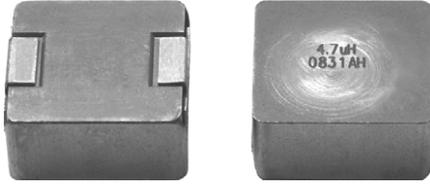


# IHLP<sup>®</sup> Automotive Inductors, High Temperature (155 °C) Series



## LINKS TO ADDITIONAL RESOURCES



STANDARD ELECTRICAL SPECIFICATIONS					
L <sub>0</sub> 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) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>	SRF TYP. (MHz)
0.22	0.73	0.81	66	68	113
0.33	0.83	0.92	62	44	79.9
0.47	1.05	1.16	54	42	65.6
0.56	1.24	1.33	50	32	63.1
0.68	1.33	1.42	40	29	48.1
1.0	1.65	1.77	40	26	33.4
1.2	1.98	2.12	29	24.5	32.0
1.5	2.4	2.57	27.5	23.5	29.2
1.8	2.75	2.94	26	22.5	25.9
2.2	3.43	3.67	25.5	21.5	23.3
3.3	5.08	5.44	20.2	16.7	17.8
4.7	7.41	7.93	19.7	18.5	15.8
5.6	8.51	9.11	16.8	14.2	12.3
6.8	11.3	12.09	14.9	14.1	13.4
7.8	12.6	13.48	13.5	8.5	13.4
8.2	13.2	14.12	13.2	7.6	10.3
10	16.60	17.76	12.1	7.8	10.7
12	19.00	20.33	11.4	7.9	9.5
15	24.00	25.68	10.1	7.7	8.8
22	31.30	33.49	9.0	6.3	6.6
33	46.03	49.25	6.9	6.2	5.5
47	77.00	79.60	5.6	4.5	3.9
82	141.10	150.98	3.7	3.7	3.0
100	175.00	187.0	3.1	4.3	2.8

### 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, PCB 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
- <sup>(1)</sup> DC current (A) that will cause an approximate ΔT of 40 °C
- <sup>(2)</sup> DC current (A) that will cause L<sub>0</sub> to drop approximately 20 %

## FEATURES

- High temperature, 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
- Material categorization: for definitions of compliance please see [www.vishay.com/doc/299912](http://www.vishay.com/doc/299912)

 AUTOMOTIVE  
GRADE

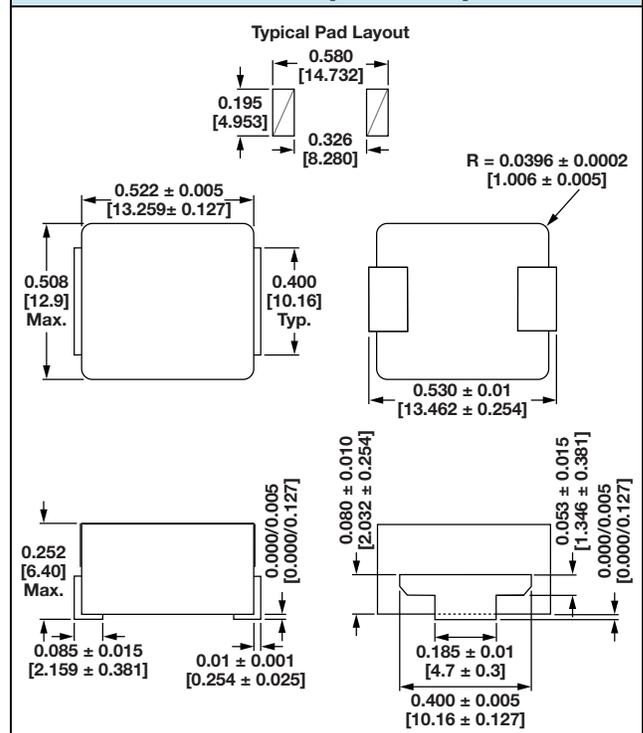
**RoHS**  
COMPLIANT

 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

## DIMENSIONS in inches [millimeters]





DESCRIPTION					
IHLP-5050FD-5A	4.7 $\mu$ H	$\pm 20 \%$	EK	e3	
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD	

GLOBAL PART NUMBER					
I H L P	5 0 5 0 F D	E K	4 R 7	M	5 A
PRODUCT FAMILY		SIZE	PACKAGE CODE	INDUCTANCE TOLERANCE	SERIES
			EK = tape and reel	4R7 = 4.7 $\mu$ H	M = $\pm 20 \%$

