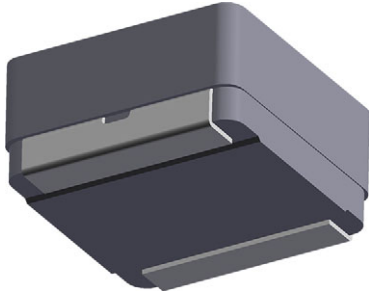


## IHLP<sup>®</sup> Automotive Inductors, Wide Terminal for High Shock and Vibration



### LINKS TO ADDITIONAL RESOURCES



### FEATURES

- 13.2 mm x 12.8 mm x 6.4 mm size
- Wide terminal for improved mechanical stability and shock and vibration performance
- High temperature up to 155 °C
- Magnetically shielded construction
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

 AUTOMOTIVE  
GRADE

**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### APPLICATIONS

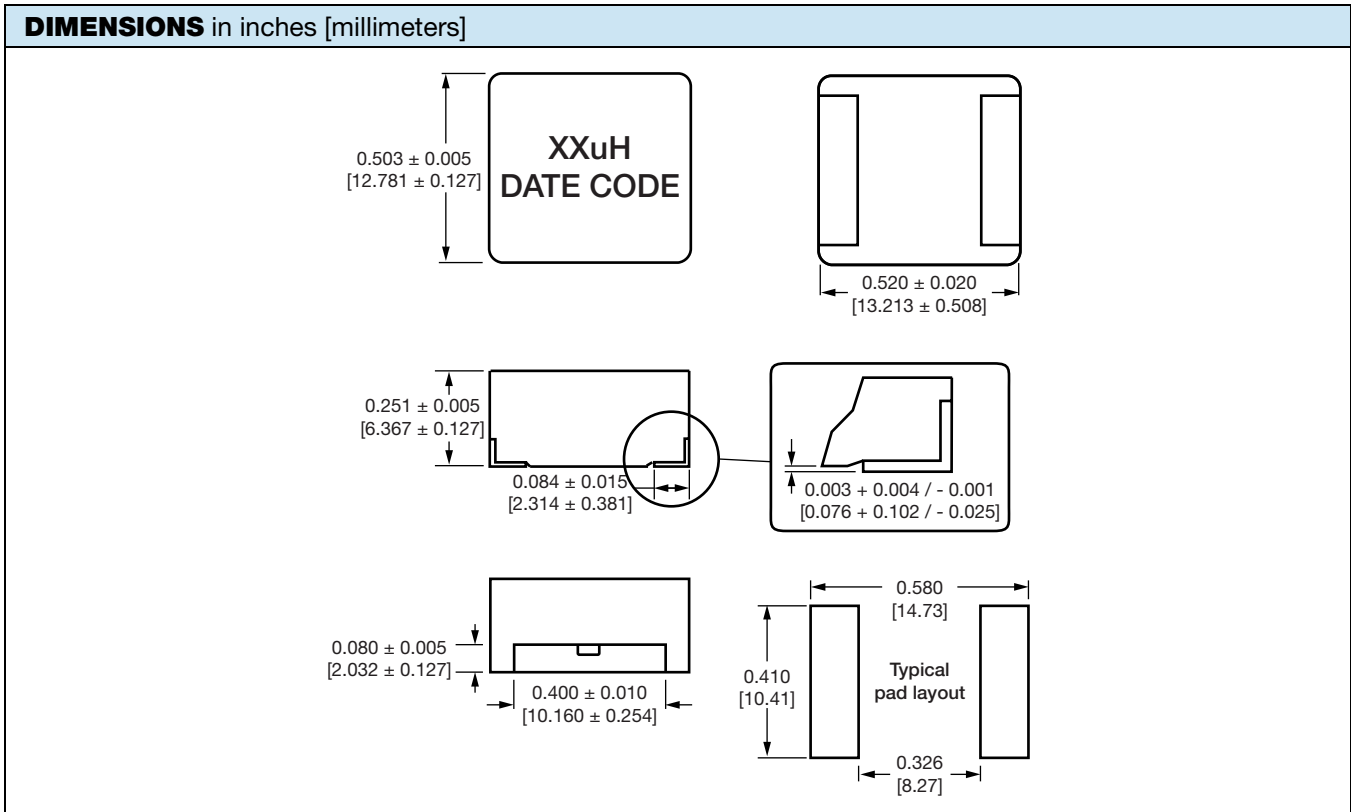
- Engine and transmission control units
- DC/DC converters for infotainment, navigation systems, lighting
- Noise suppression and filtering
- 50 g shock and vibration applications

### STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	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)		SRF TYP. (MHz)
					20 % DROP <sup>(2)</sup>	30 % DROP <sup>(3)</sup>	
IHLP505WFDE_R22M5A	0.22	0.73	0.81	66	68	95	113
IHLP505WFDE_R33M5A	0.33	0.83	0.92	62	44	57	79.9
IHLP505WFDE_R47M5A	0.47	1.05	1.16	54	42	55	65.6
IHLP505WFDE_R56M5A	0.56	1.24	1.33	50	32	45	63.1
IHLP505WFDE_R68M5A	0.68	1.33	1.42	40	29	41	48.1
IHLP505WFDE_1R0M5A	1	1.65	1.77	40	26	40	33.4
IHLP505WFDE_1R2M5A	1.2	1.98	2.12	29	24.5	34	32
IHLP505WFDE_1R5M5A	1.5	2.4	2.57	27.5	23.5	35	29.2
IHLP505WFDE_1R8M5A	1.8	2.75	2.94	26	22.5	32	25.9
IHLP505WFDE_2R2M5A	2.2	3.43	3.67	25.5	21.5	30	23.3
IHLP505WFDE_3R3M5A	3.3	5.08	5.44	20.2	16.7	23	17.8
IHLP505WFDE_4R7M5A	4.7	7.41	7.93	19.7	18.5	26	15.8
IHLP505WFDE_5R6M5A	5.6	8.51	9.11	16.8	14.2	20	12.3
IHLP505WFDE_6R8M5A	6.8	11.3	12.09	14.9	14.1	20	13.4
IHLP505WFDE_7R8M5A	7.8	12.6	13.48	13.5	8.5	12	13.4
IHLP505WFDE_8R2M5A	8.2	13.2	14.12	13.2	7.6	11	10.3
IHLP505WFDE_100M5A	10	16.6	17.76	12.1	7.8	11	10.7
IHLP505WFDE_120M5A	12	19	20.33	11.4	7.9	11	9.5
IHLP505WFDE_150M5A	15	24	25.68	10.1	7.7	11	8.8
IHLP505WFDE_220M5A	22	31.3	33.49	9	6.3	9	6.6
IHLP505WFDE_330M5A	33	46.03	49.25	6.9	6.2	9	5.5
IHLP505WFDE_470M5A	47	77	79.6	5.6	4.5	6.4	3.9
