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

AUTOMOTIVE GRADE

Pb-free

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) (1)	SATURATION CURRENT DC TYP. (A) (2)		SRF TYP. (MHz)
		TYP.	MAX.		20 % DROP	30 % DROP	
IHLP4040DZE_R47M5A	0.47	1.55	1.66	35.5	28.5	38.0	72.1
IHLP4040DZE_R68M5A	0.68	2.17	2.32	35.0	24.0	32.0	42.5
IHLP4040DZE_1R0M5A	1.0	2.87	3.07	23.5	24.0	32.0	37.2
IHLP4040DZE_1R5M5A	1.5	4.20	4.50	22.0	17.9	24.2	32
IHLP4040DZE_2R2M5A	2.2	8.15	8.76	15.0	12.0	16.2	30.1
IHLP4040DZE_3R3M5A	3.3	11	11.81	11.0	12.0	16.2	25.5
IHLP4040DZE_4R7M5A	4.7	14.3	15.32	9.8	9.2	12.4	20.1
IHLP4040DZE_5R6M5A	5.6	16.5	17.60	9.3	9.0	12.2	16.3
IHLP4040DZE_6R8M5A	6.8	20.9	22.36	8.0	9.0	12.2	16.3
IHLP4040DZE_100M5A	10	30.9	33.06	6.5	8.5	11.5	11.5
IHLP4040DZE_150M5A	15	47	50.29	5.1	7.7	10.4	10.4
IHLP4040DZE_220M5A	22	70.5	75.44	4.1	6.4	8.6	8.3
IHLP4040DZE_330M5A	33	110	117.7	3.7	4.2	5.7	5.79
IHLP4040DZE_470M5A	47	167	178	3.1	4.1	5.5	5.22
IHLP4040DZE_680M5A	68	240	252	2.4	3.5	4.7	4.02