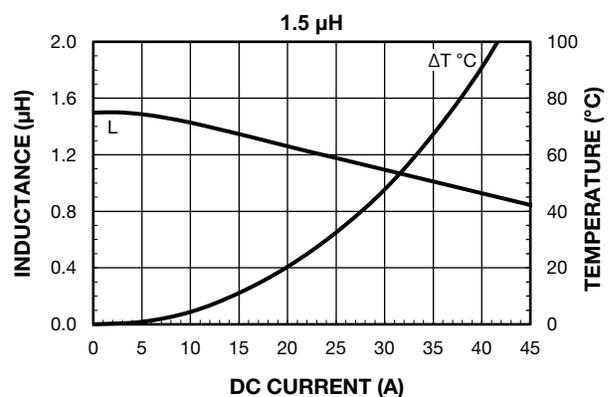
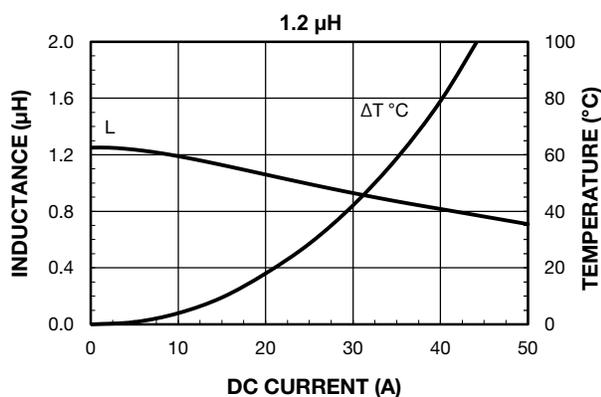
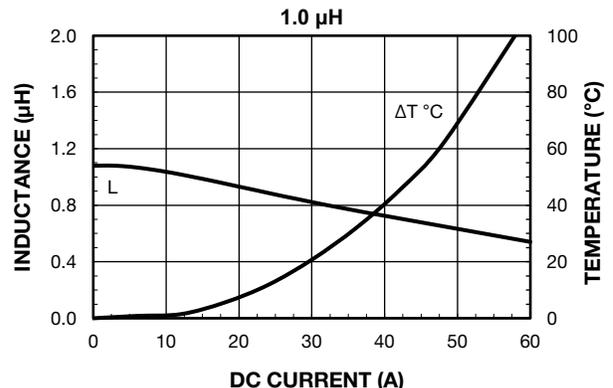
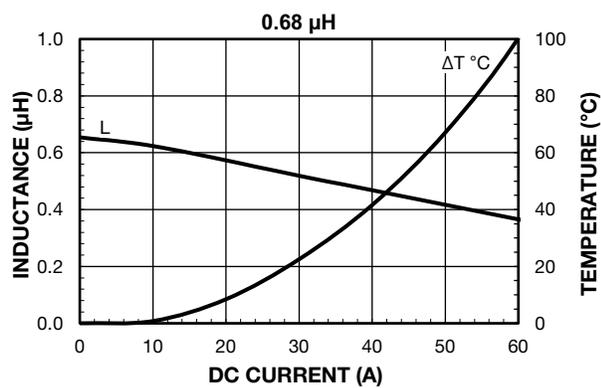
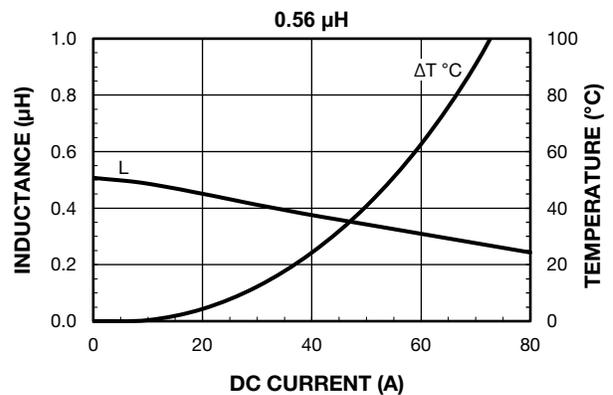
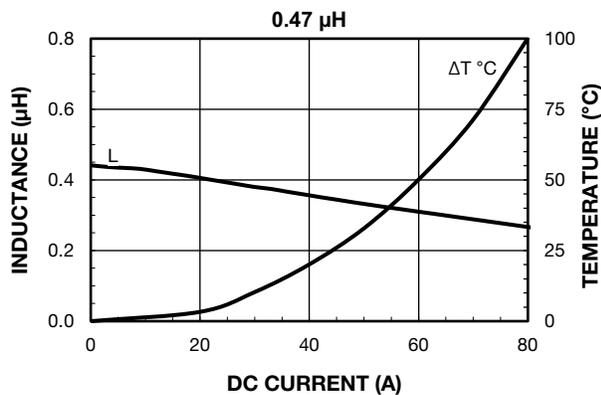
