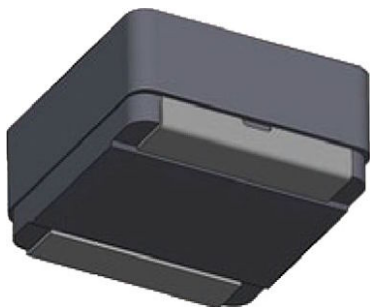


# **IHLP® Automotive Inductors, High Temperature (155 °C) Wide Terminal Series**



## **FEATURES**

- Wide terminals for improved mounting stability
- 10.8 mm x 10.2 mm x 4.0 mm SMD package
- High temperature, up to 155 °C
- Magnetically shielded construction
- Handles high transient current spikes without saturation
- AEC-Q200 qualified
- Packaging information: [SMD packaging](#)
- 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)

## **LINKS TO ADDITIONAL RESOURCES**



3D Models



Design Tools



Product Page

## **APPLICATIONS**

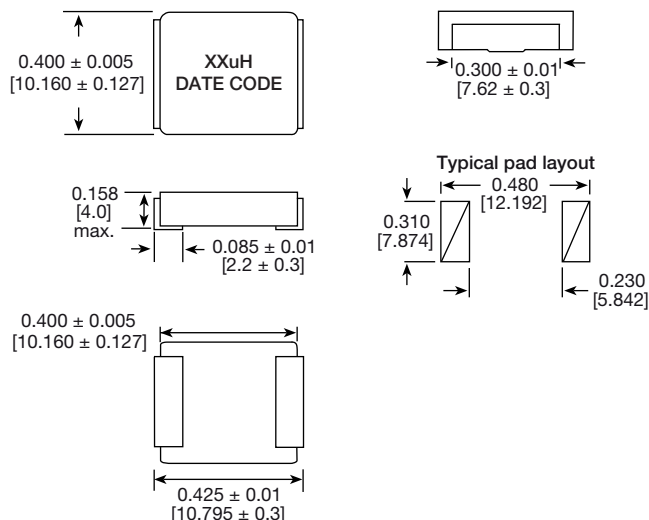
- Engine and transmission control units
- DC/DC converters for infotainment, navigation systems, lighting
- Noise suppression and filtering
- LED drivers

## **STANDARD ELECTRICAL SPECIFICATIONS**

PART NUMBER	INDUCTANCE ± 20 % (μH) AT 0 A	DCR 25 °C (mΩ)		HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>		SRF TYP. (MHz)
		TYP.	MAX.		20 % DROP	30 % DROP	
IHLP4W40DZERR47M5A	0.47	1.55	1.66	30	28.5	40	72.1
IHLP4W40DZERR68M5A	0.68	2.17	2.32	35	24	35	42.5
IHLP4W40DZER1R0M5A	1.0	2.87	3.07	23.5	24.0	32.0	37.2
IHLP4W40DZER1R5M5A	1.5	4.2	4.5	22	17.9	26	32
IHLP4W40DZER2R2M5A	2.2	8.15	8.76	15	12	16	30.1
IHLP4W40DZER3R3M5A	3.3	11	11.81	11	12	15	25.5
IHLP4W40DZER4R7M5A	4.7	14.3	15.32	9.8	9.2	14	20.1
IHLP4W40DZER5R6M5A	5.6	16.5	17.6	9.3	9.0	12.2	16.3
IHLP4W40DZER6R8M5A	6.8	20.9	22.36	8.0	9.0	12.2	16.3
IHLP4W40DZER100M5A	10	30.9	33.06	6.5	8.5	10	11.5
IHLP4W40DZER220M5A	22	70.5	75.44	4.1	6.4	9	8.3
IHLP4W40DZER330M5A	33	110	117.7	3.7	4.2	6.5	5.79
IHLP4W40DZER470M5A	47	167	178	3.1	4.1	6.2	5.22
IHLP4W40DZER680M5A	68	240	252	2.4	3.5	4.7	4.02