IHLP505WFDE_820M5A	82	141.1	150.98	3.7	3.7	5.2	3
IHLP505WFDE_101M5A	100	175	187	3.1	4.3	5.1	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
- (1) DC current (A) that will cause an approximate ΔT of 40 °C  
 (2) DC current (A) that will cause L<sub>0</sub> to drop approximately 20 %  
 (3) DC current (A) that will cause L<sub>0</sub> to drop approximately 30 %



DESCRIPTION				
<b>IHLP505WFD-5A</b>	<b>4.7 μH</b>	<b>± 20 %</b>	<b>EK</b>	<b>e3</b>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER					
<b>I H L P</b>	<b>5 0 5 W F D</b>	<b>E K</b>	<b>4 R 7</b>	<b>M</b>	<b>5 A</b>
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE	INDUCTANCE TOLERANCE	SERIES
		<b>EK</b> = tape and reel	<b>4R7</b> = 4.7 μH	<b>M</b> = ± 20 %	

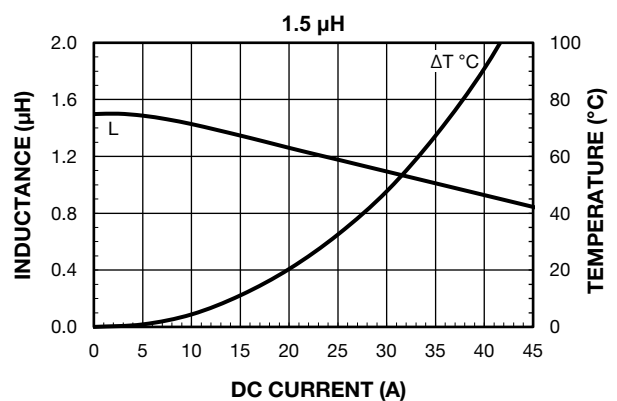
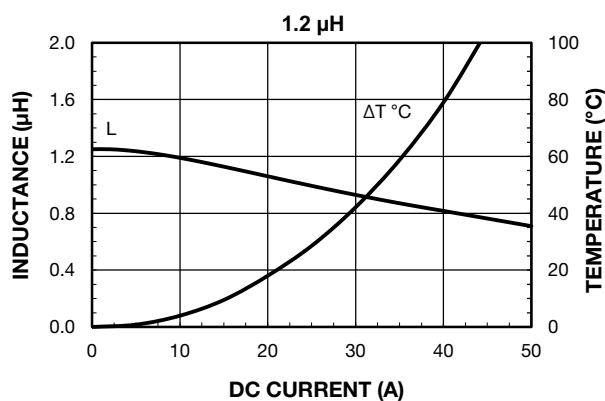
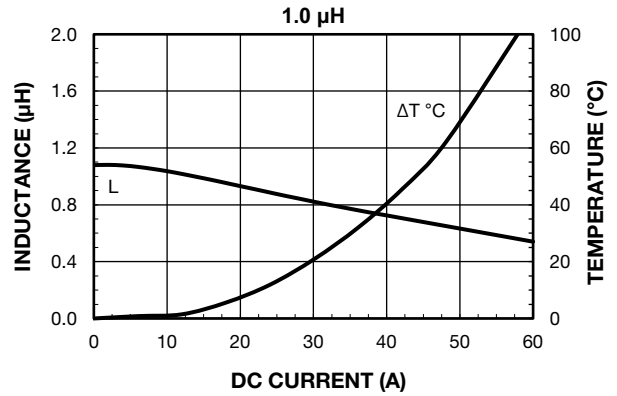
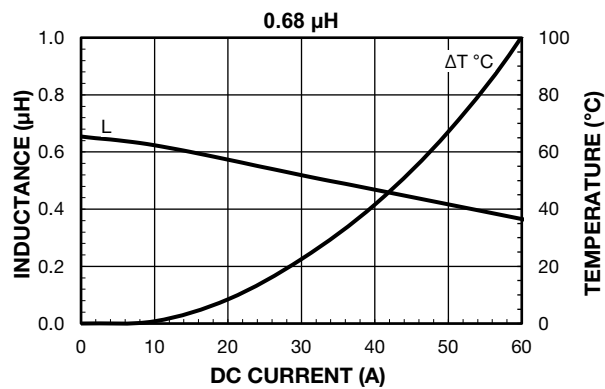
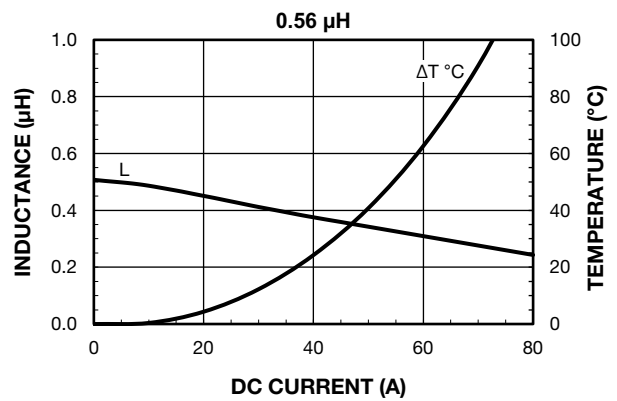
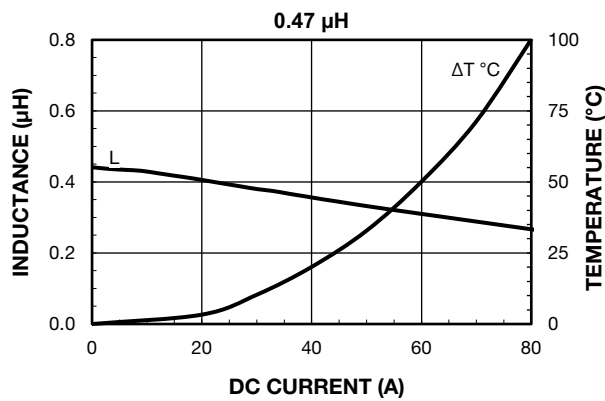
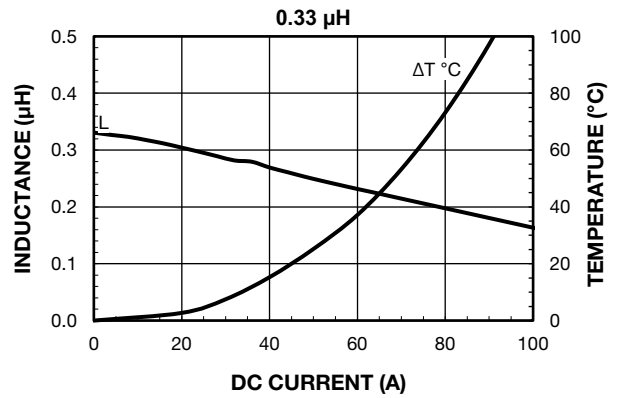
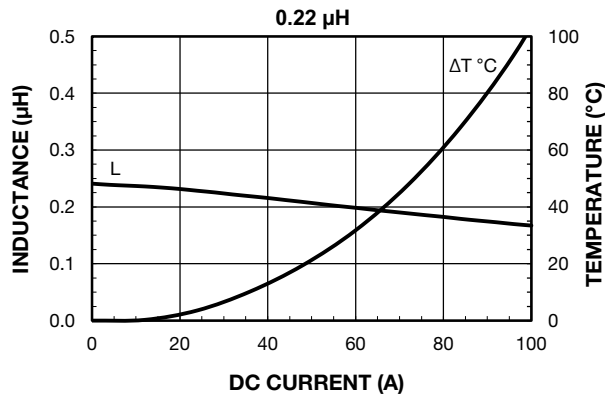
PACKAGE CODE OPTIONS
<b>EK</b> = tape and reel packaging (500 pcs on 13-inch reel)
<b>ER</b> = tape and reel packaging (250 pcs on 13-inch reel)

