



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
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912



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

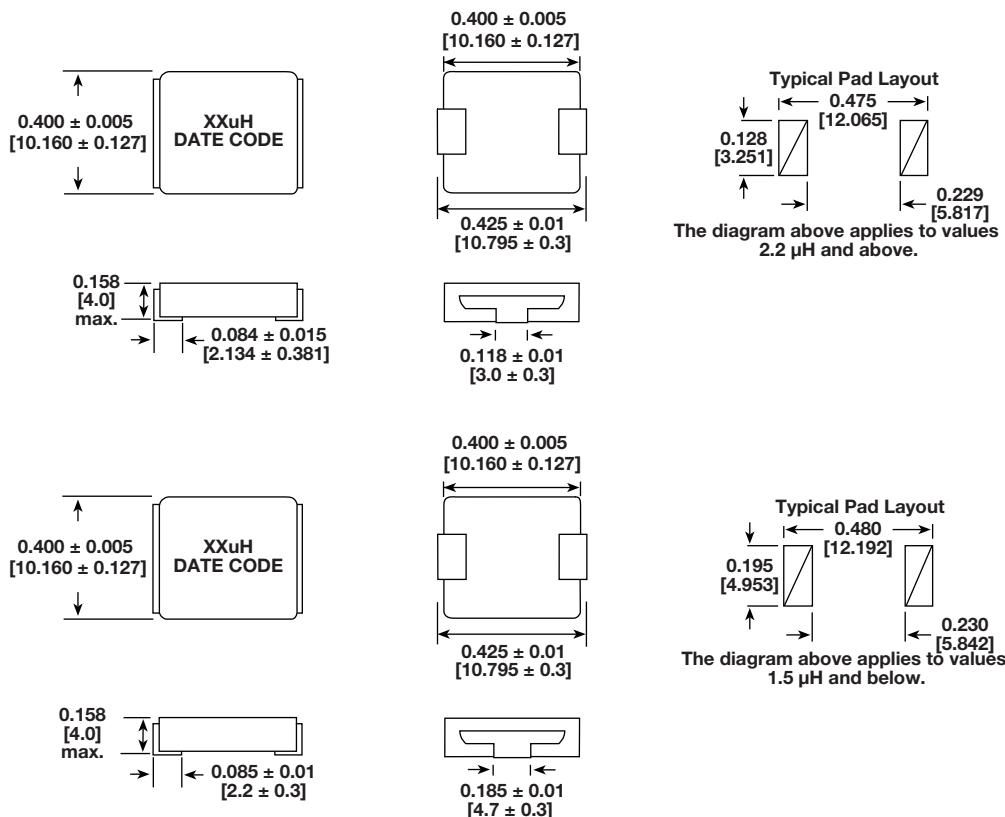
PART NUMBER	INDUCTANCE ± 20 % (μH) AT 0 A	DCR 25 °C (mΩ)		HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾		SRF TYP. (MHz)
		TYP.	MAX.		20 % DROP	30 % DROP	
IHLP4040DZERR47M5A	0.47	1.55	1.66	35.5	28.5	38.0	72.1
IHLP4040DZERR68M5A	0.68	2.17	2.32	35.0	24.0	32.0	42.5
IHLP4040DZER1R0M5A	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
- ⁽¹⁾ DC current (A) that will cause an approximate ΔT of 40 °C
⁽²⁾ DC current (A) that will cause L₀ to drop approximately 20 %