### **Notes**

- All test data is referenced to 25 °C ambient
  - Test condition: 100 kHz, 0.25 V
  - 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 %

**DIMENSIONS** in inches [millimeters]

**DESCRIPTION**

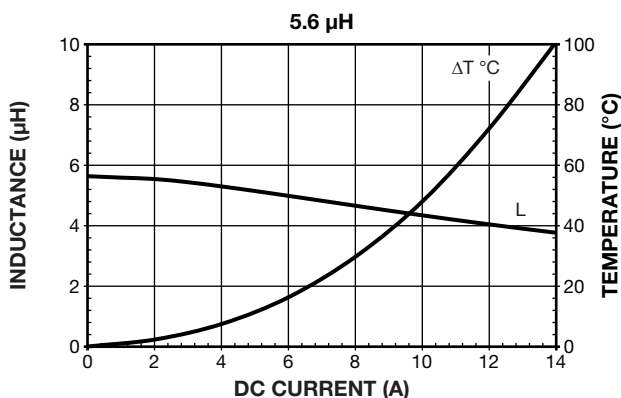
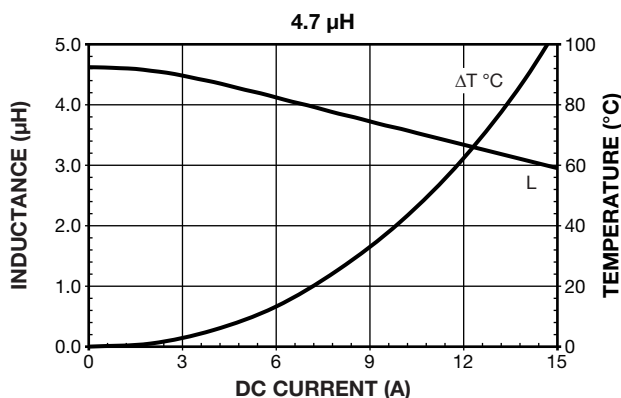
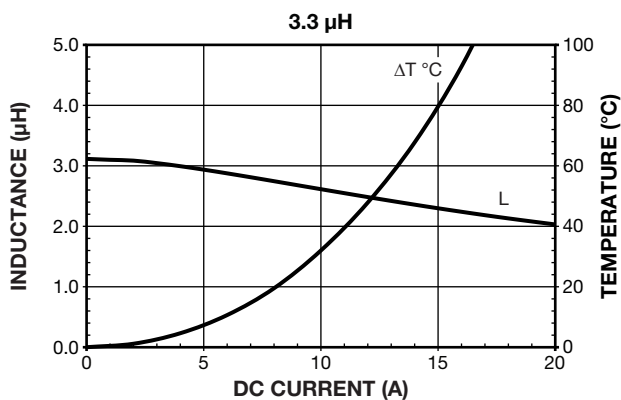