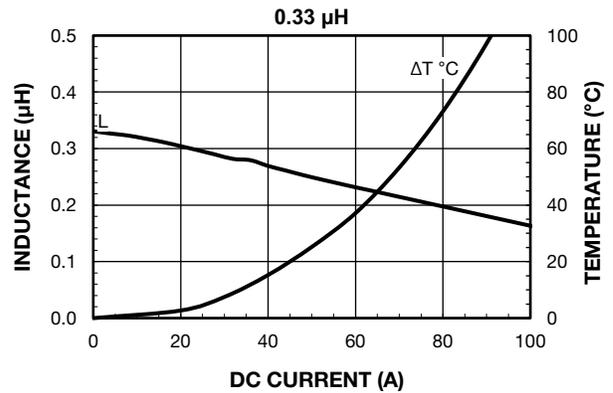
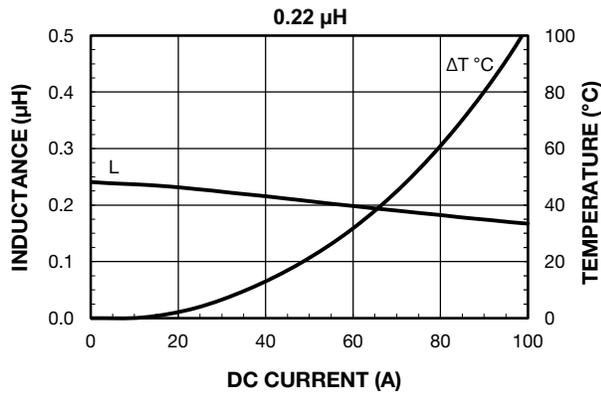
PACKAGE CODE OPTIONS
EK = tape and reel packaging (500 pcs on 13-inch reel)
ER = tape and reel packaging (250 pcs on 13-inch reel)