PATENT(S): www.vishay.com/patents

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

**DIMENSIONS** in inches [millimeters]**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

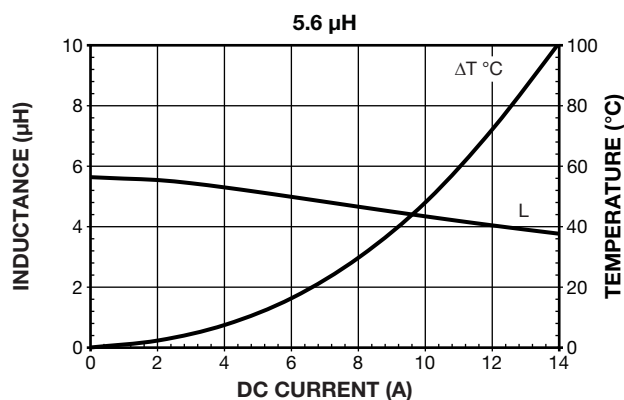
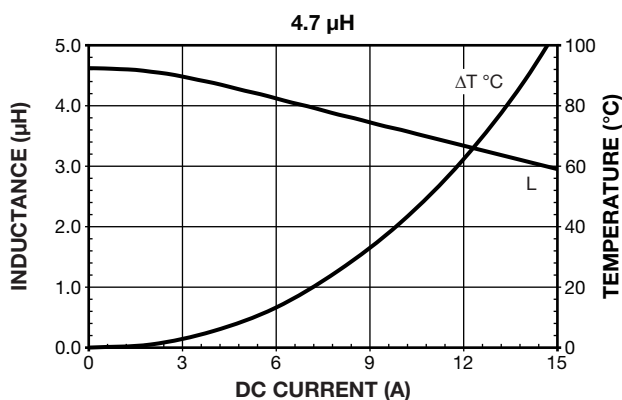
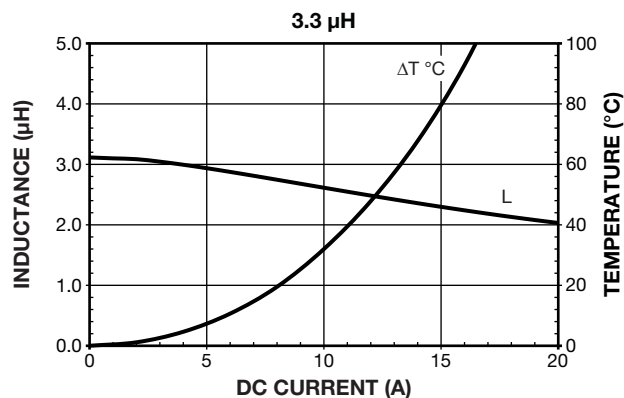