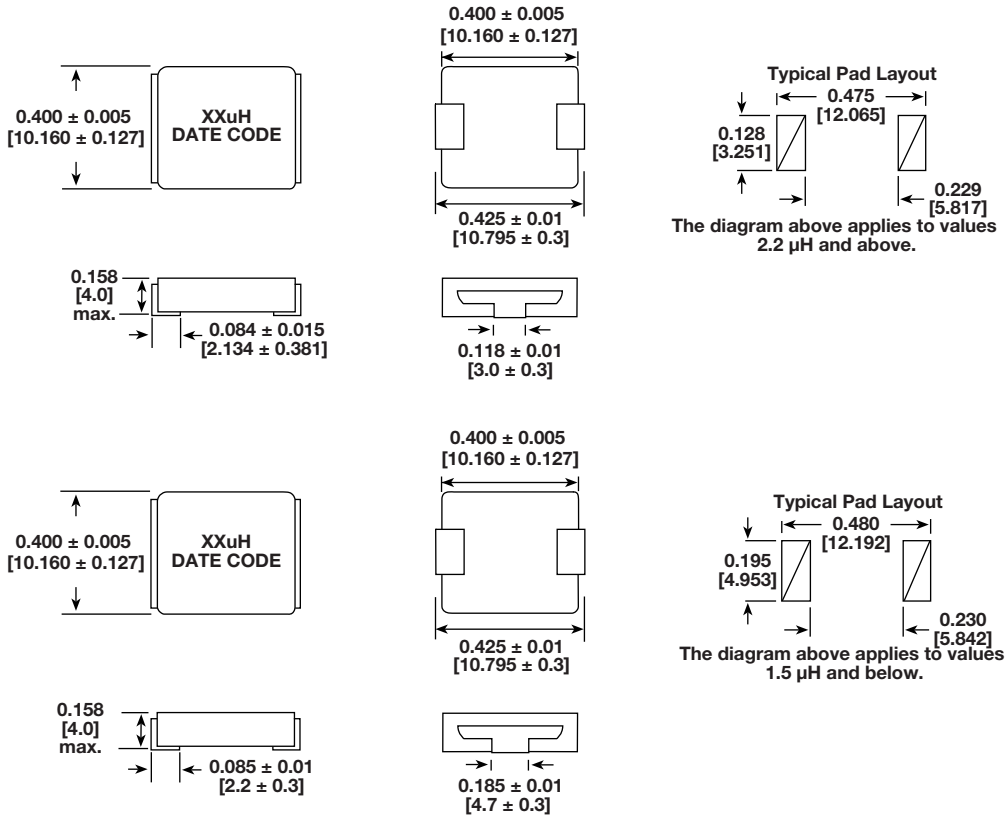
Notes

- 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 L_0 to drop approximately 20 %

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 K	4 R 7	M	5 A
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	SERIES
		EK = tape and reel	**4R7** = 4.7 µH	**M** = ± 20 %	

PACKAGE CODE OPTIONS

ER = tape and reel packaging (500 piece reel)

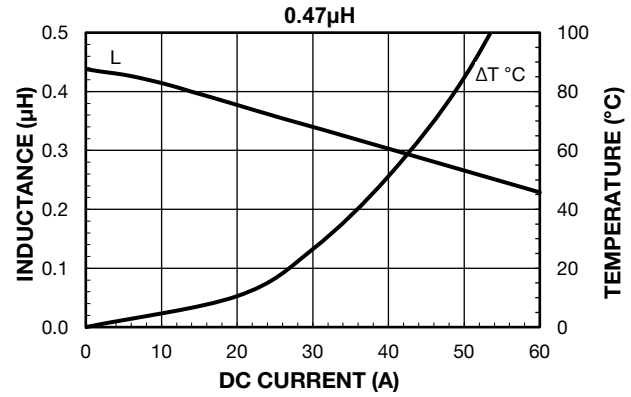
EK = tape and reel packaging (1000 piece reel)

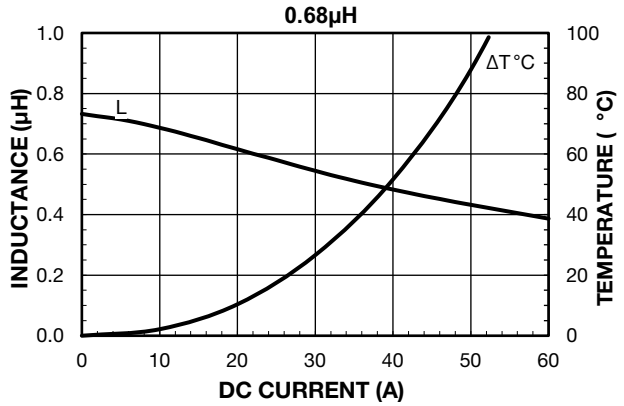
EP = tape and reel packaging (1000 piece reel) + polarity marking