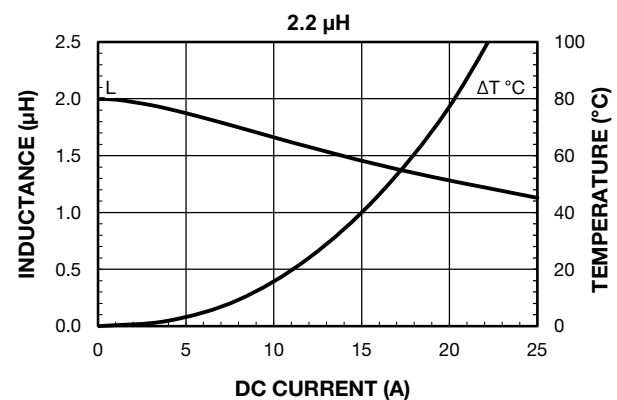
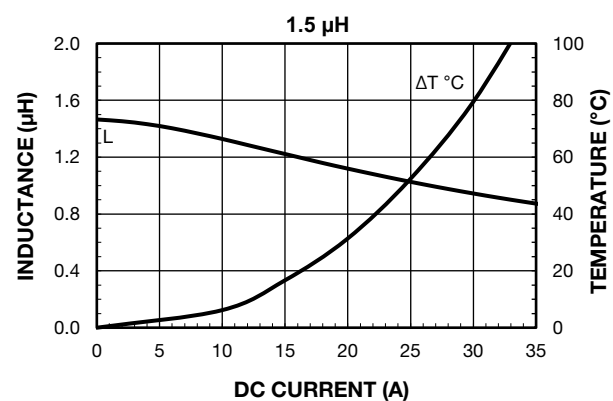
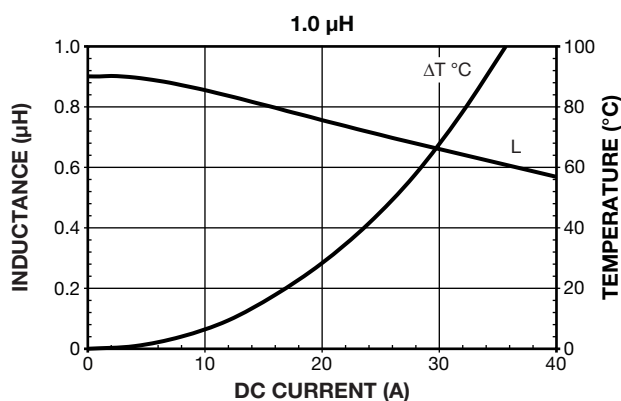
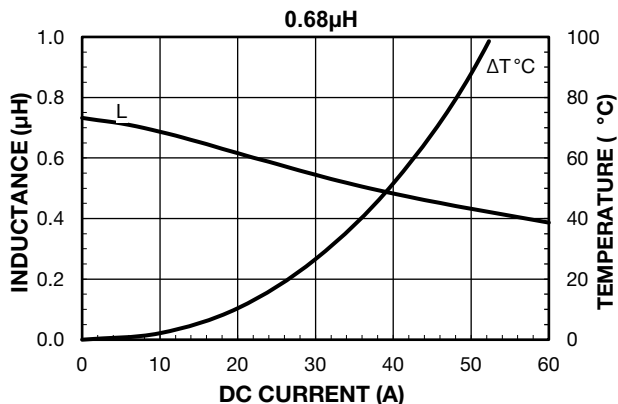
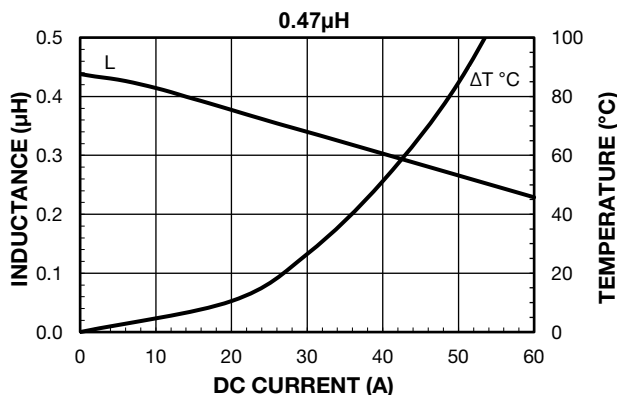
<b>IHLP-4W40DZ-5A</b>	<b>4.7 <math>\mu</math>H</b>	<b><math>\pm 20</math> %</b>	<b>TAPE AND REEL</b>	<b>e3</b>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

