



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



## FEATURES

- High temperature, up to 155 °C
- 10.8 mm x 10.2 mm x 4.0 mm SMD package
- Magnetically shielded construction
- Metal alloy core
- AEC-Q200 qualified
- IHLP design; PATENT(S): [www.vishay.com/patents](http://www.vishay.com/patents)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



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

## LINKS TO ADDITIONAL RESOURCES



## APPLICATIONS

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

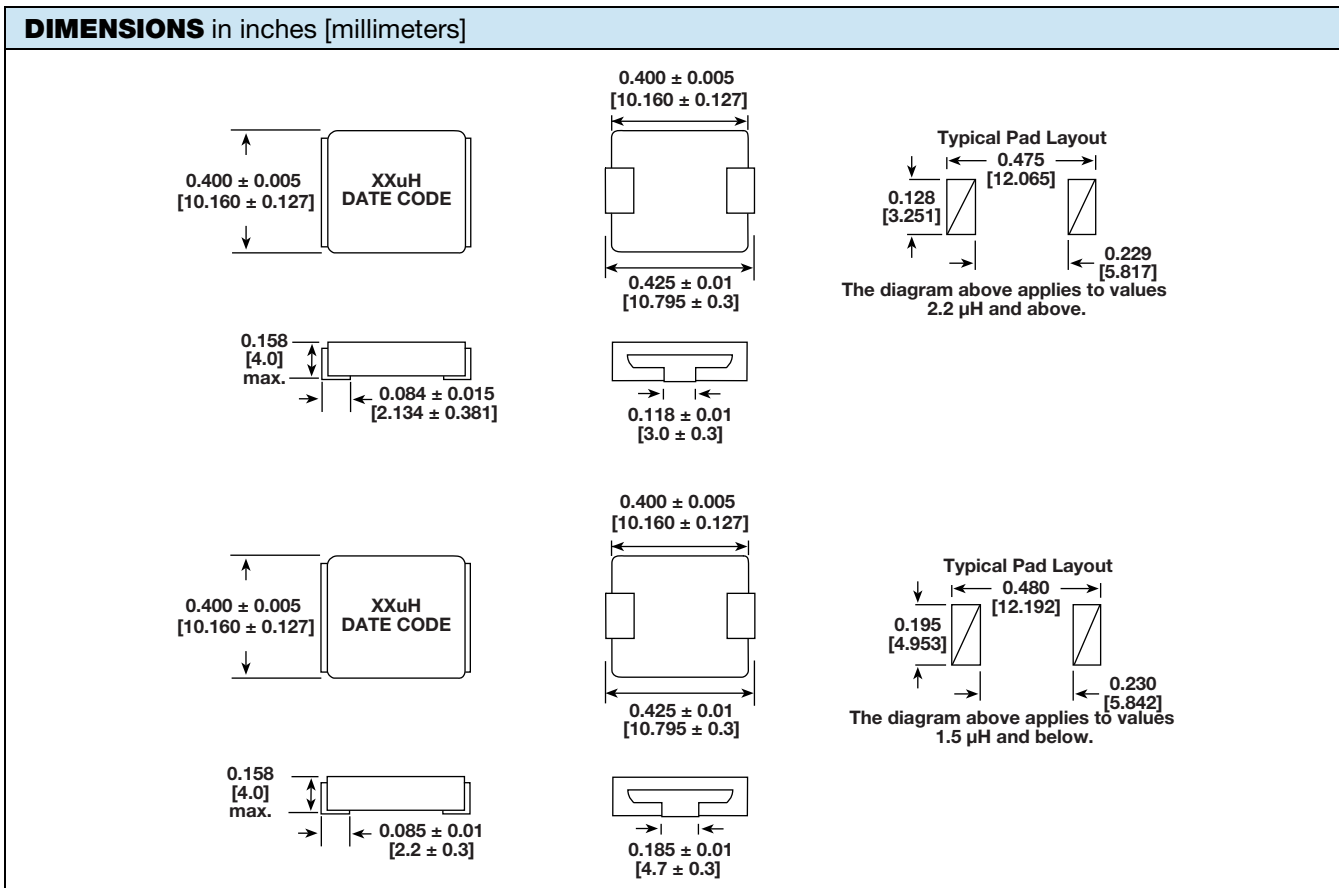
STANDARD ELECTRICAL SPECIFICATIONS							
PART NUMBER	INDUCTANCE ± 20 % (µH) AT 0 A	DCR 25 °C (mΩ)		HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>		SRF TYP. (MHz)
		TYP.	MAX.		20 % DROP	30 % DROP	
IHLP4040DZERR47M5A	0.47	1.55	1.66	35.5	28.5	38.0	72.1
IHLP4040DZERR68M5A	0.68	2.17	2.32	35.0	24.0	32.0	42.5
IHLP4040DZER1R0M5A	1.0	2.87	3.07	23.5	24.0	32.0	37.2
IHLP4040DZER1R5M5A	1.5	4.20	4.50	22.0	17.9	24.2	32
IHLP4040DZER2R2M5A	2.2	8.15	8.76	15.0	12.0	16.2	30.1
IHLP4040DZER3R3M5A	3.3	11	11.81	11.0	12.0	16.2	25.5
IHLP4040DZER4R7M5A	4.7	14.3	15.32	9.8	9.2	12.4	20.1
IHLP4040DZER5R6M5A	5.6	16.5	17.60	9.3	9.0	12.2	16.3
IHLP4040DZER6R8M5A	6.8	20.9	22.36	8.0	9.0	12.2	16.3
IHLP4040DZER100M5A	10	30.9	33.06	6.5	8.5	11.5	11.5
IHLP4040DZER150M5A	15	47	50.29	5.1	7.7	10.4	10.4
IHLP4040DZER220M5A	22	70.5	75.44	4.1	6.4	8.6	8.3
IHLP4040DZER330M5A	33	110	117.7	3.7	4.2	5.7	5.79
IHLP4040DZER470M5A	47	167	178	3.1	4.1	5.5	5.22
IHLP4040DZER680M5A	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 %