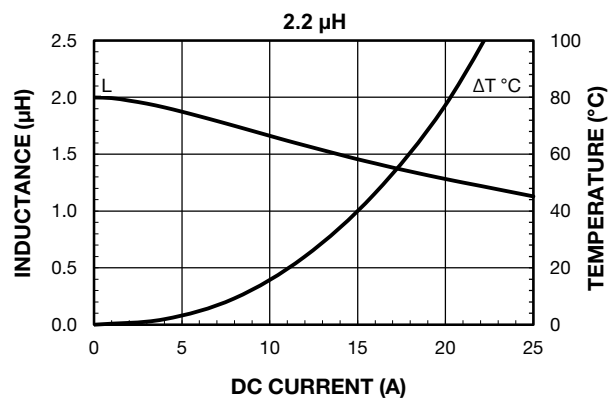
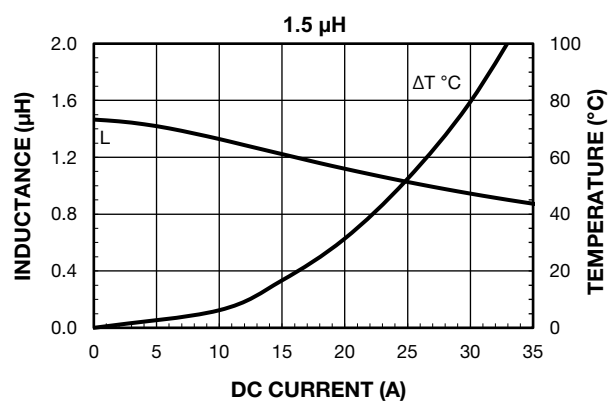
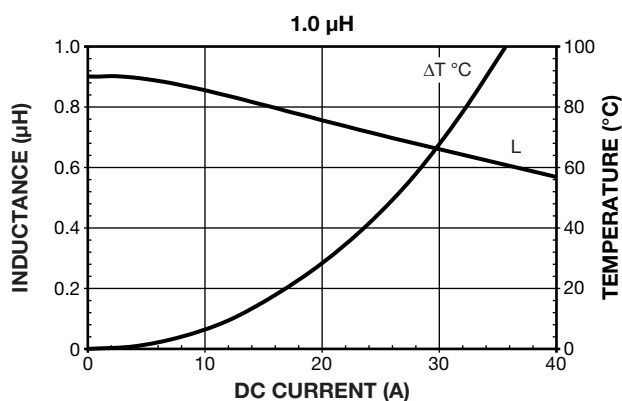
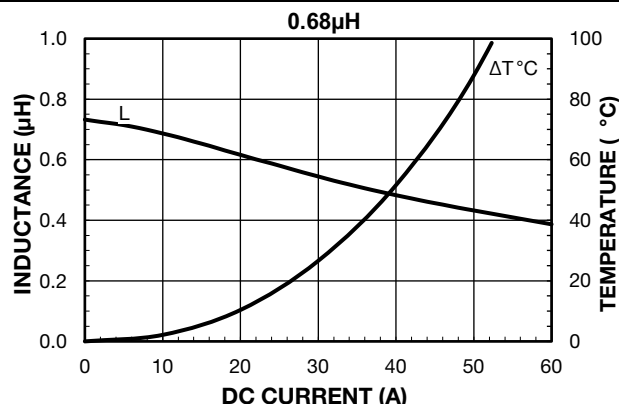
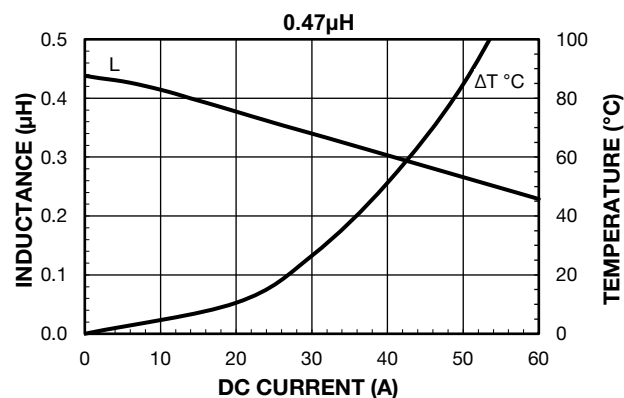
I H L P	4 0 4 0 D Z	E R	4 R 7	M	5 A
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	SERIES
ER = tape and reel			4R7 = 4.7 µH	M = ± 20 %	