Note

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

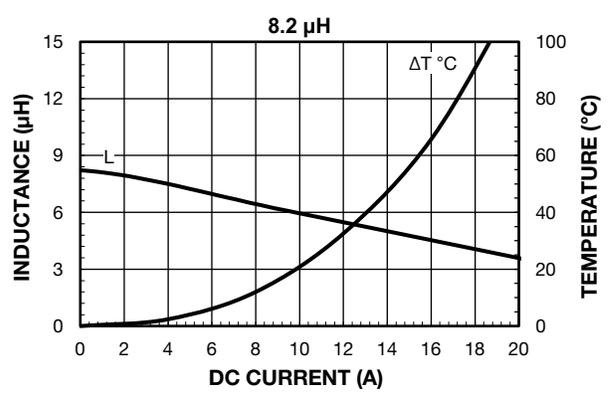
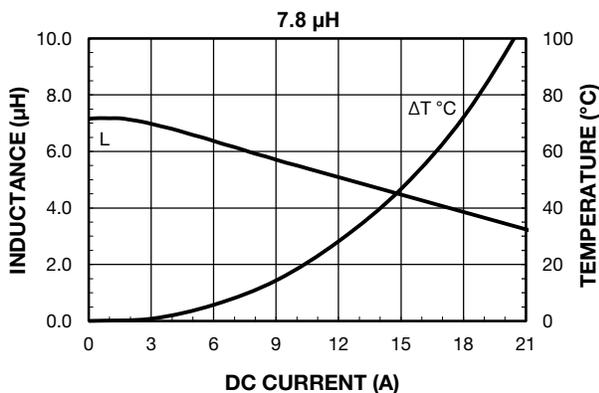
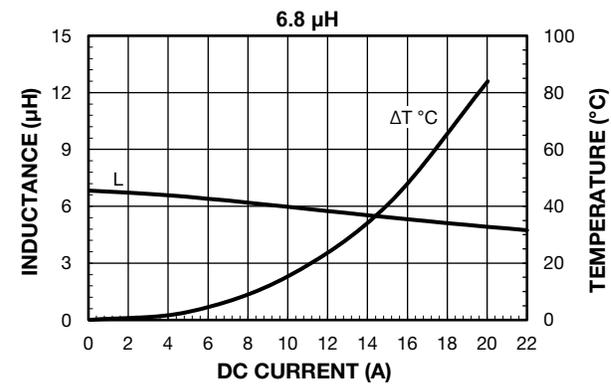
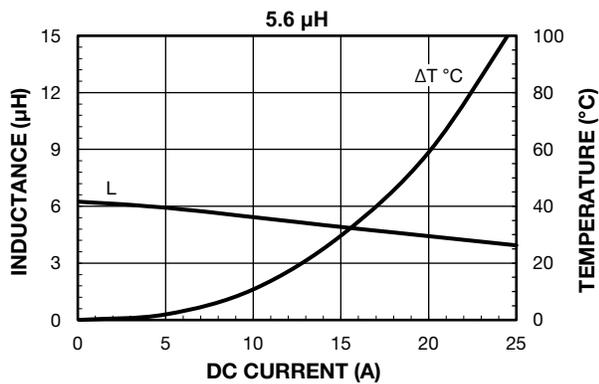
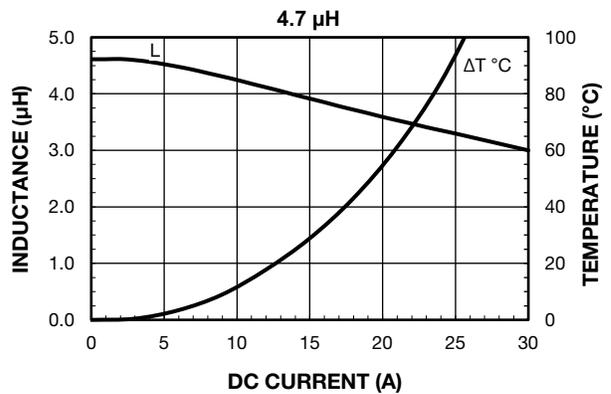
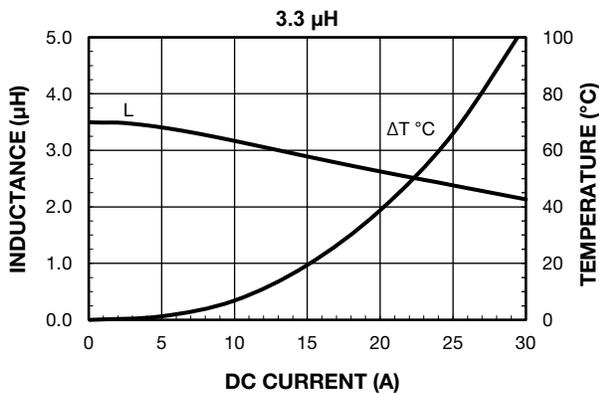
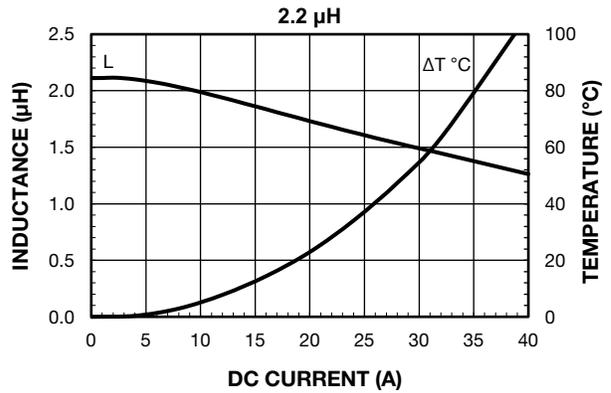
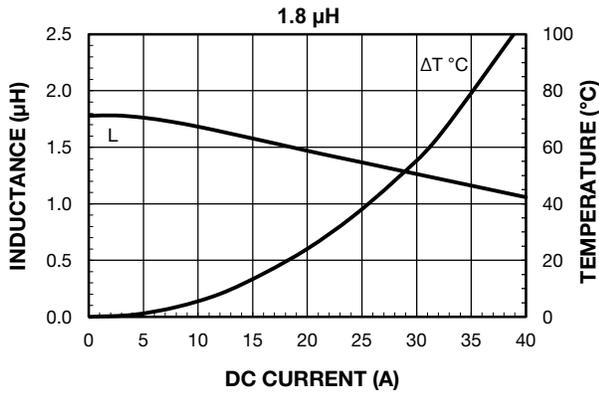