**PATENT(S):** [www.vishay.com/patents](http://www.vishay.com/patents)

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



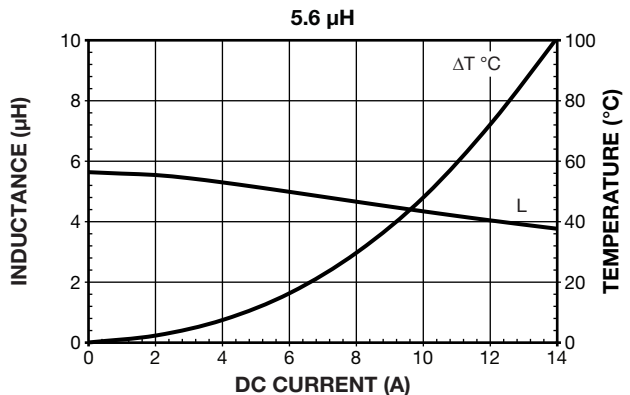
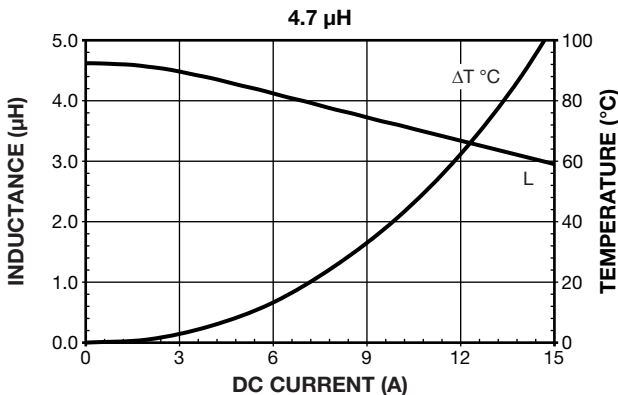
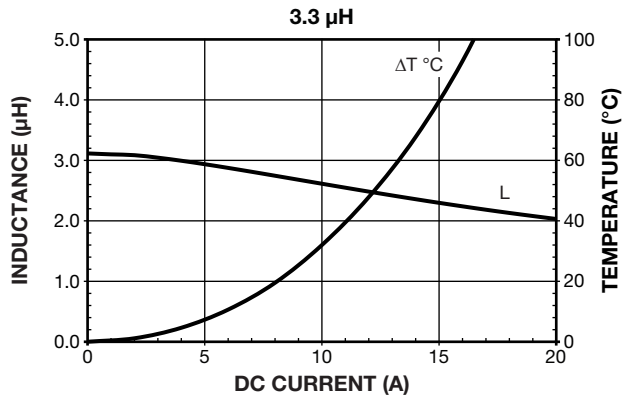
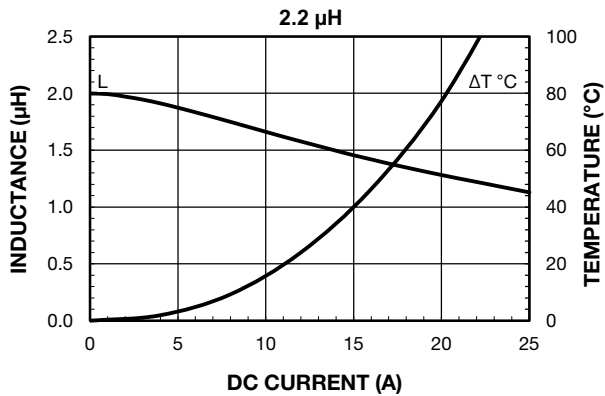