**Note**

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

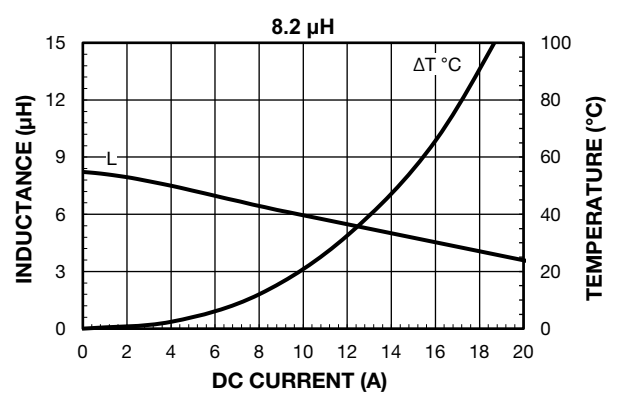
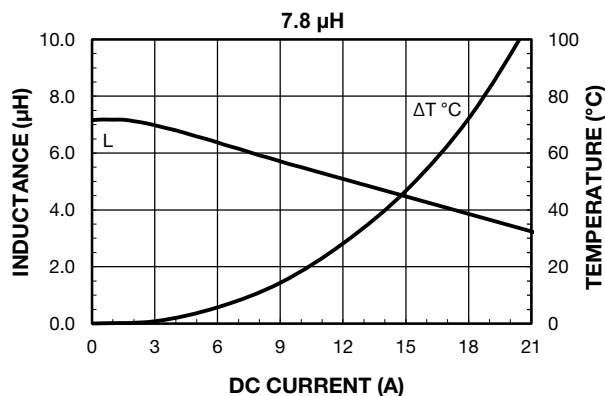
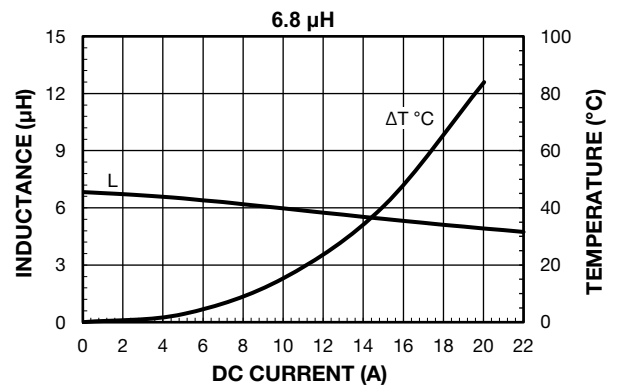
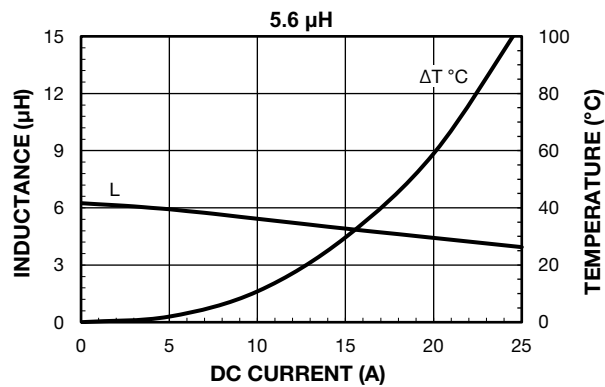
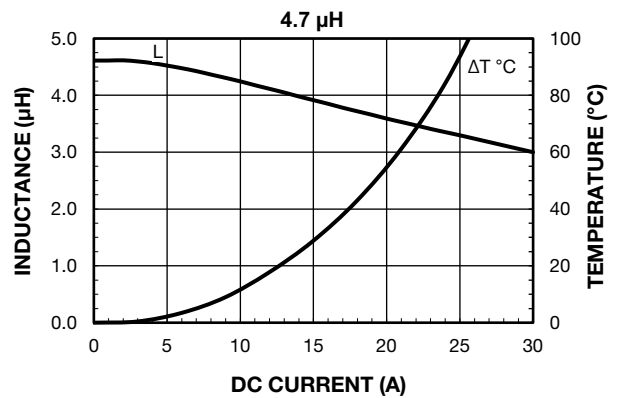
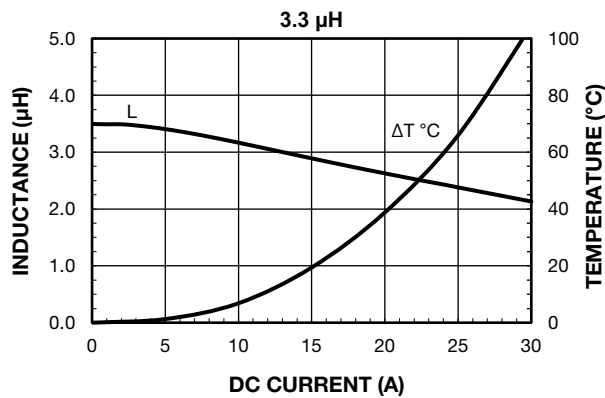
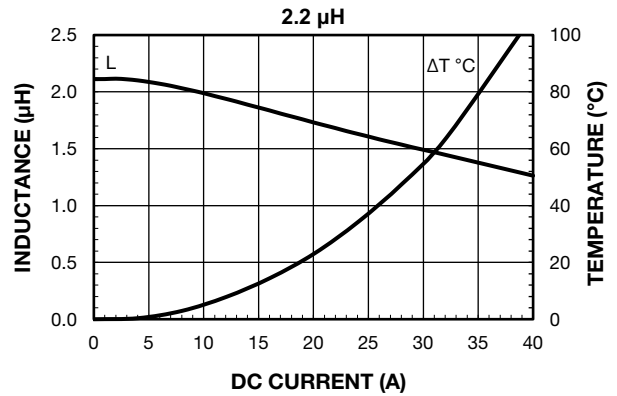
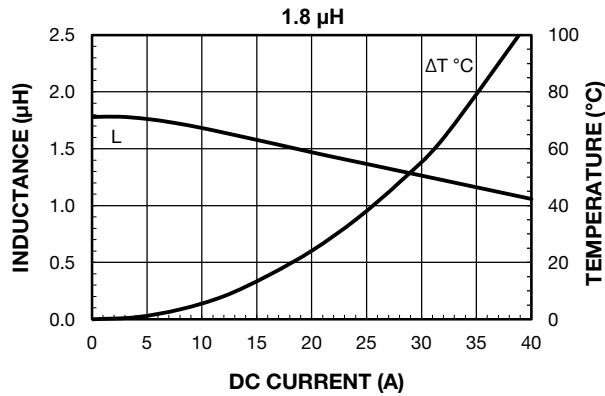