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

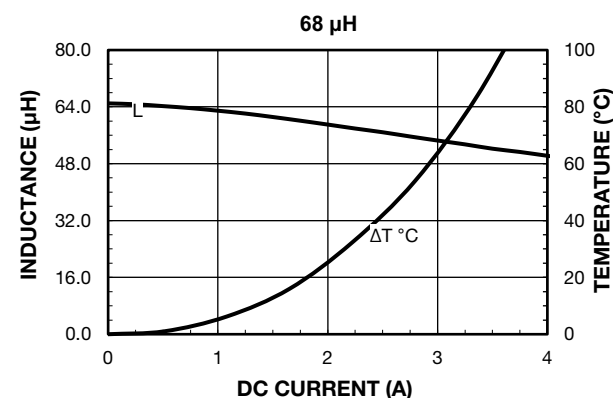
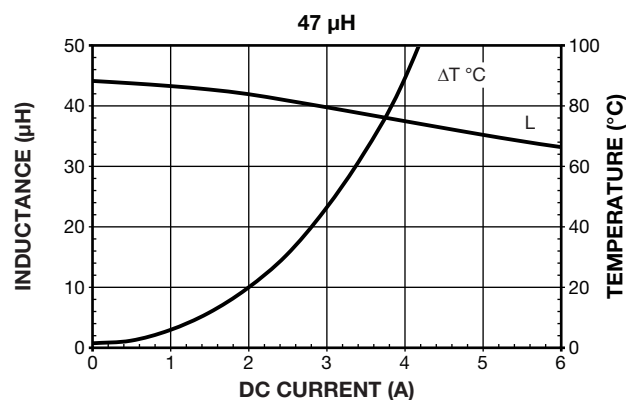
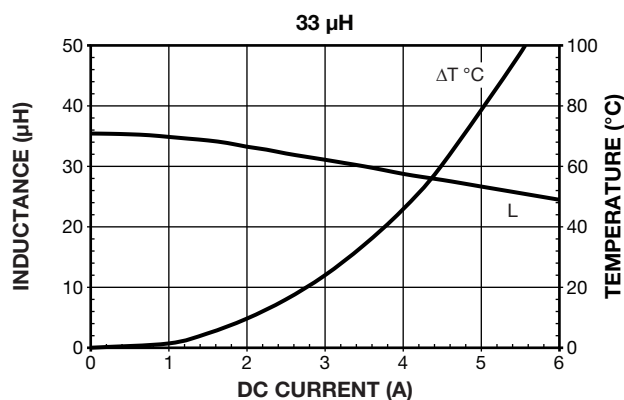
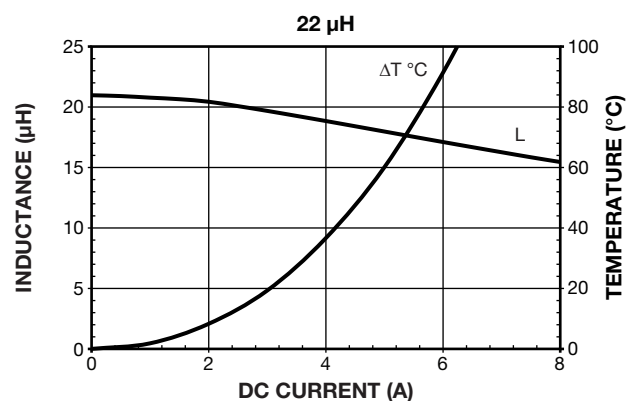
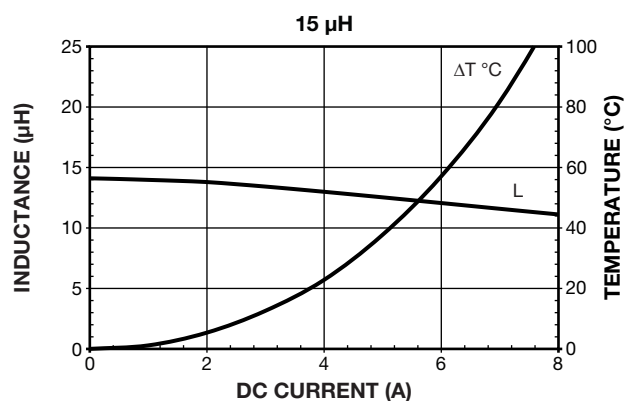
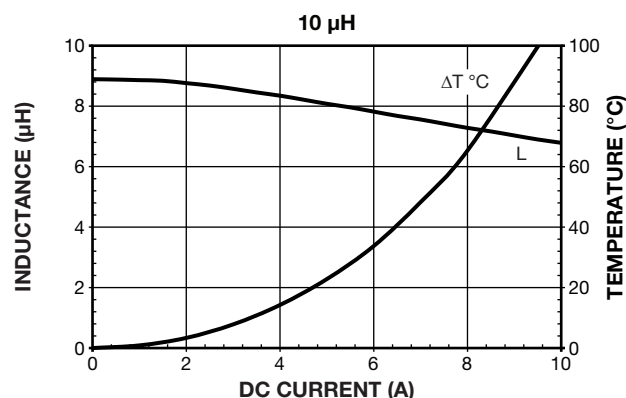
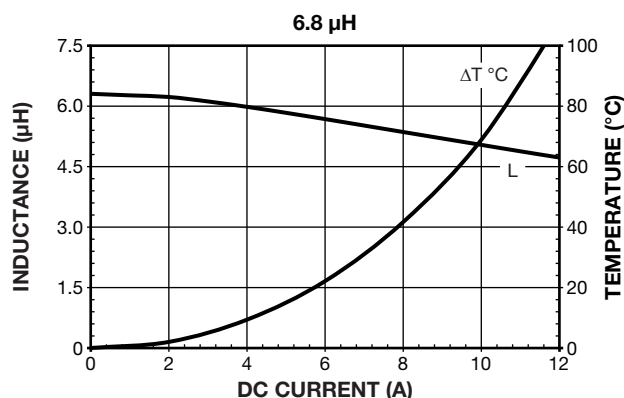