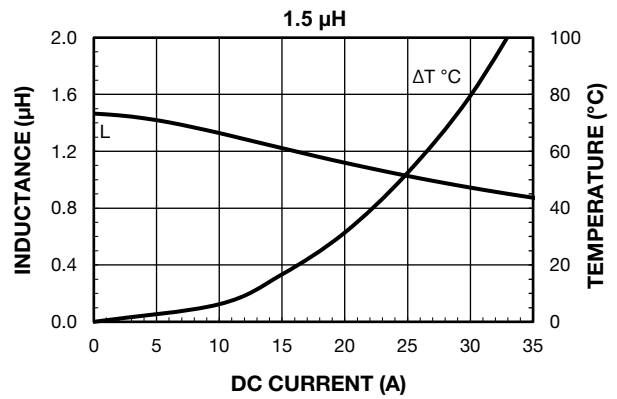
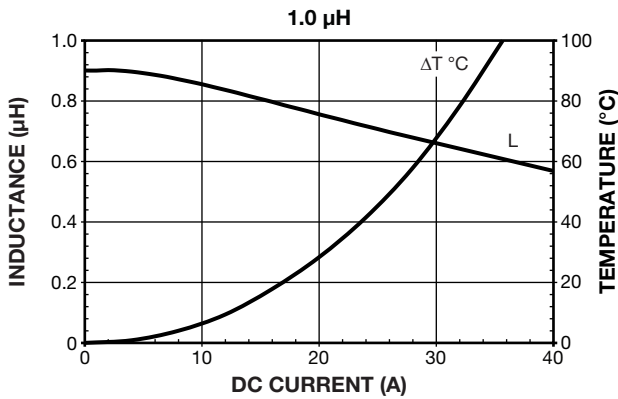
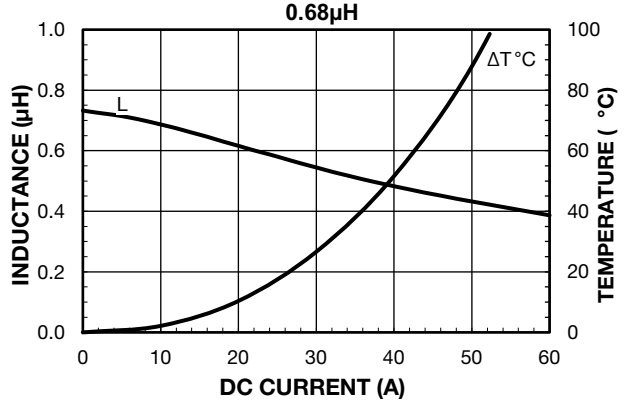
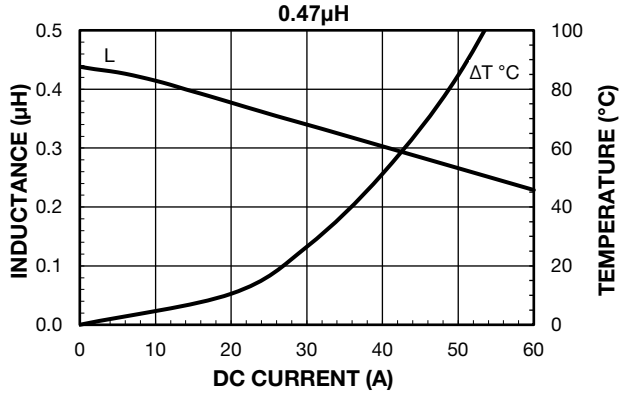
DESCRIPTION					
IHLP-4040DZ-5A	4.7 µH	± 20 %	TAPE AND REEL	e3	
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD	