PERFORMANCE GRAPHS



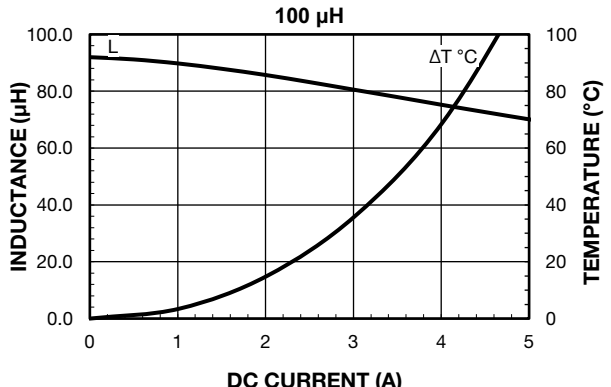
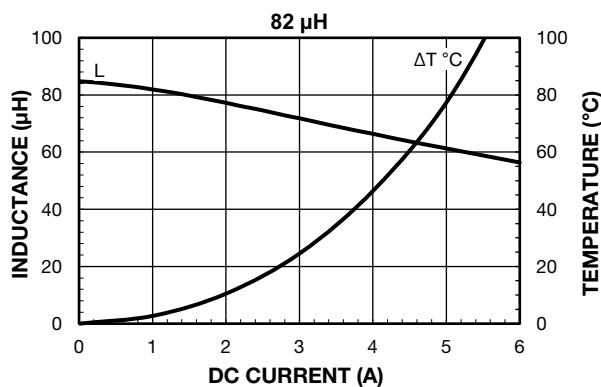
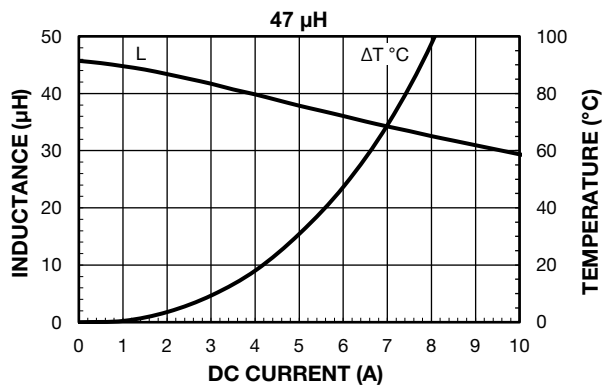
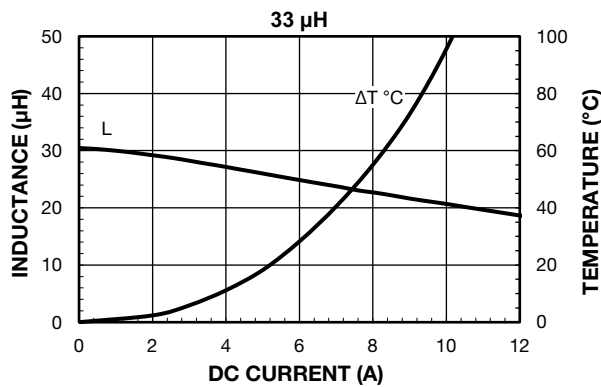
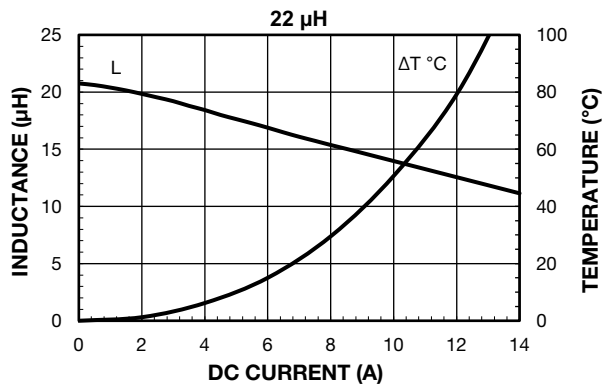
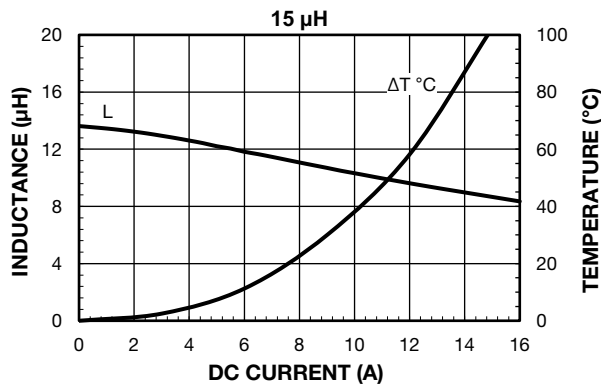
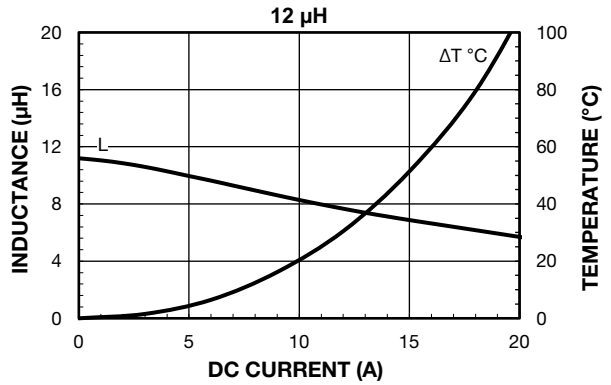
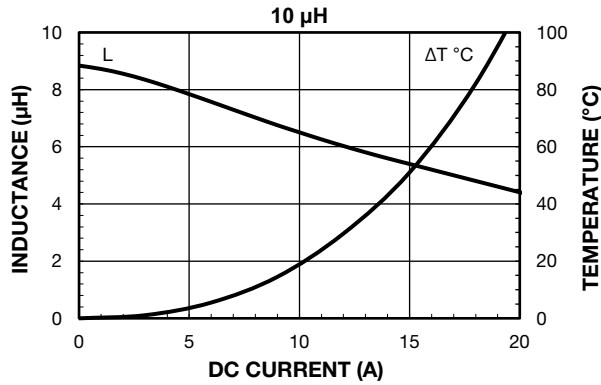