**GLOBAL PART NUMBER**

<b>I H L P</b>	<b>4 W 4 0 D Z</b>	<b>E R</b>	<b>4 R 7</b>	<b>M</b>	<b>5 A</b>
PRODUCT FAMILY	SIZE	PACKAGE CODE	IMPEDANCE VALUE	INDUCTANCE TOLERANCE	SERIES
		ER = tape and reel	4R7 = 4.7 $\mu$ H	M = $\pm 20$ %	

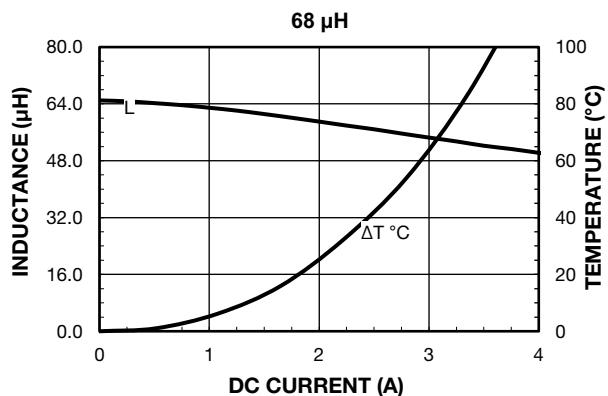