GLOBAL PART NUMBER					
I H L P	4 0 4 0 D Z	E R	4 R 7	M	5 A
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	SERIES
		ER = tape and reel	4R7 = 4.7 µH	M = ± 20 %	

PACKAGE CODE OPTIONS
ER = tape and reel packaging (500 piece reel)
EK = tape and reel packaging (1000 piece reel)
EP = tape and reel packaging (1000 piece reel) + polarity marking

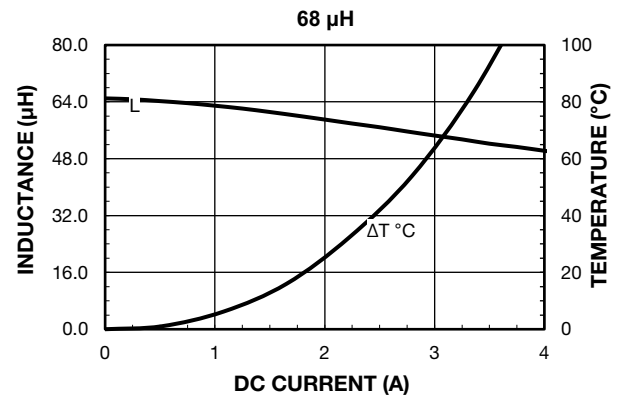
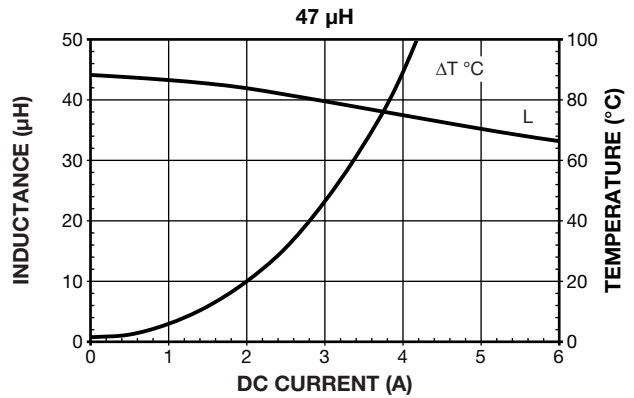
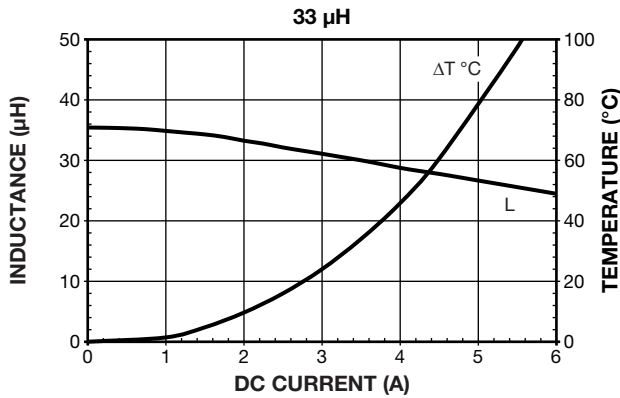
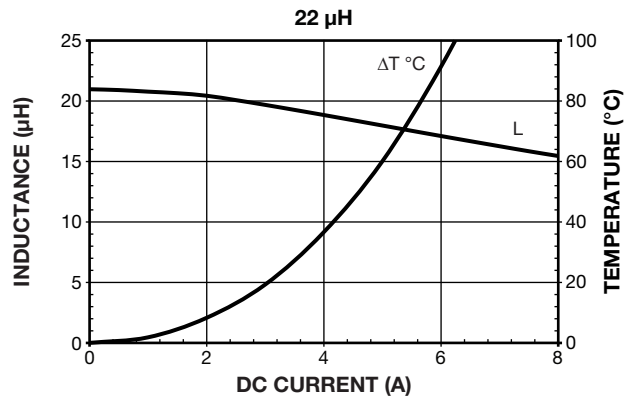
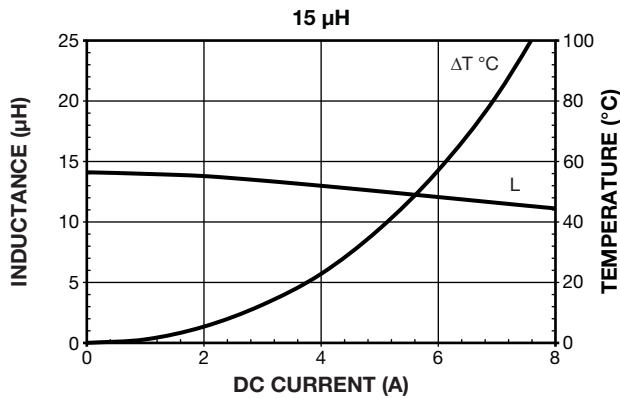
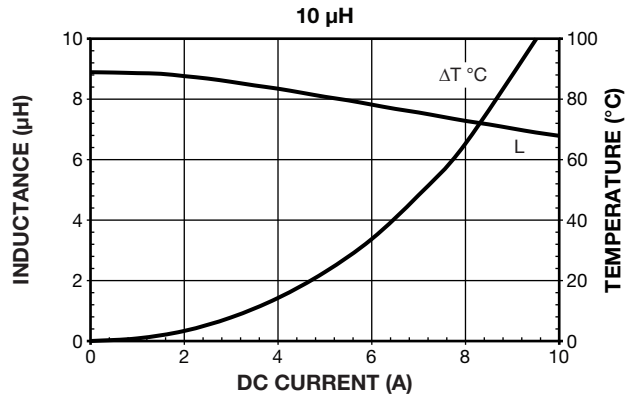
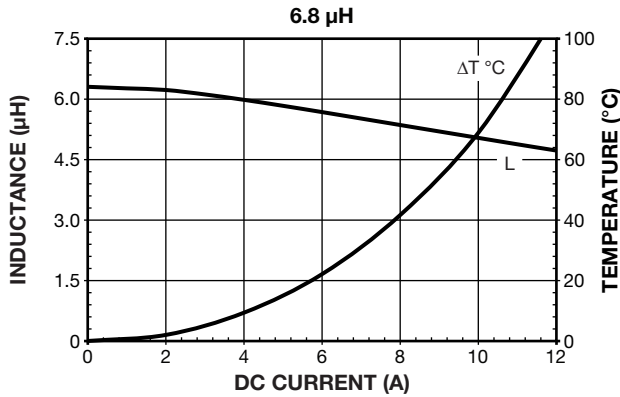