PERFORMANCE GRAPHS



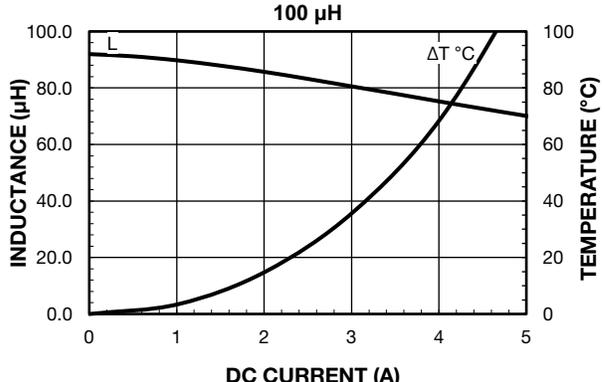
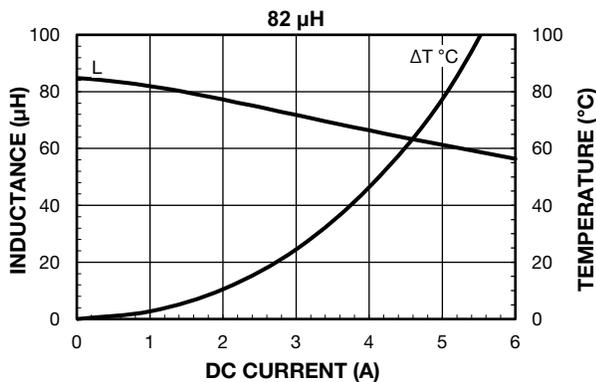
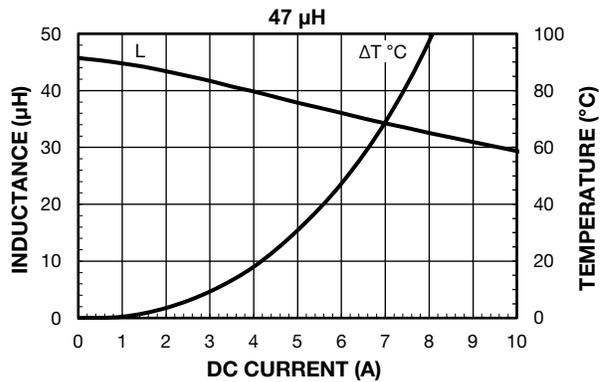
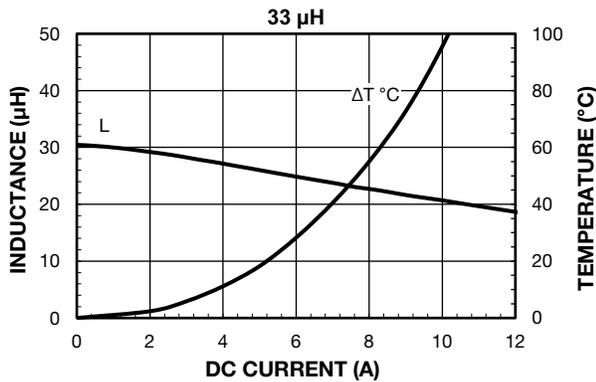
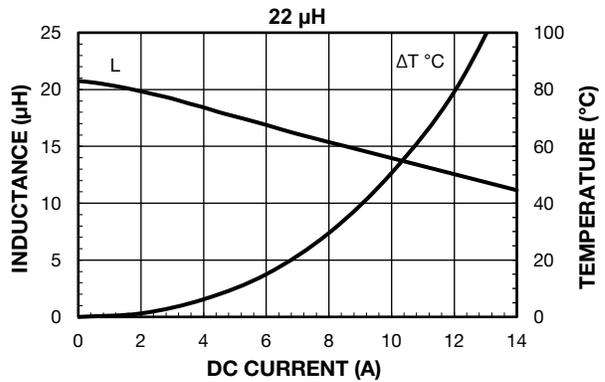
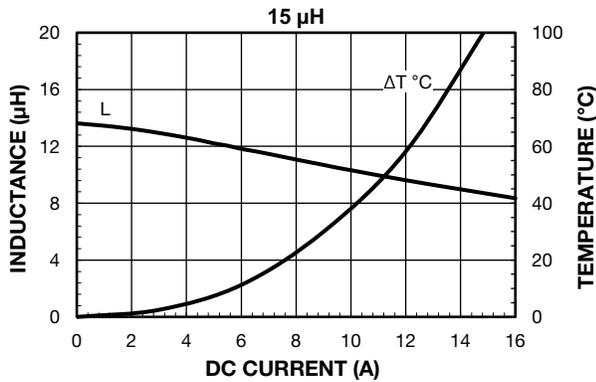
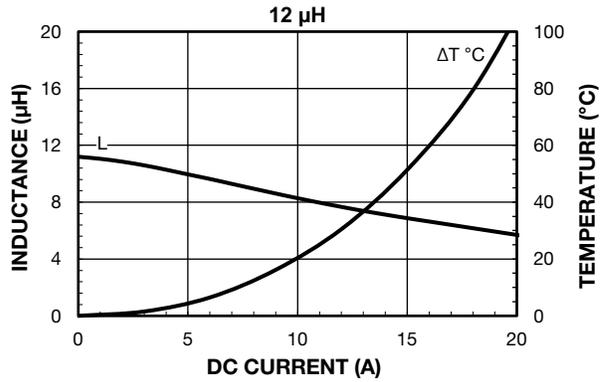
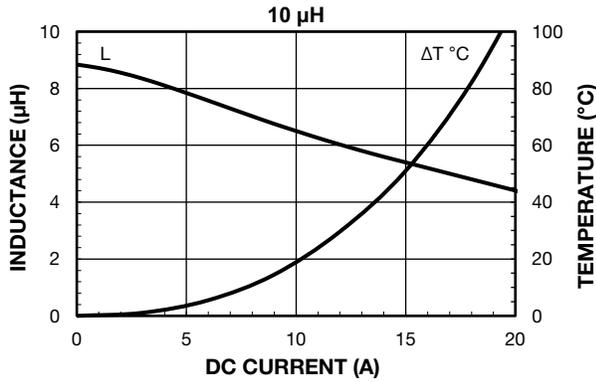