PERFORMANCE GRAPHS



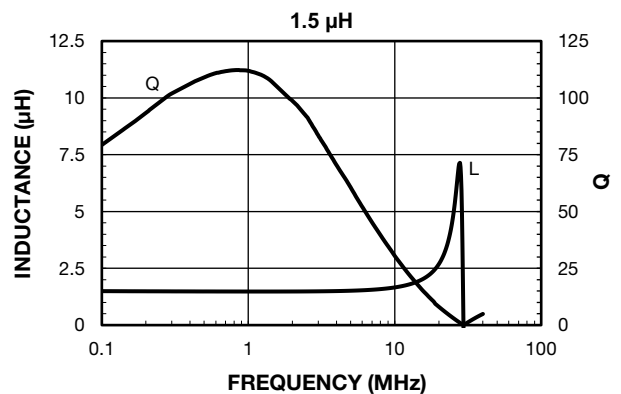
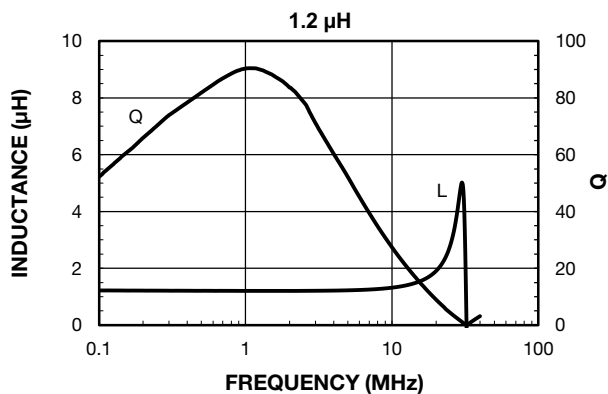
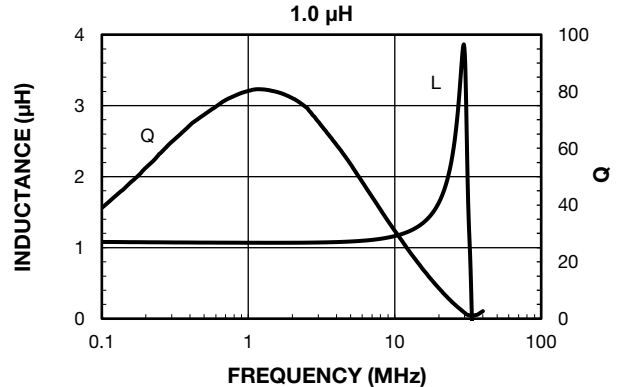
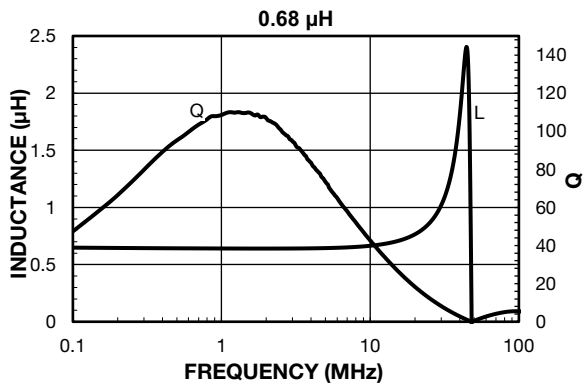
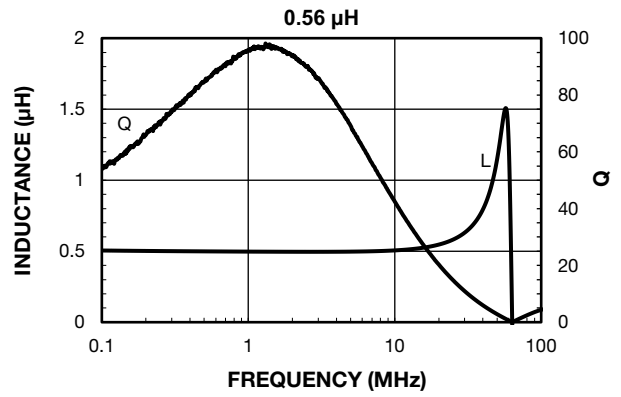
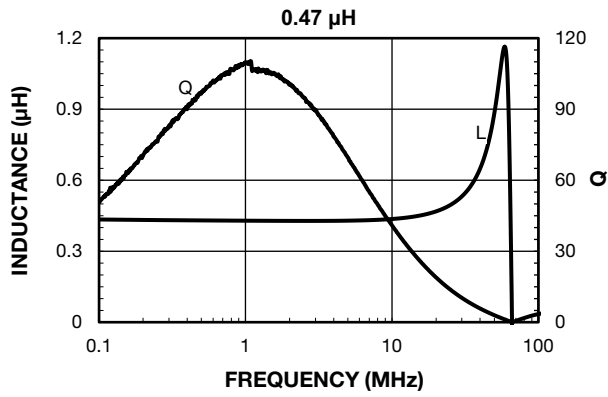
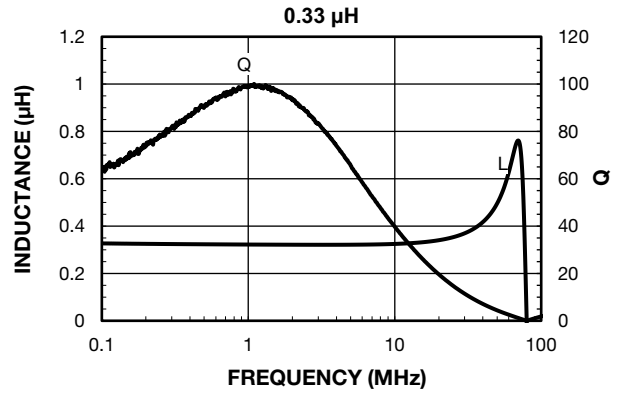
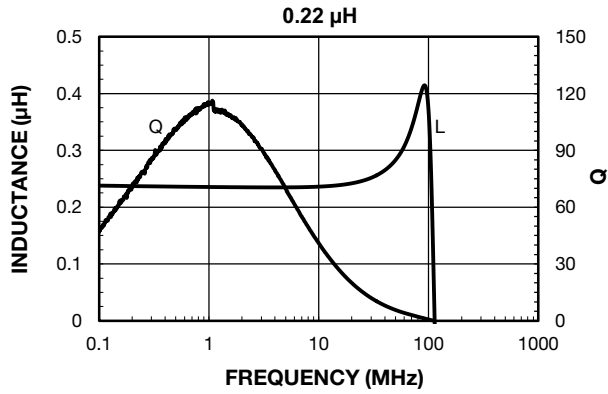