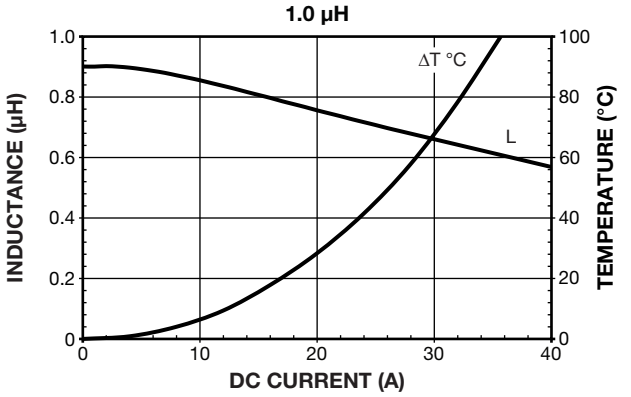
Notes

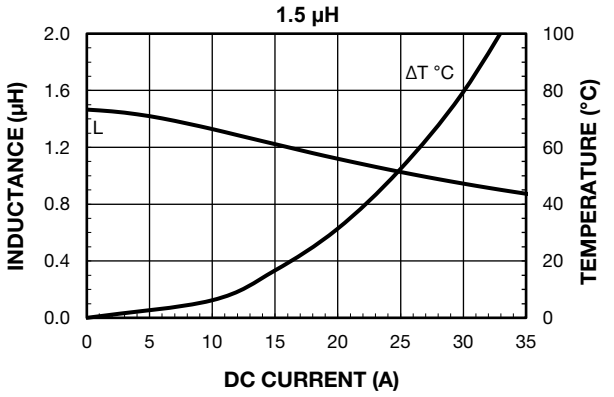
- For additional packaging details see "Packaging Methods"
- 1000 piece reel for IHLP4040DZ models contains tape pitch change