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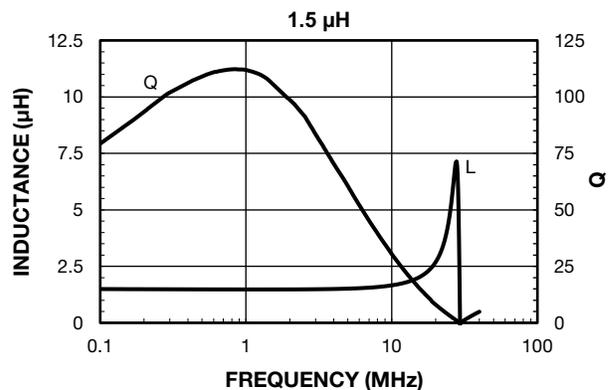
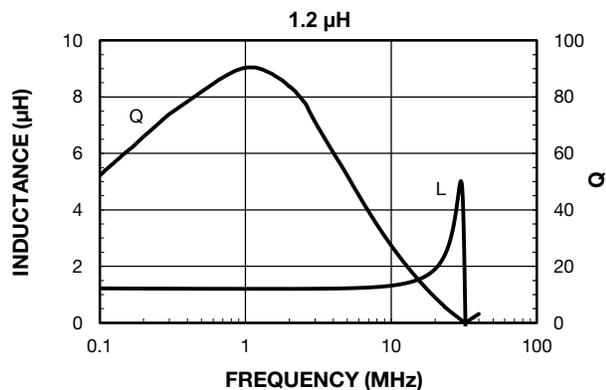
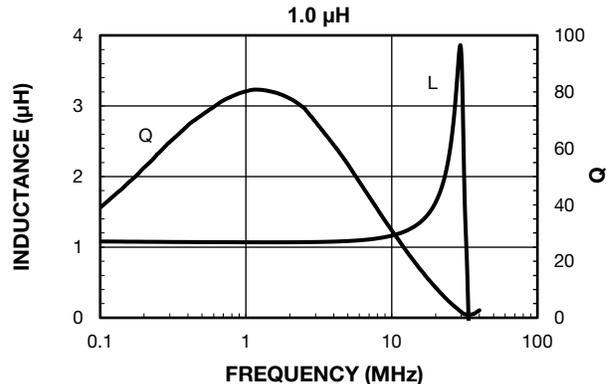
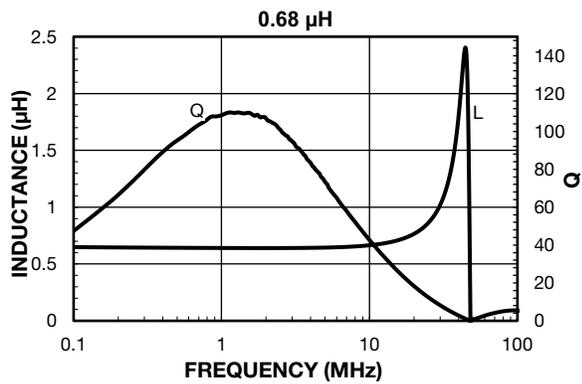
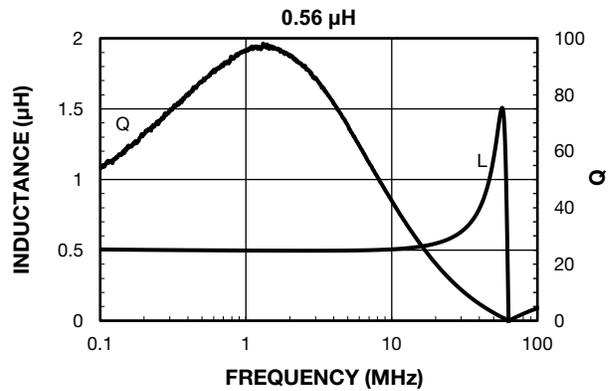
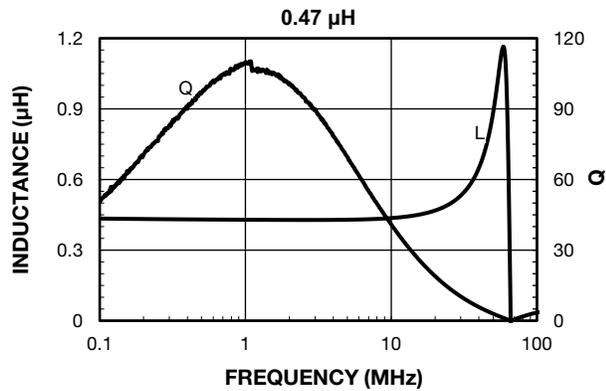
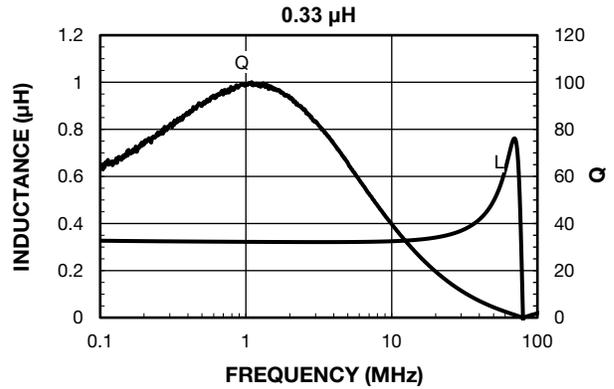
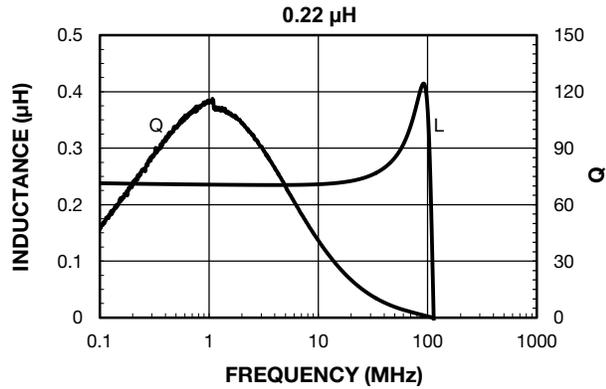