PERFORMANCE GRAPHS



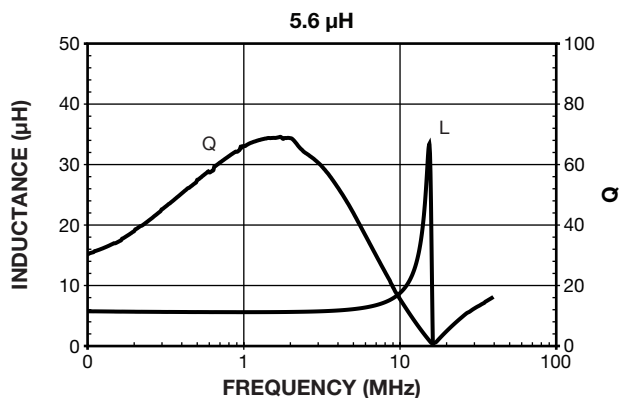
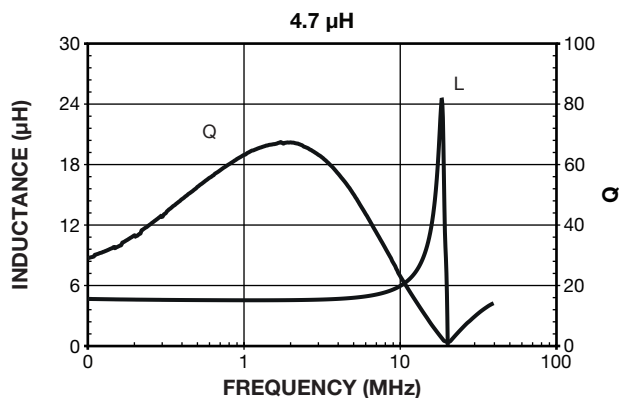
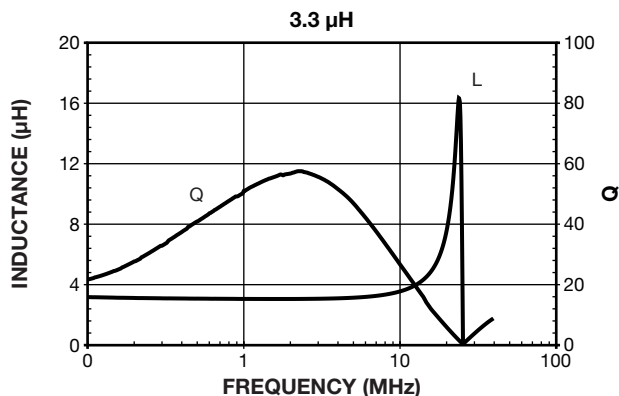
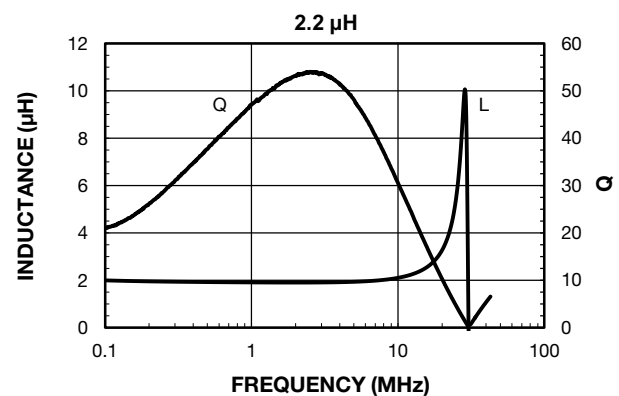