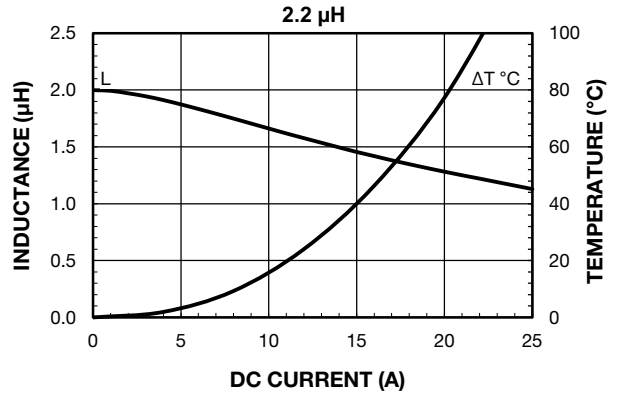
PERFORMANCE GRAPHS

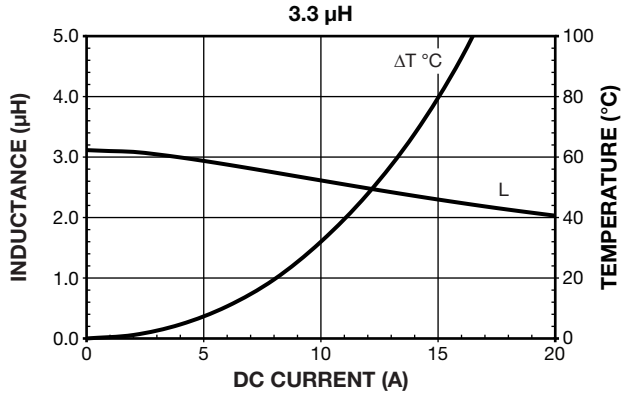


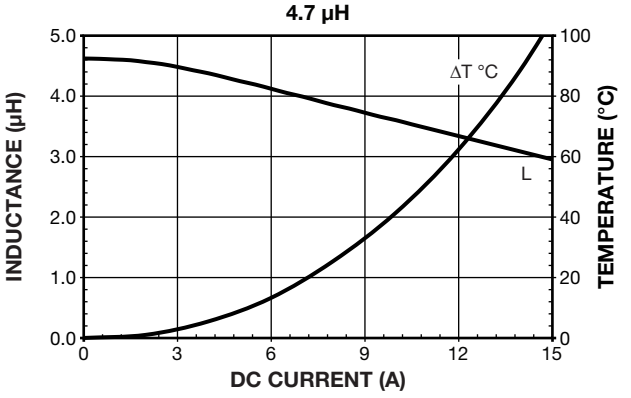


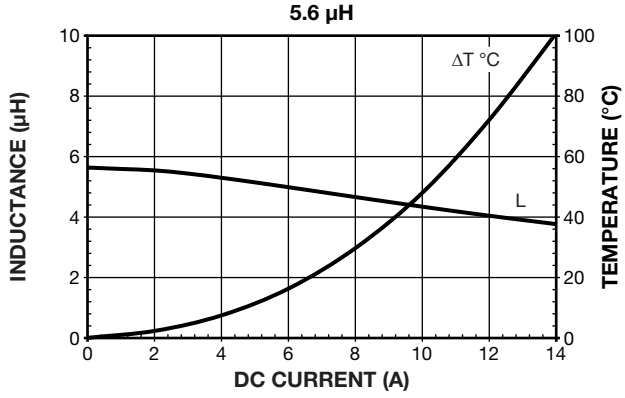






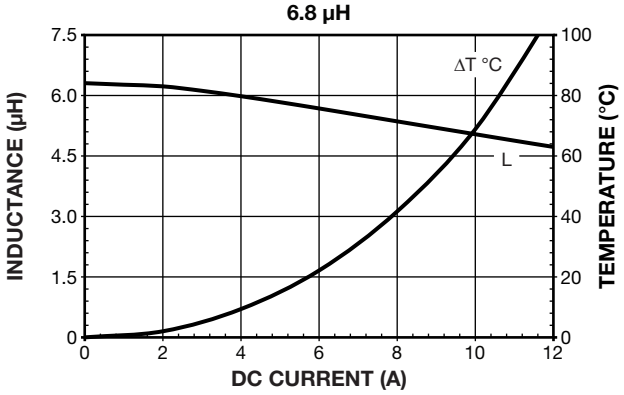




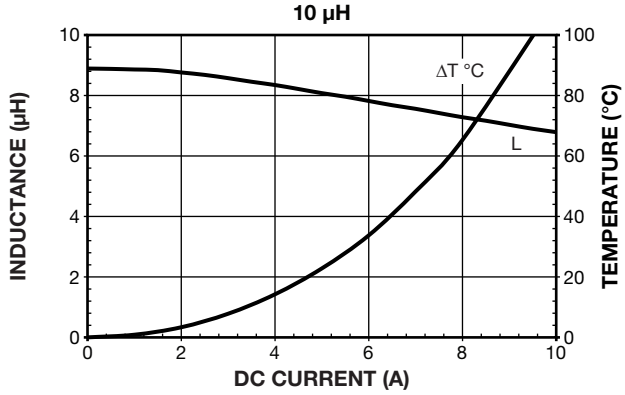