**PERFORMANCE GRAPHS**



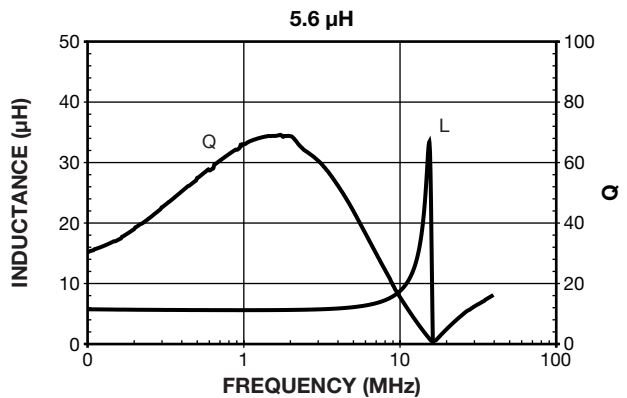
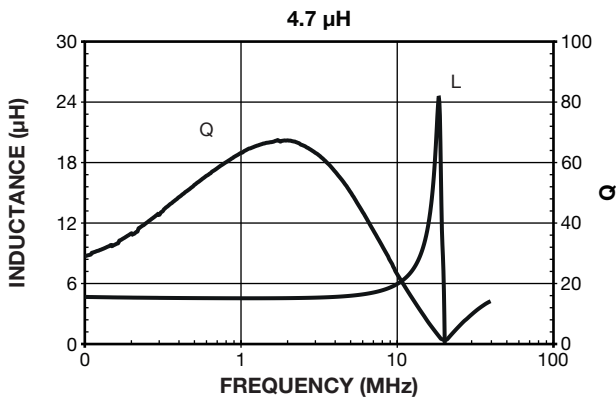
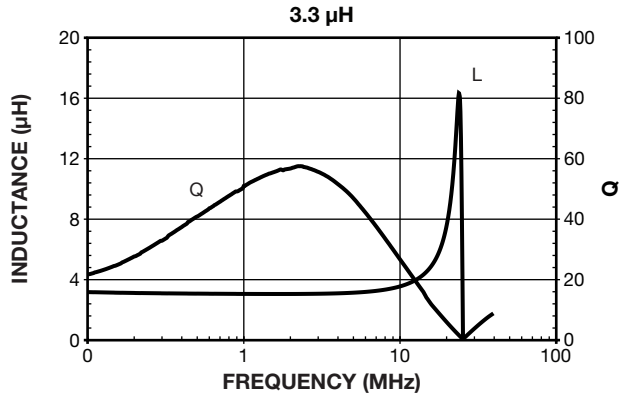
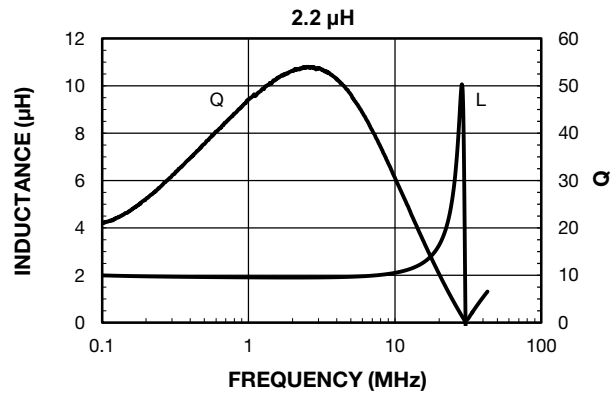