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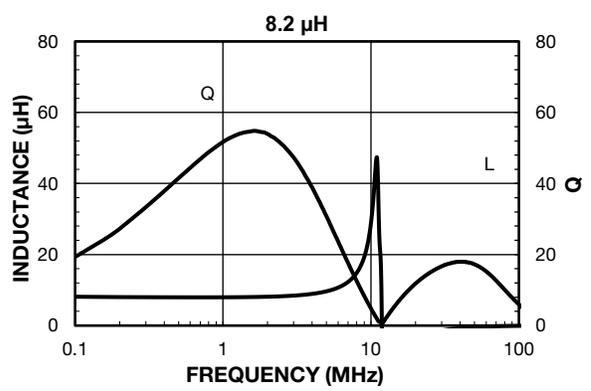
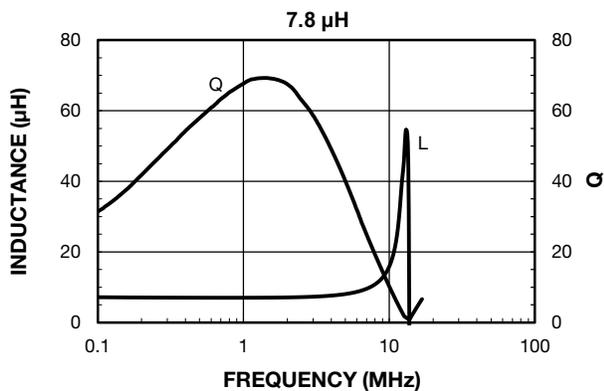
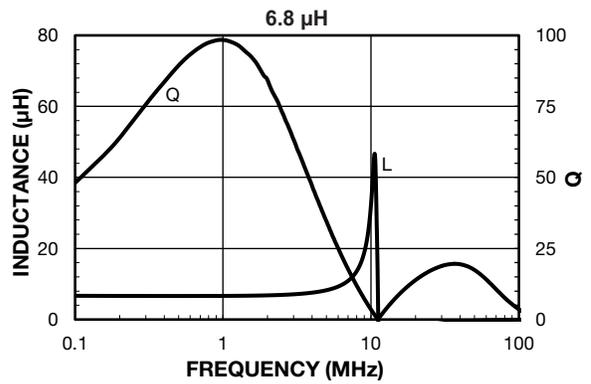
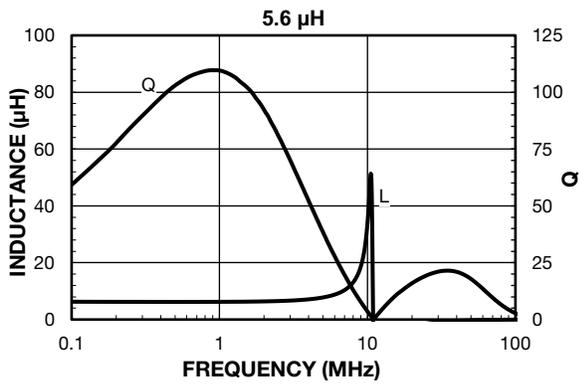
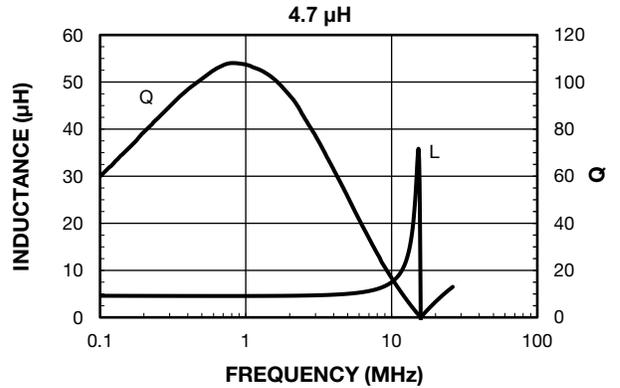
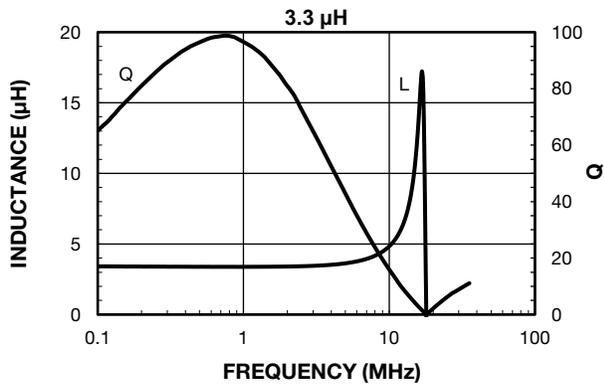
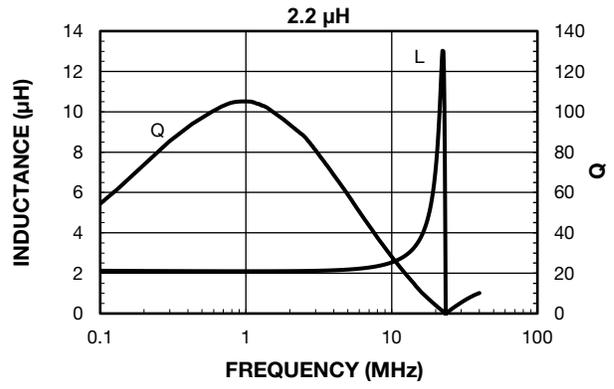
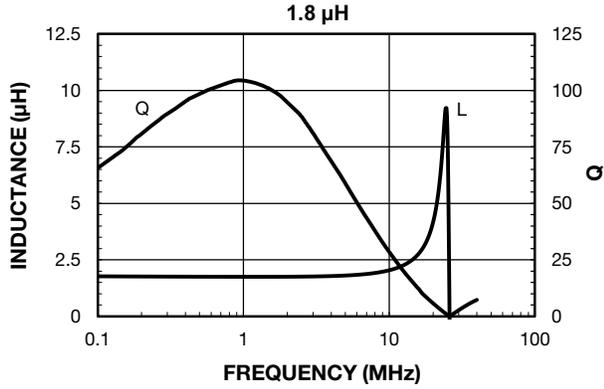