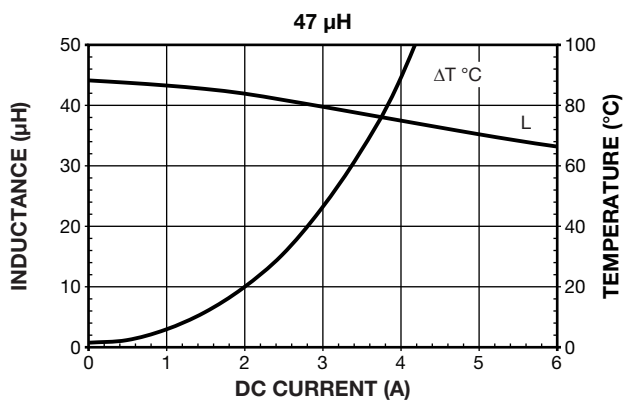
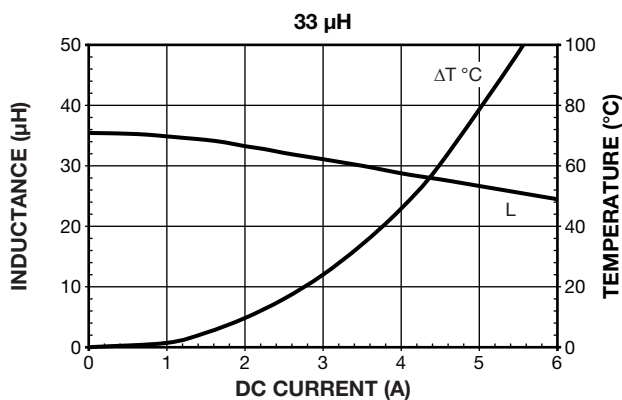
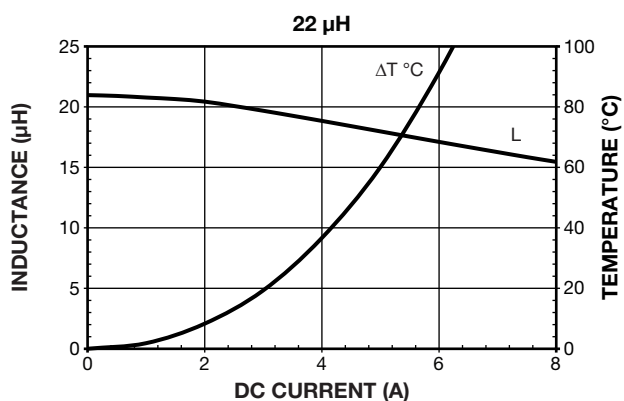
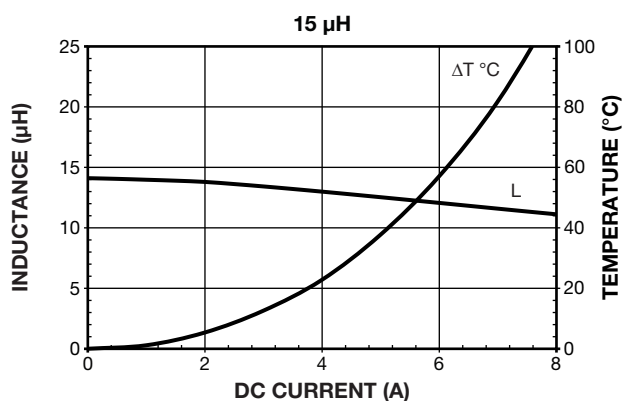
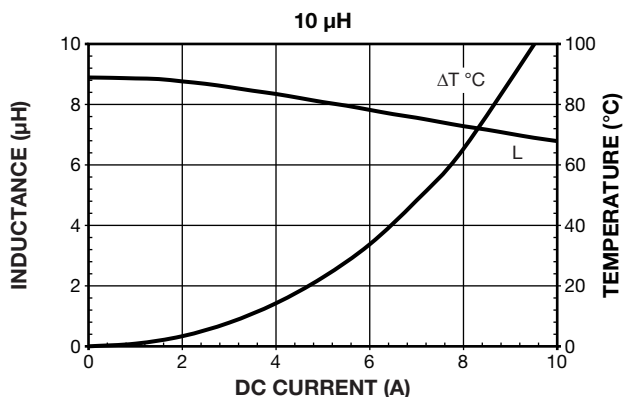
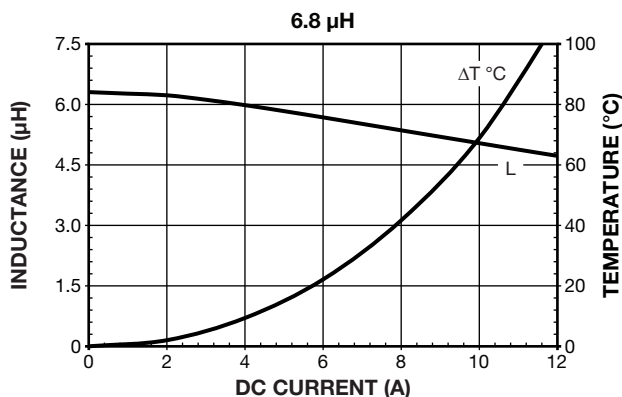