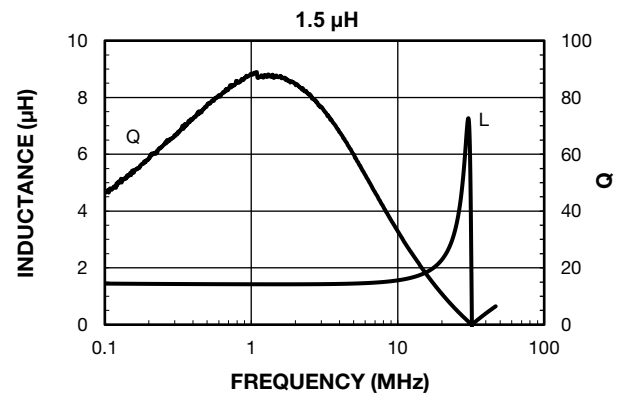
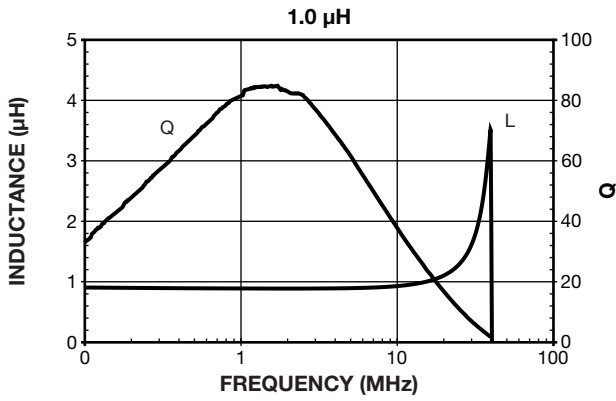
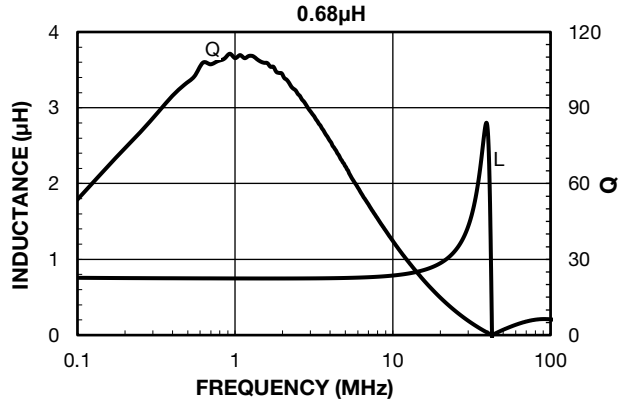
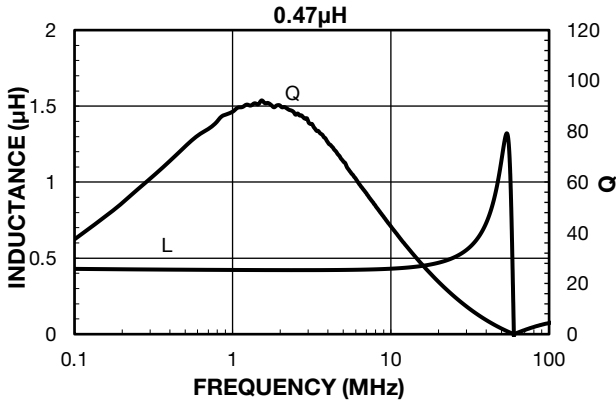