PERFORMANCE GRAPHS

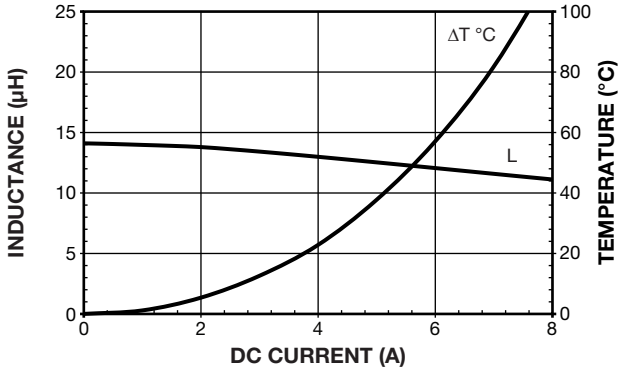
6.8 µH



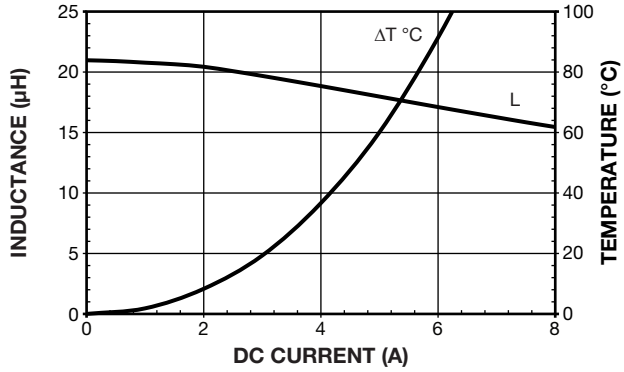
10 µH



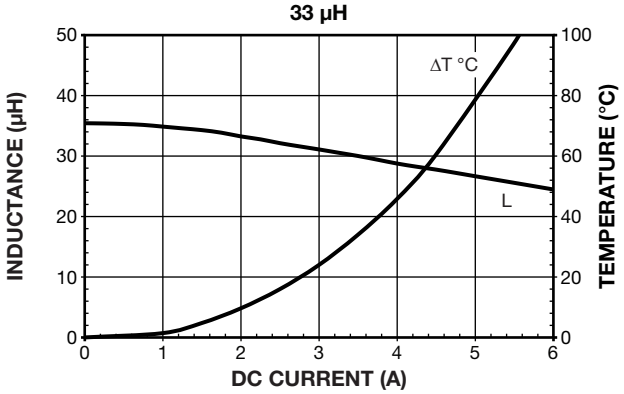
15 µH



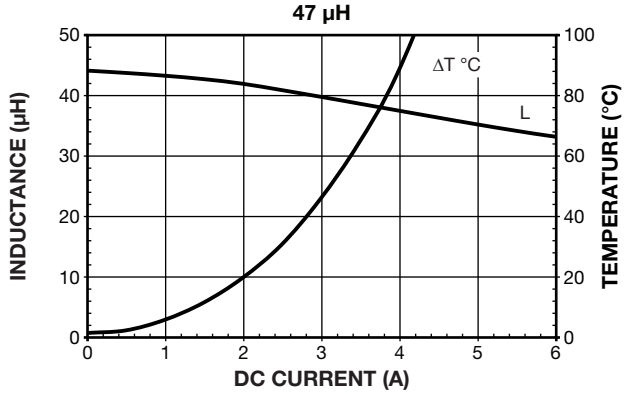
22 µH



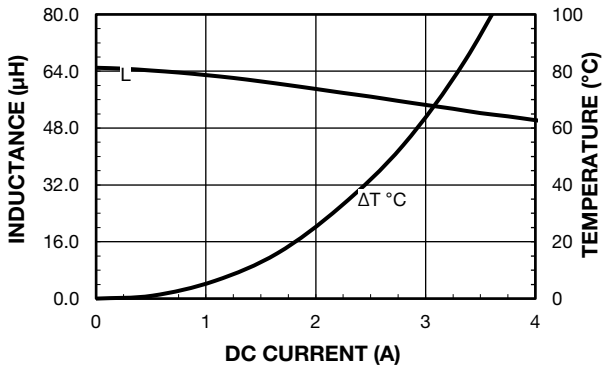
33 µH



