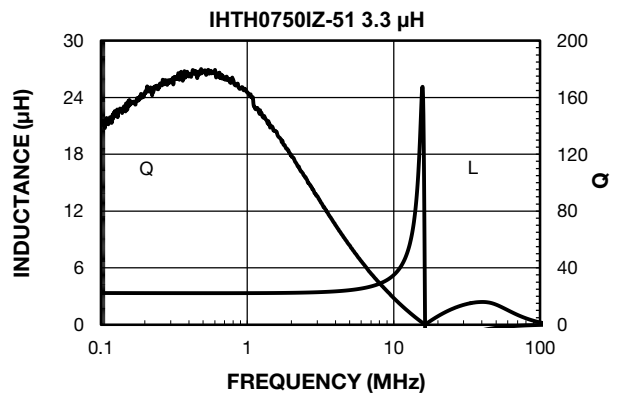
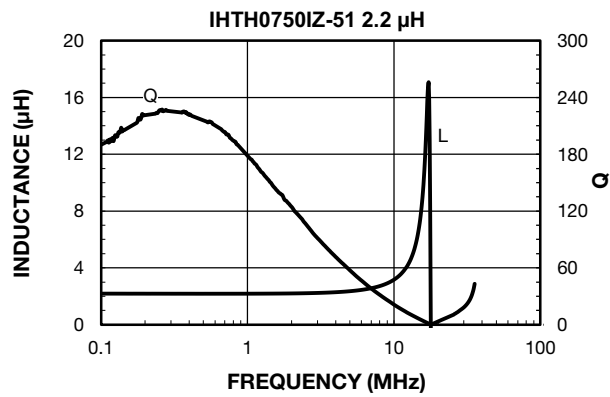
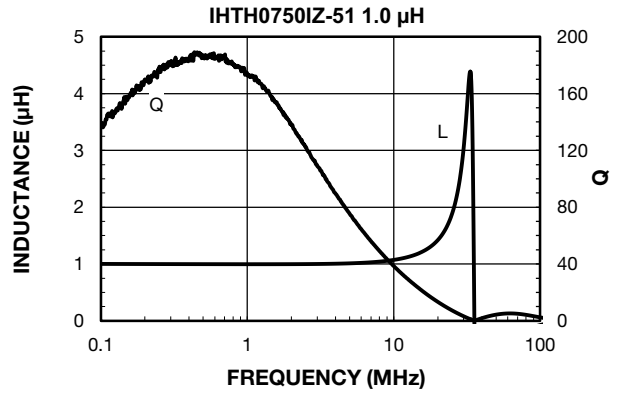
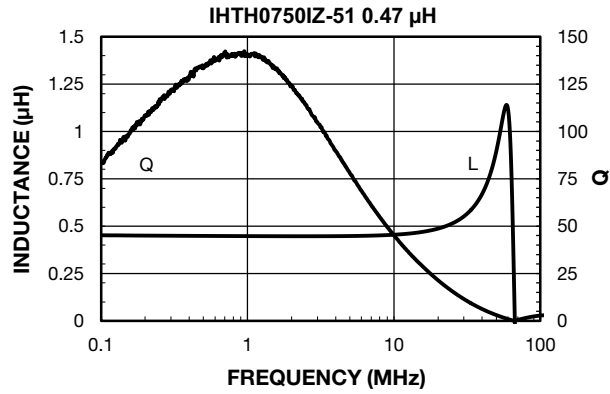


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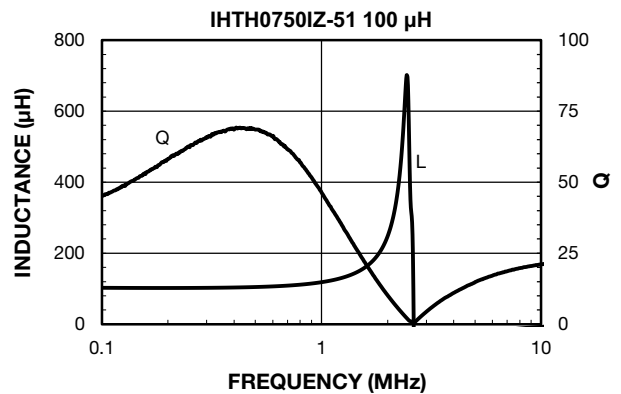
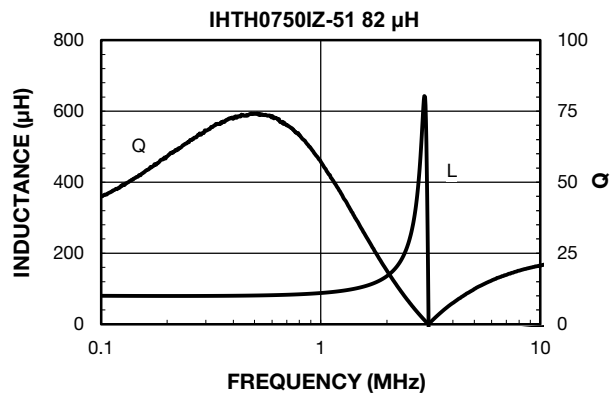