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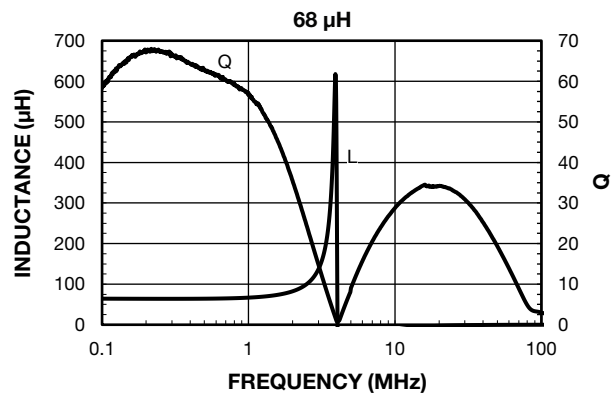
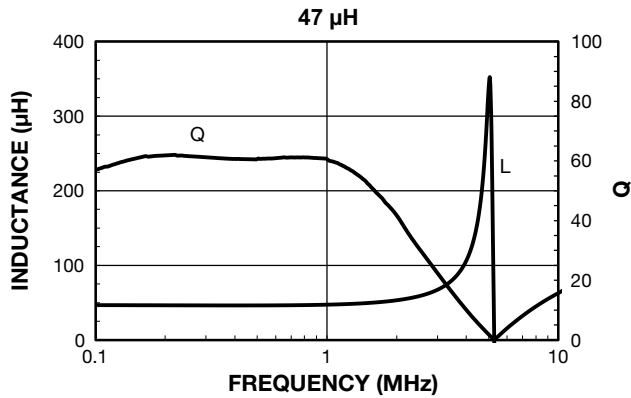
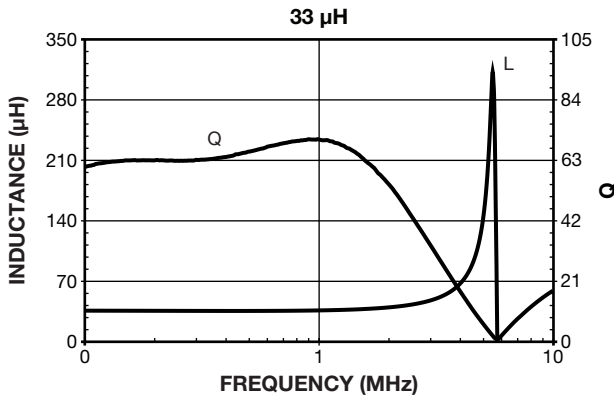
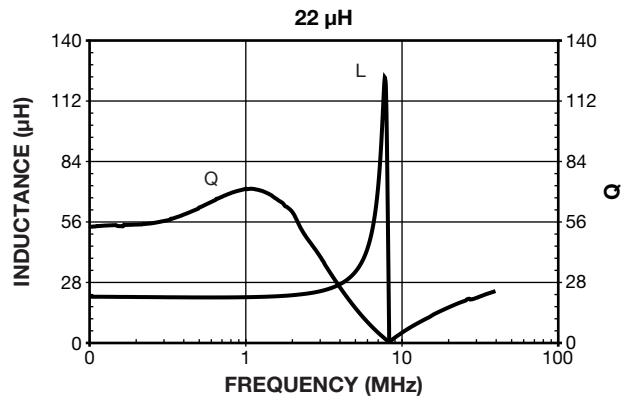
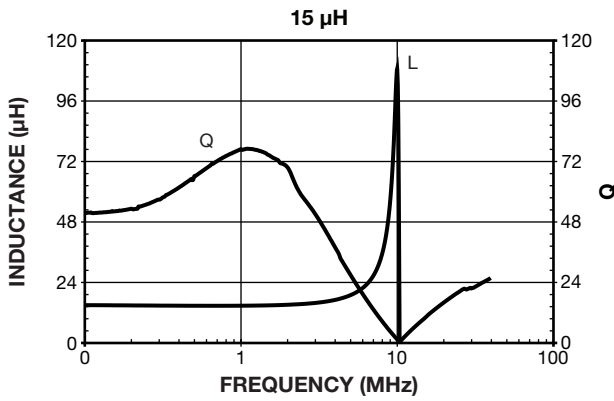
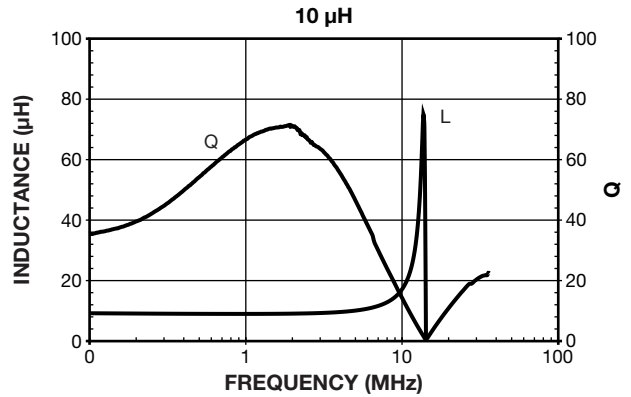
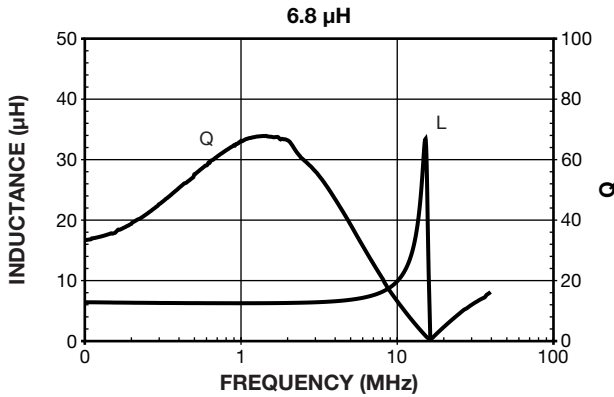


**PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY**





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