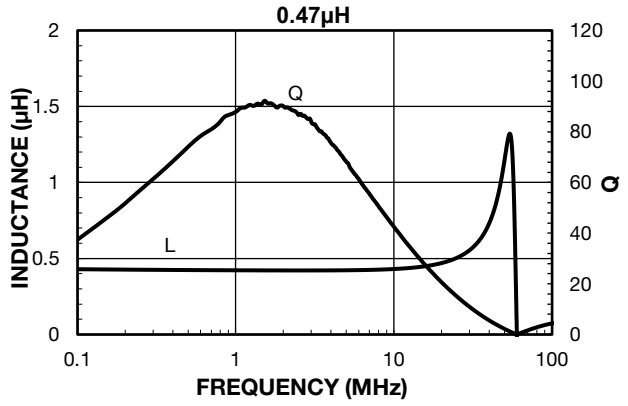
47 µH

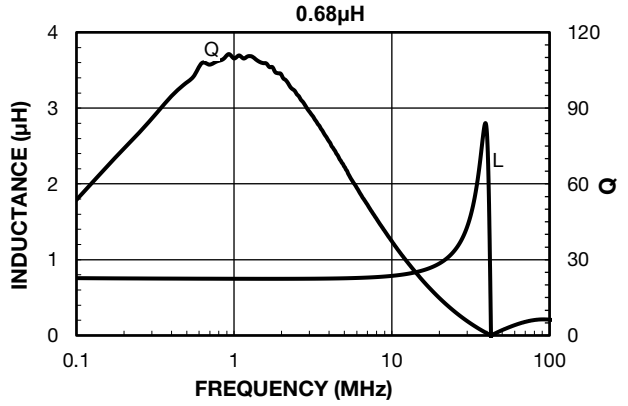


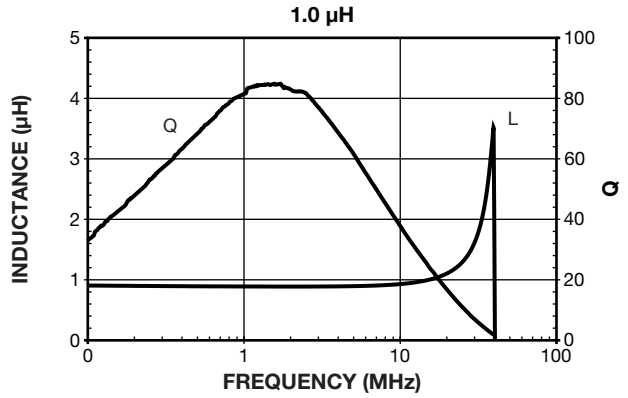
68 µH

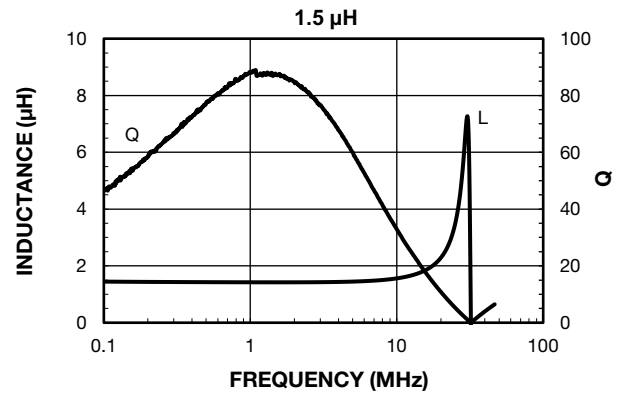


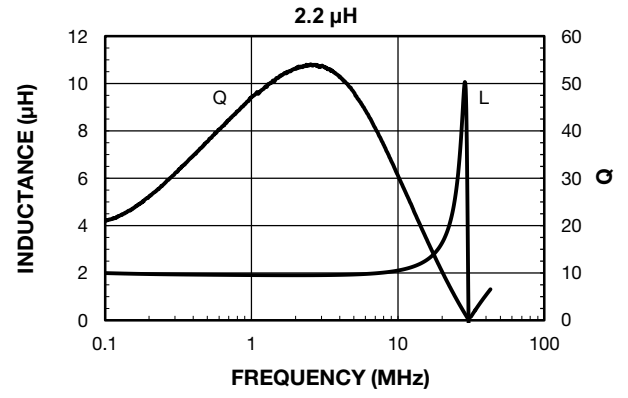
PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