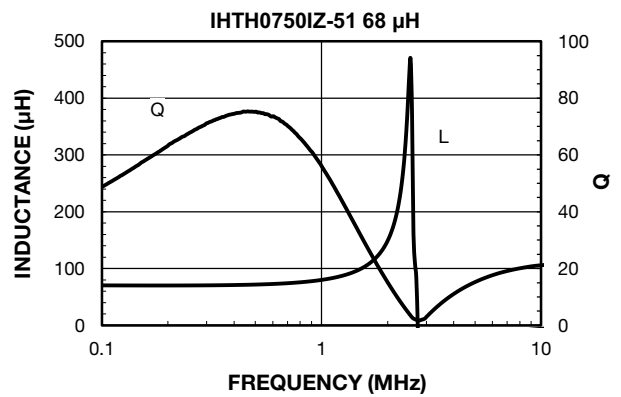
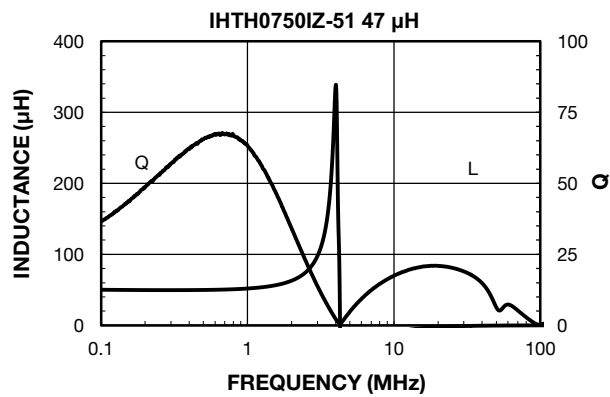
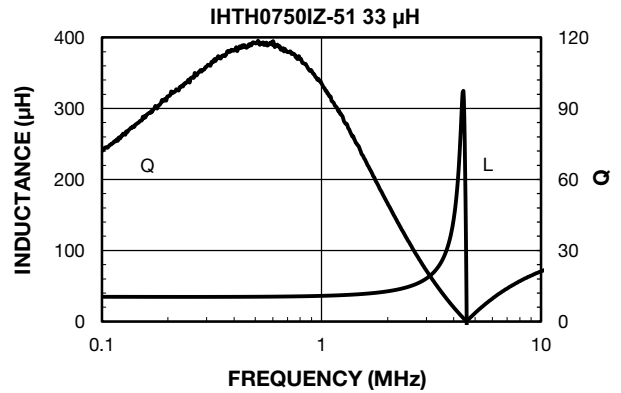
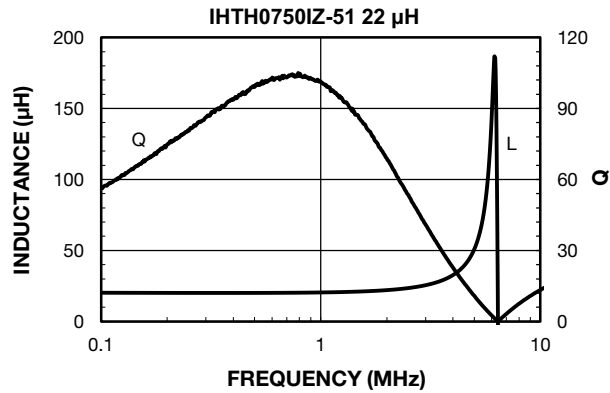


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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