PERFORMANCE GRAPHS



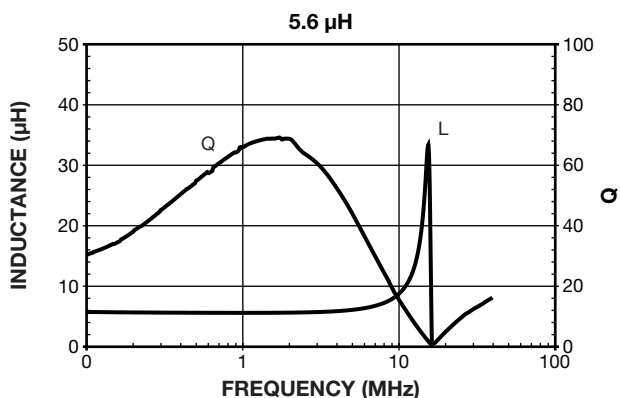
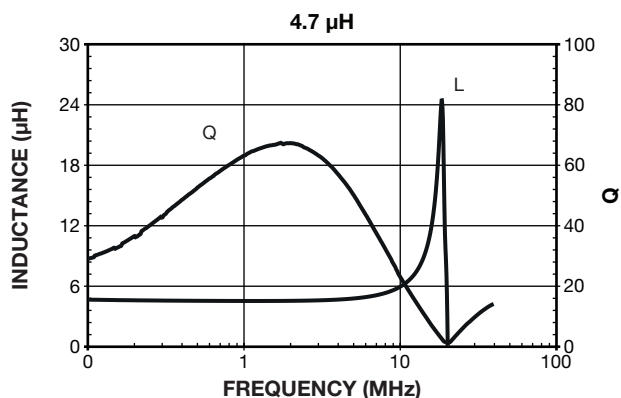
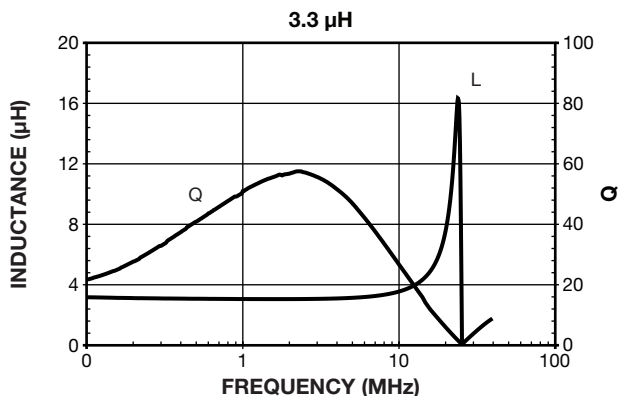
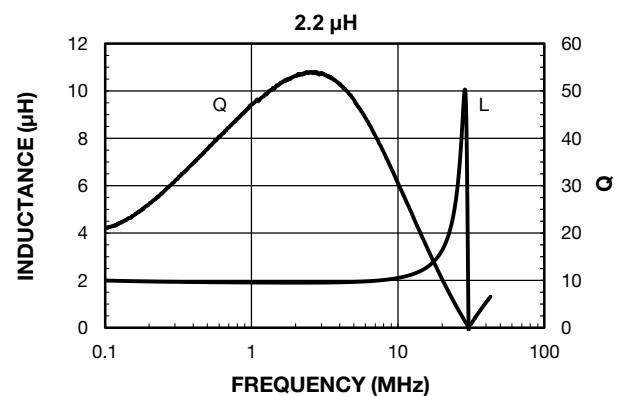