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY



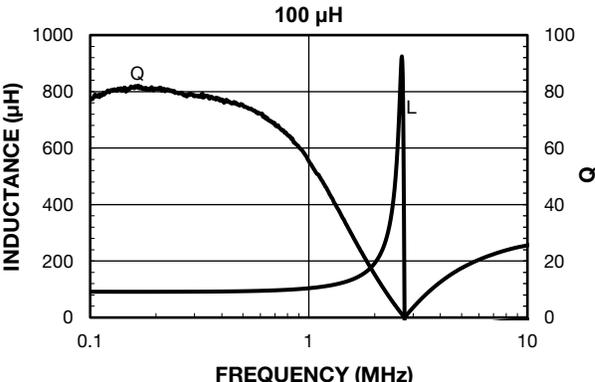
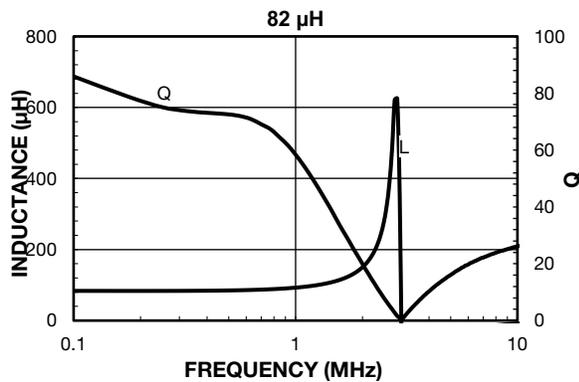
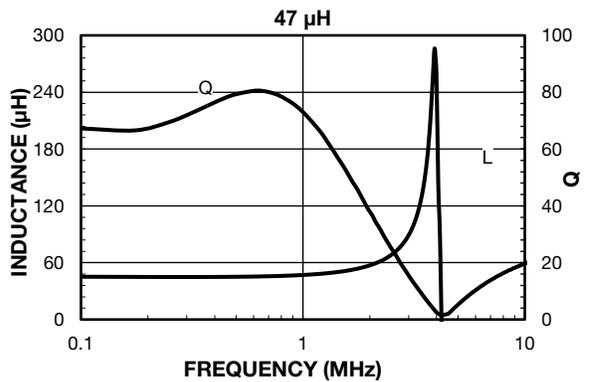
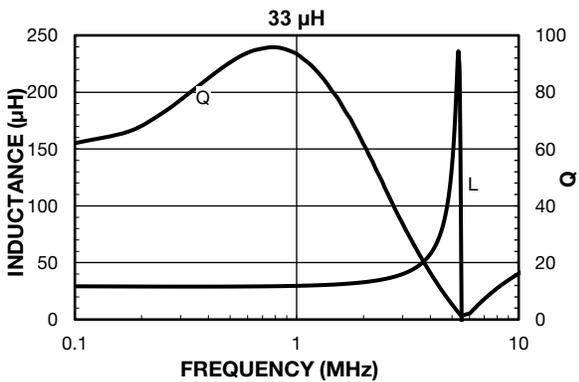
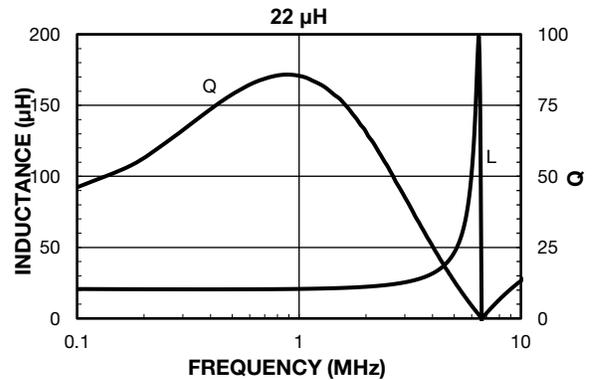
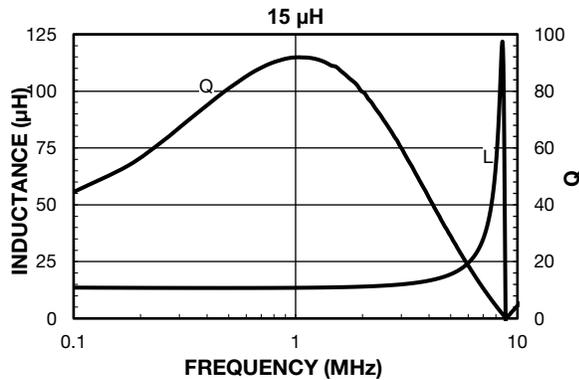
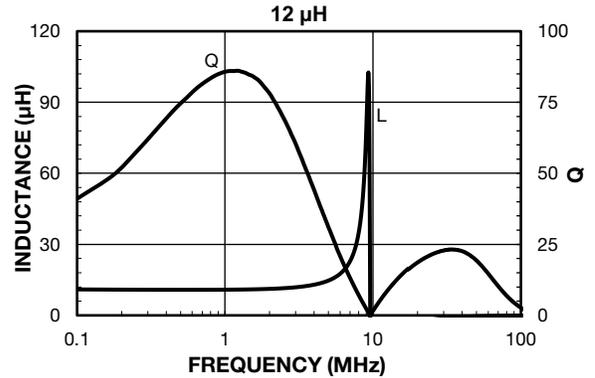
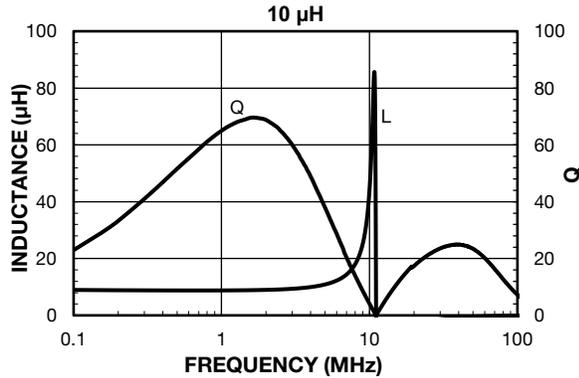


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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