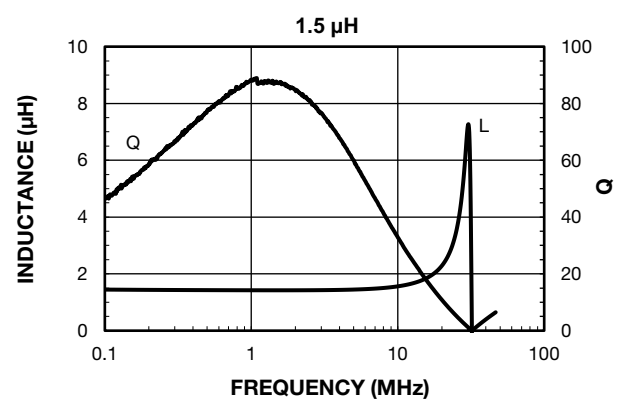
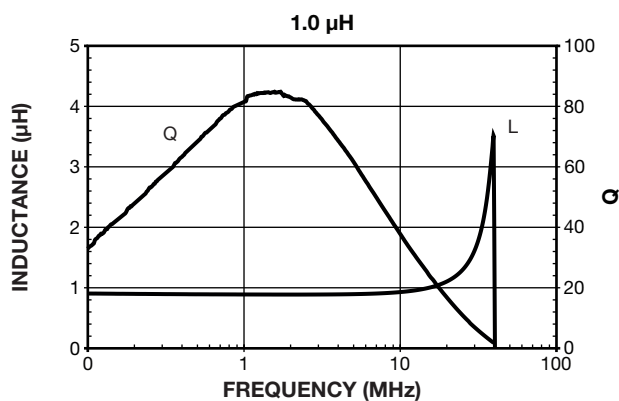
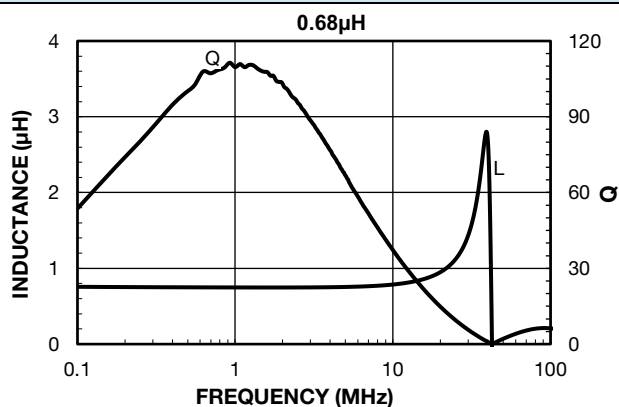
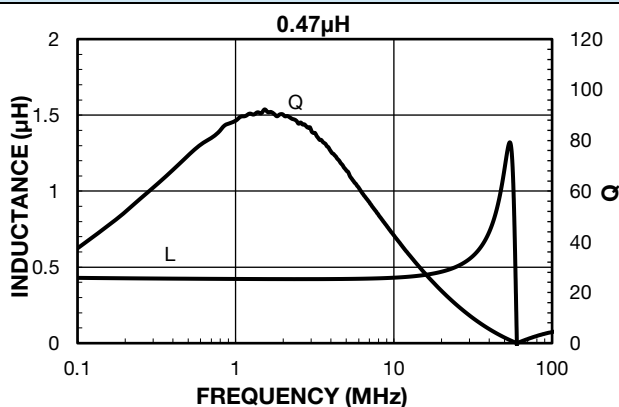