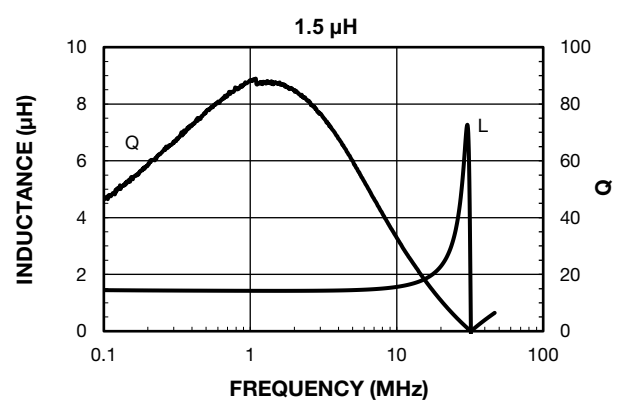
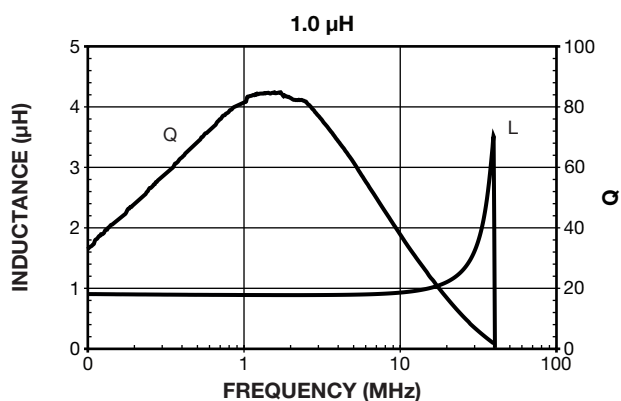
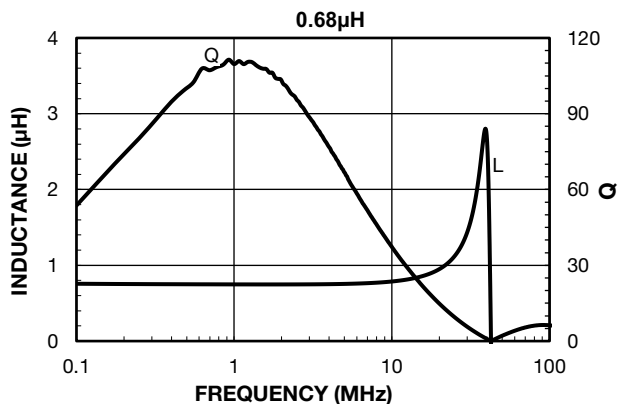
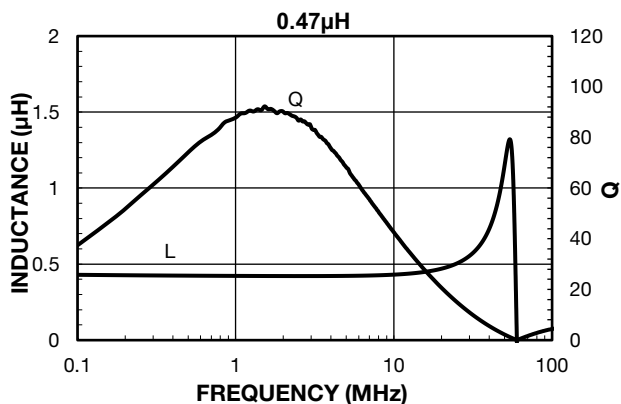