PERFORMANCE GRAPHS

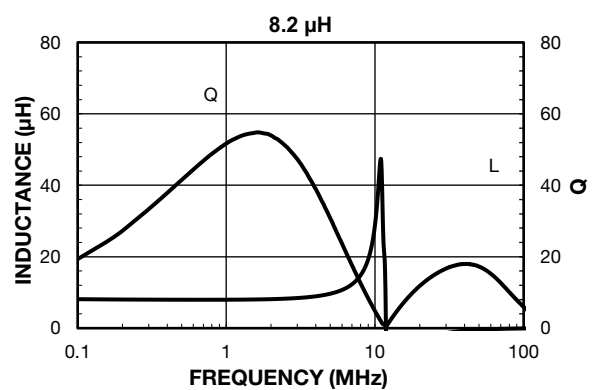
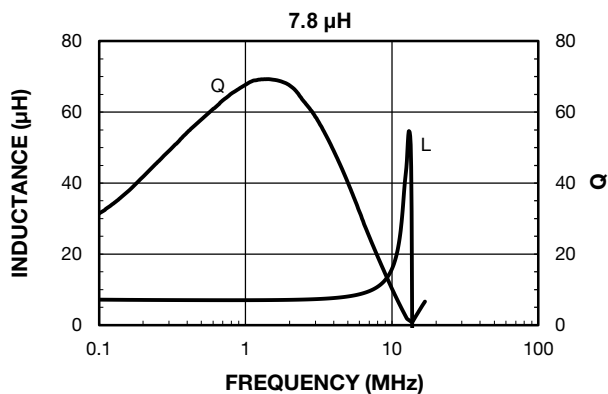
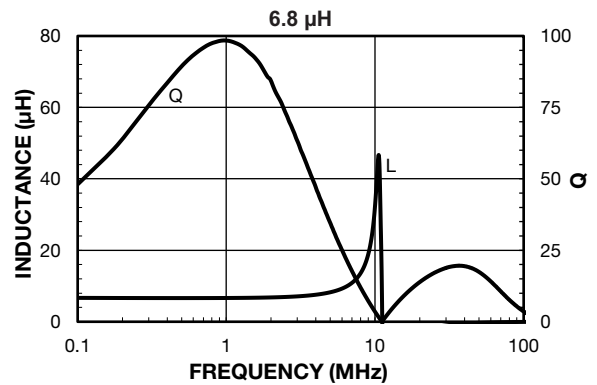
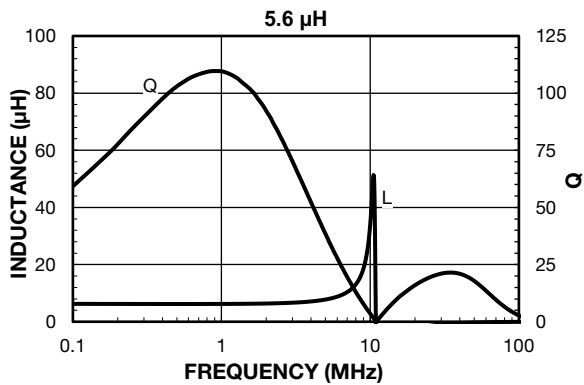
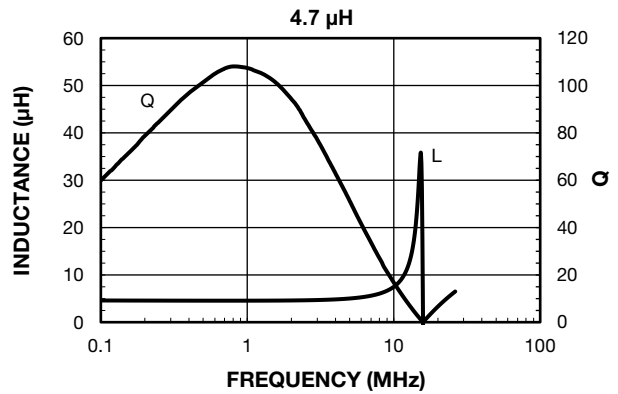
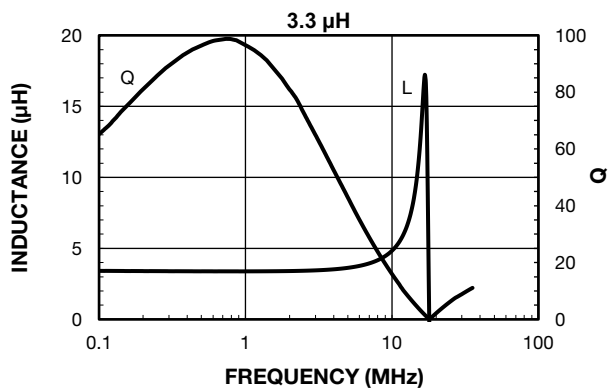
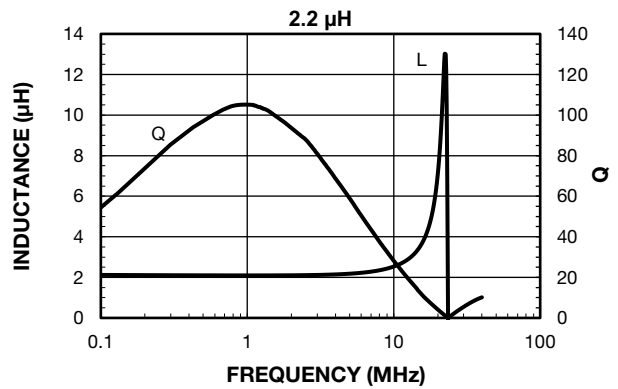
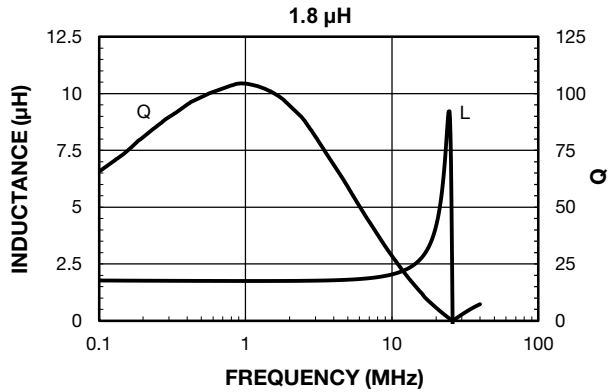




PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

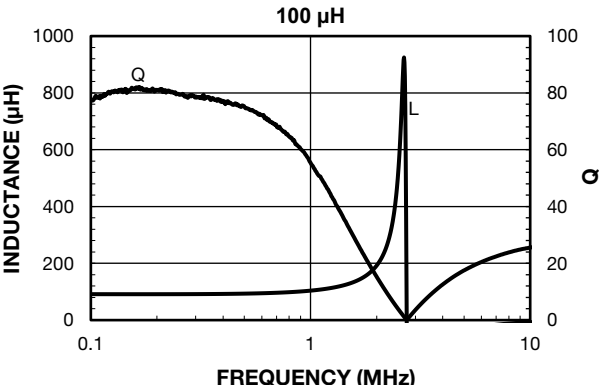
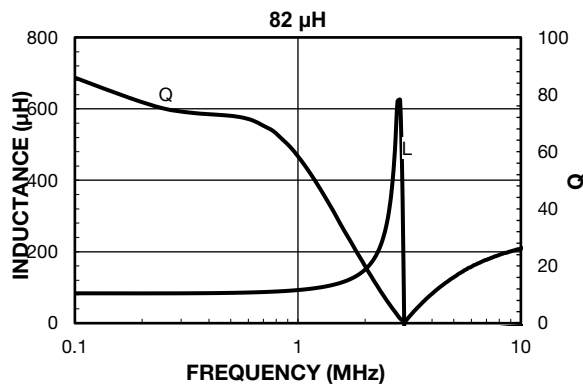
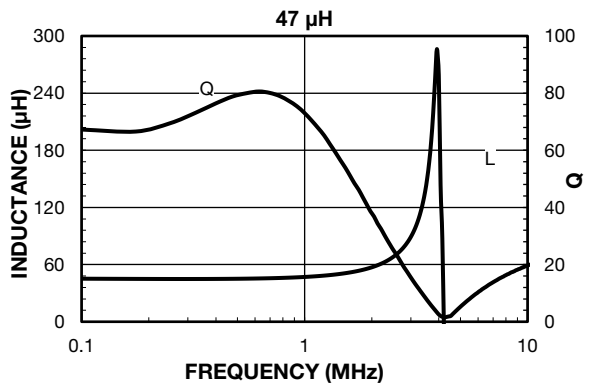
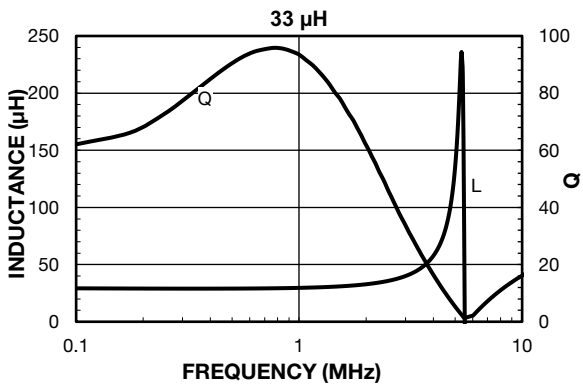
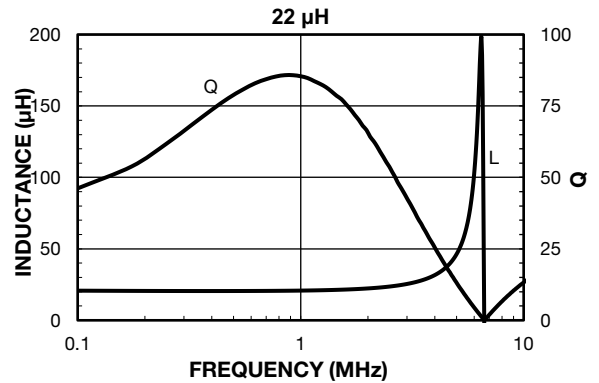
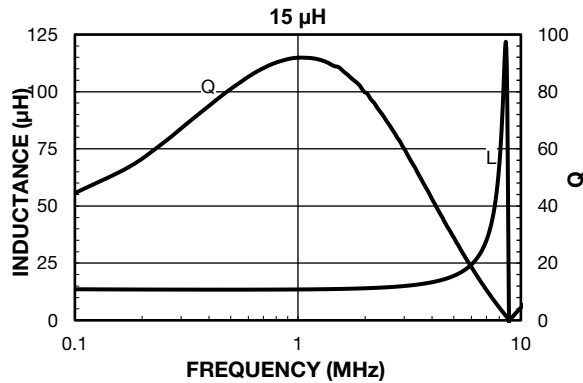
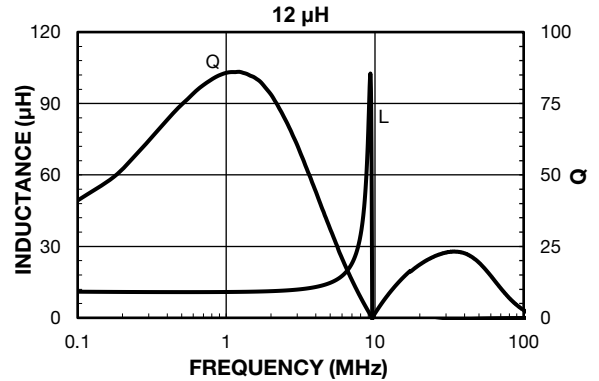
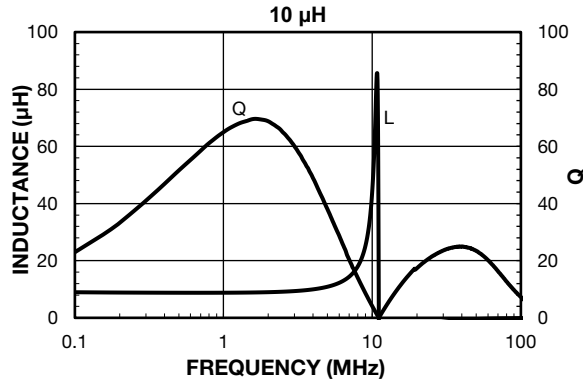


**PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY**





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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