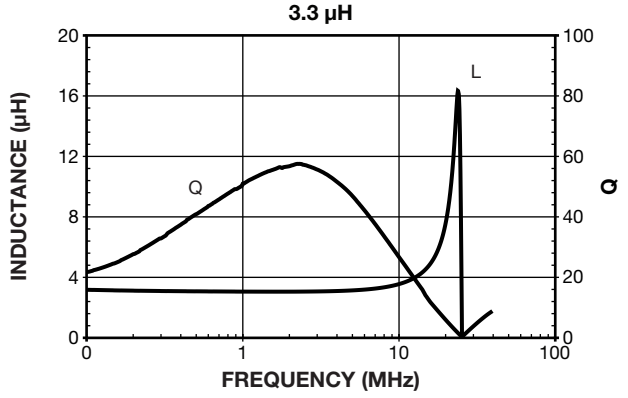


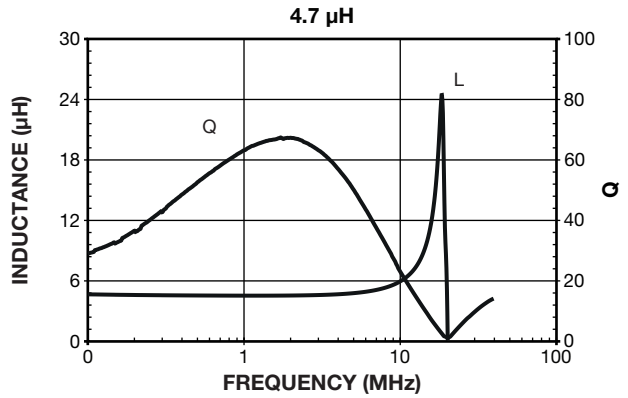


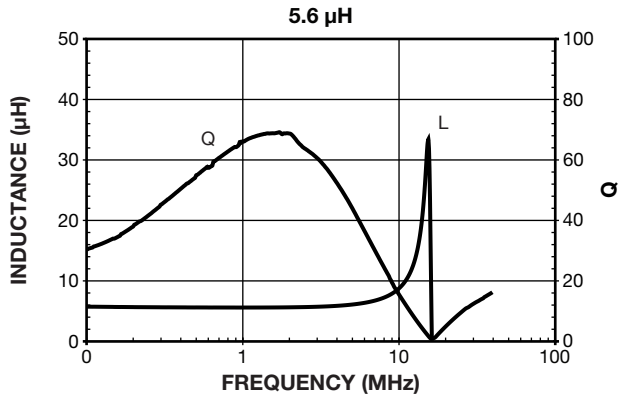






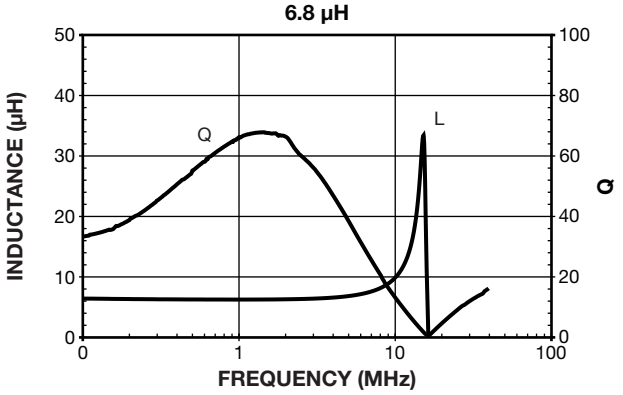




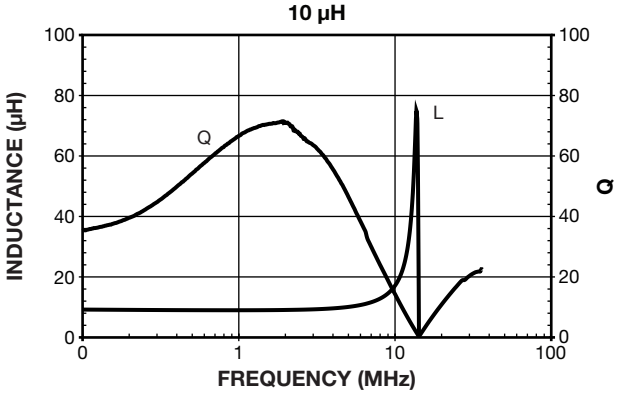


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

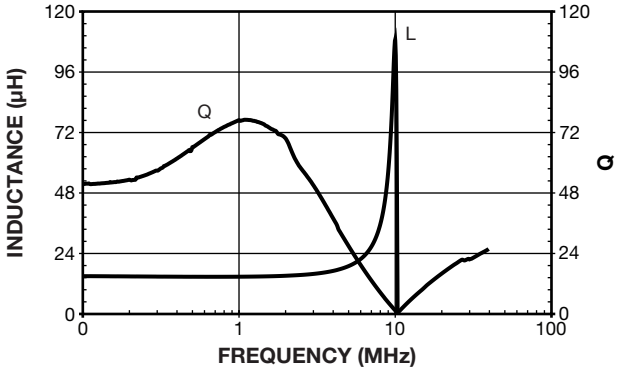
6.8 µH