PERFORMANCE GRAPHS



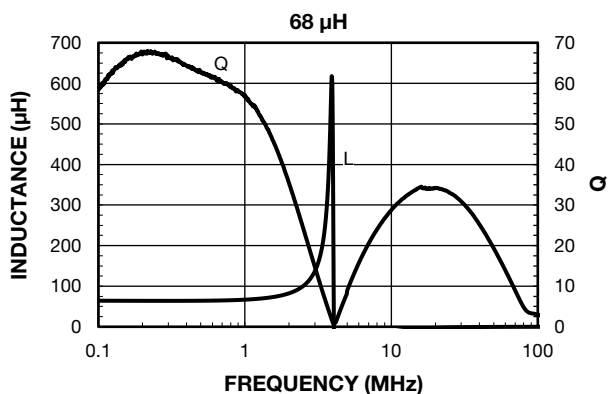
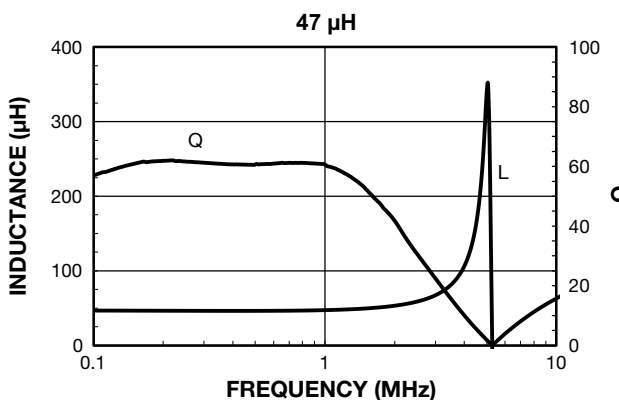
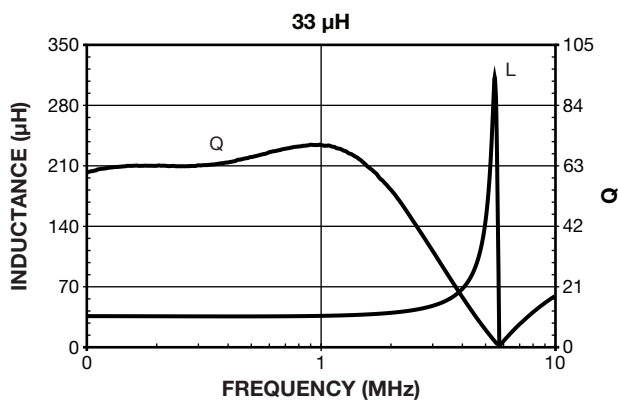
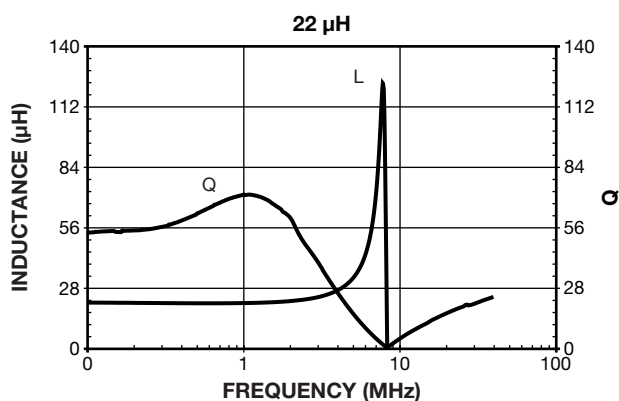
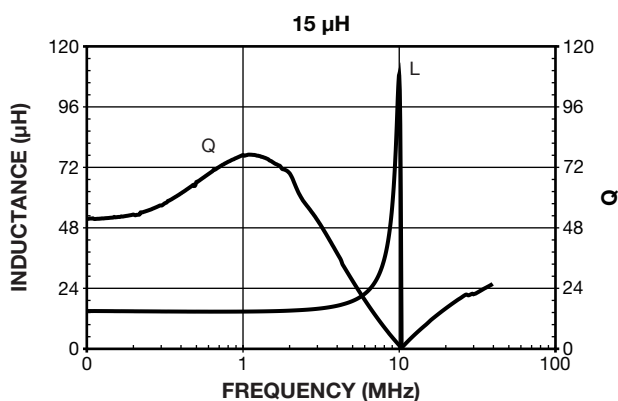
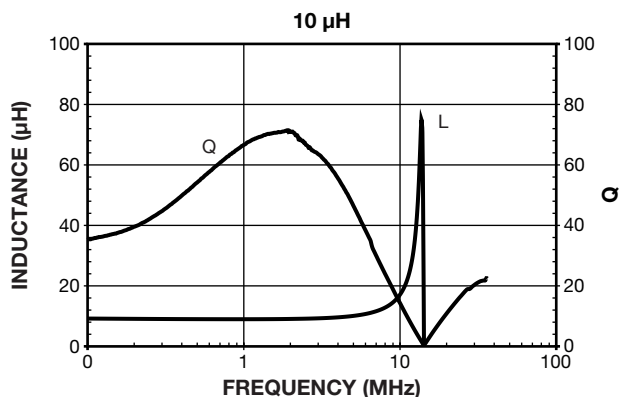
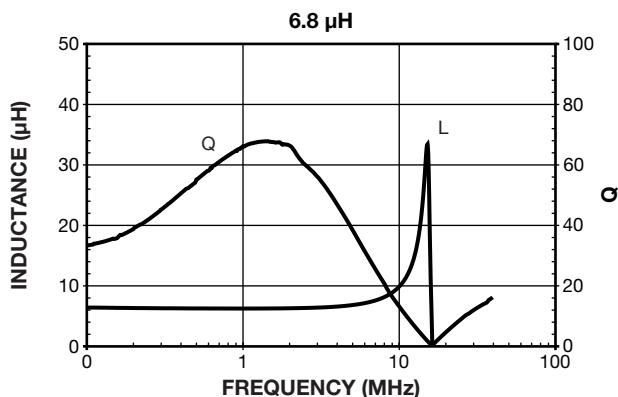


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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