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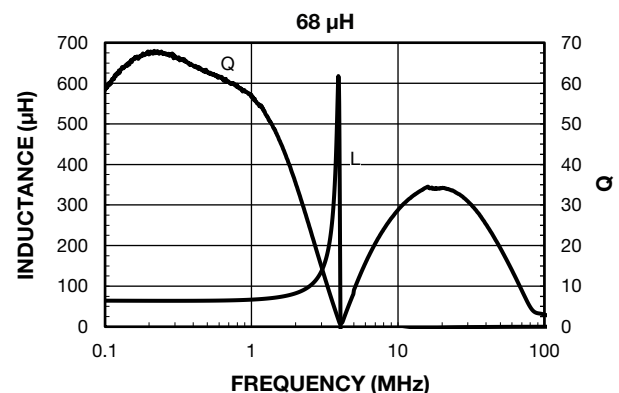
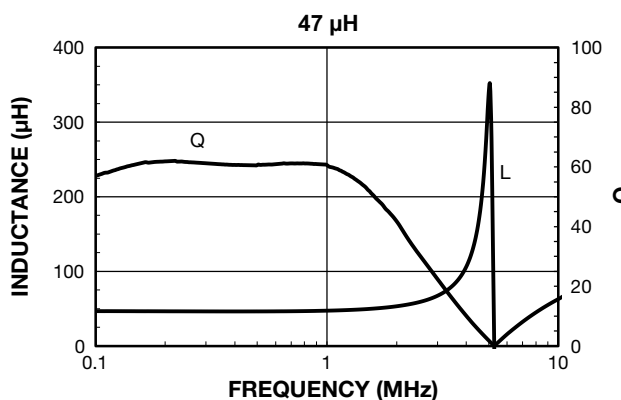
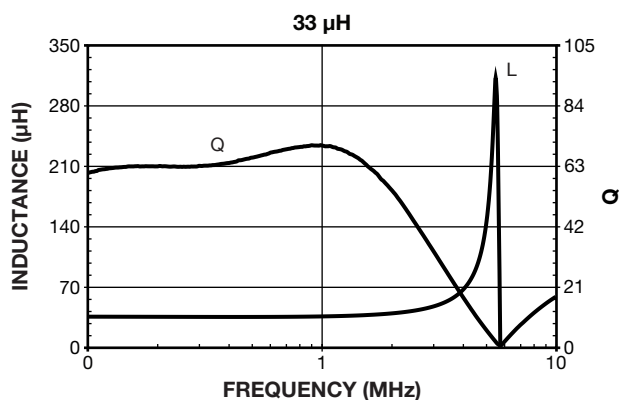
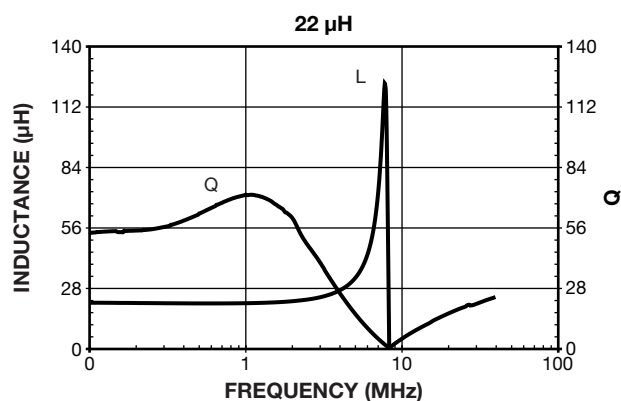
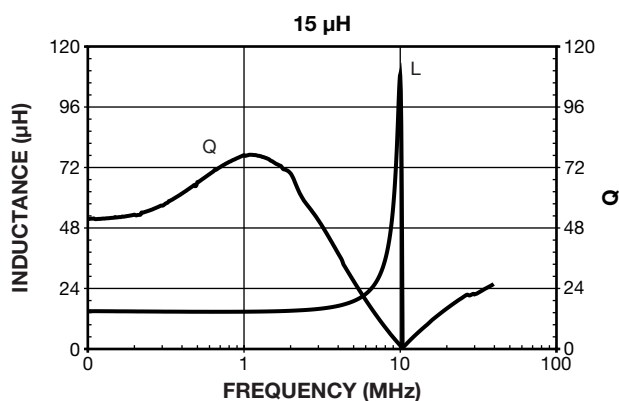
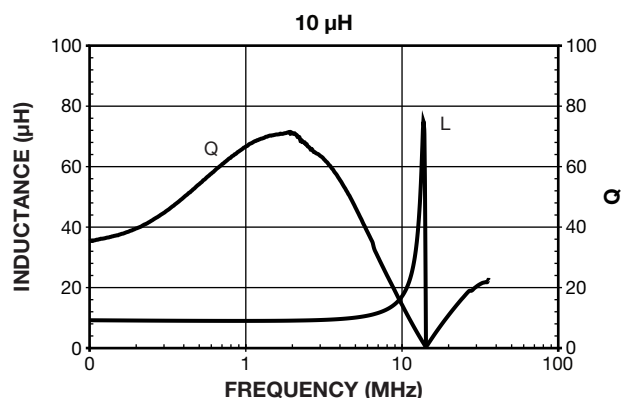
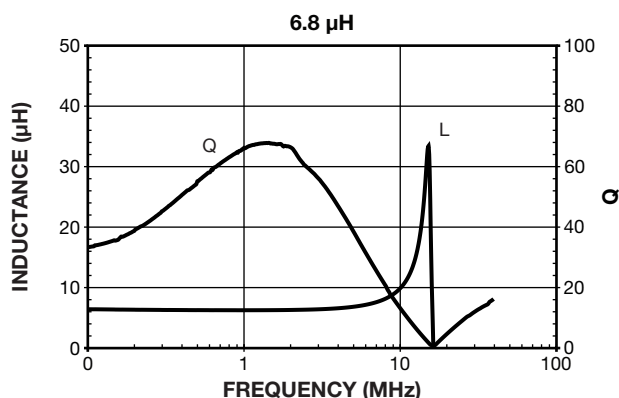


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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