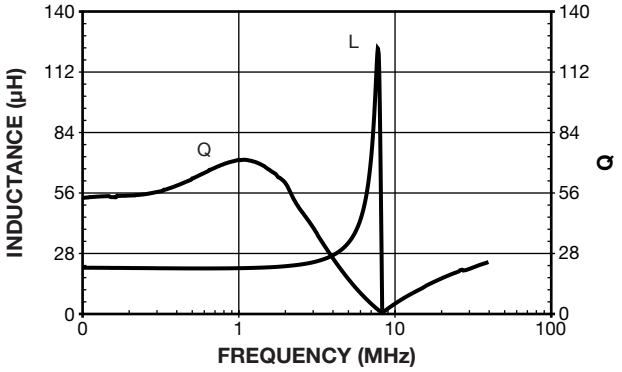
10 µH



15 µH



22 µH



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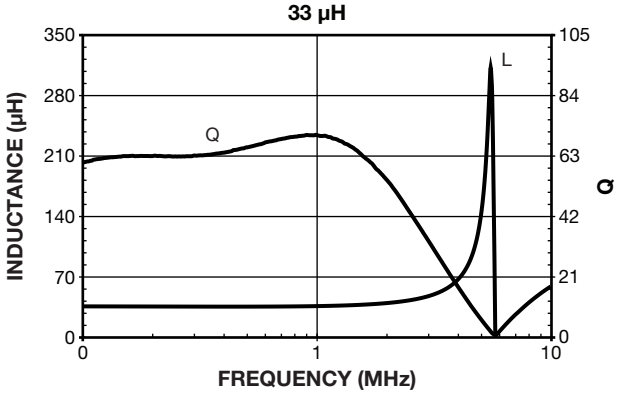

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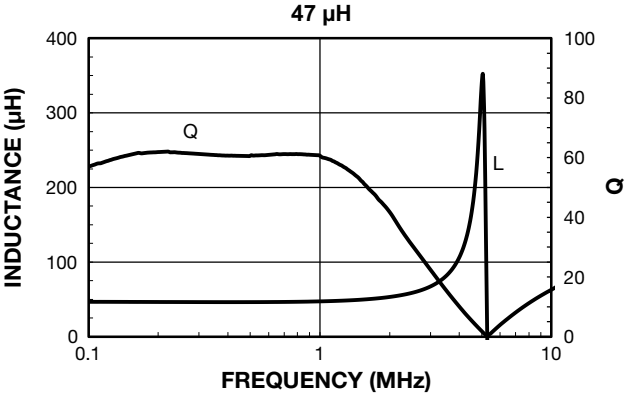
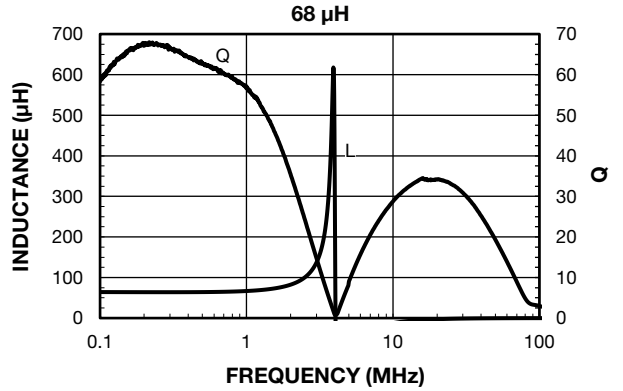


68 µH



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