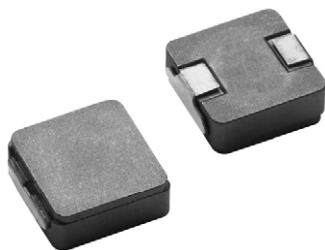




# IHLP® Automotive Inductors, High Temperature (155 °C) Series



## 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](http://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

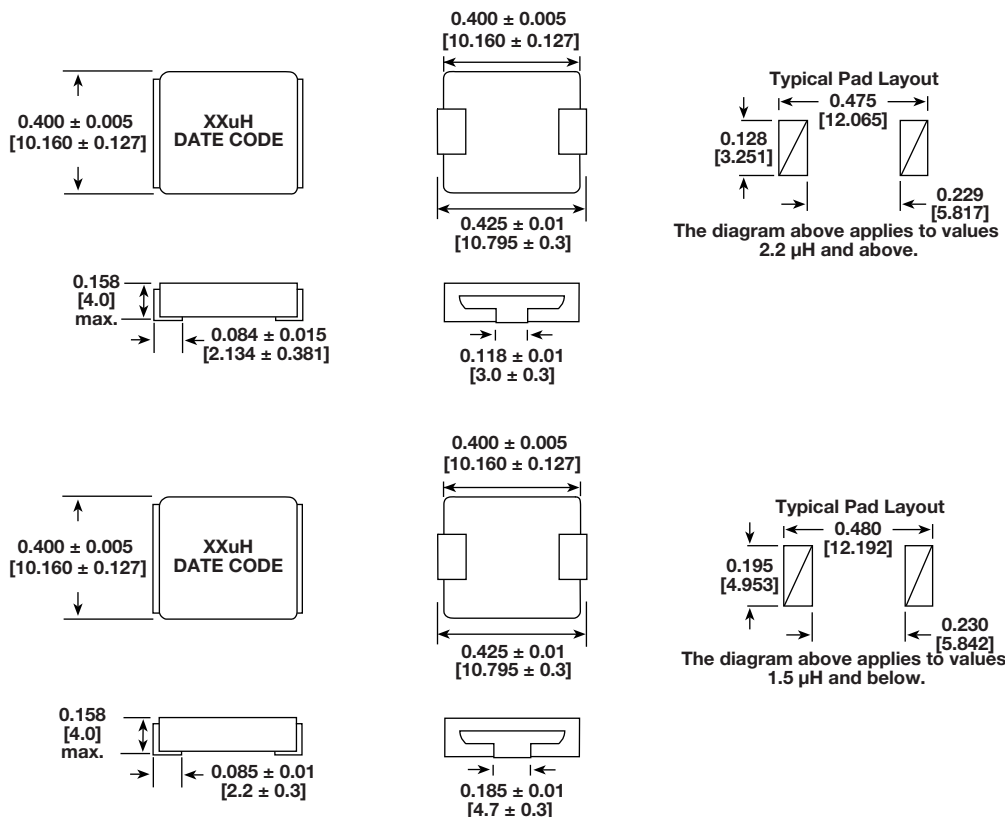
PART NUMBER	INDUCTANCE ± 20 % (μH) AT 0 A	DCR 25 °C (mΩ)		HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>		SRF TYP. (MHz)
		TYP.	MAX.		20 % DROP	30 % DROP	
IHLP4040DZE_R47M5A	0.47	1.55	1.66	35.5	28.5	38.0	72.1
IHLP4040DZE_R68M5A	0.68	2.17	2.32	35.0	24.0	32.0	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<sub>0</sub> 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**

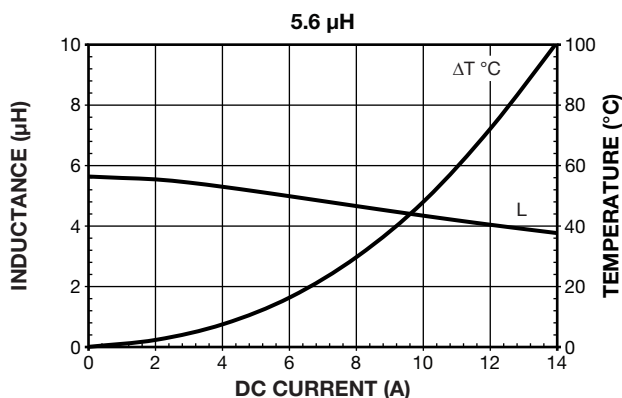
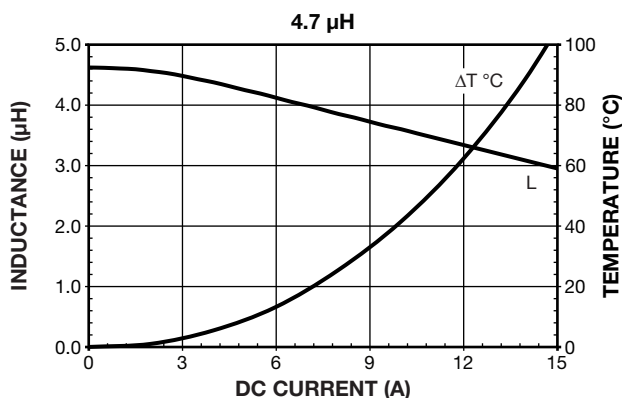
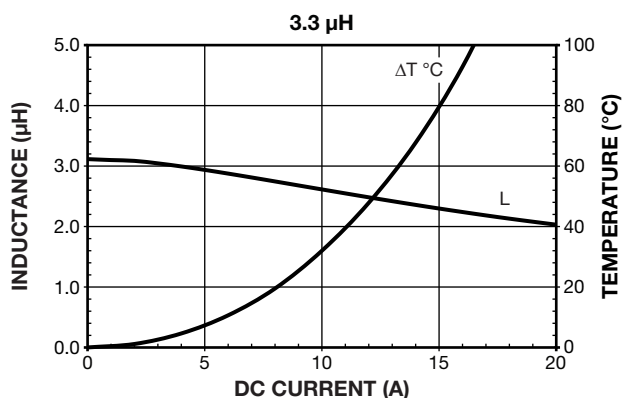
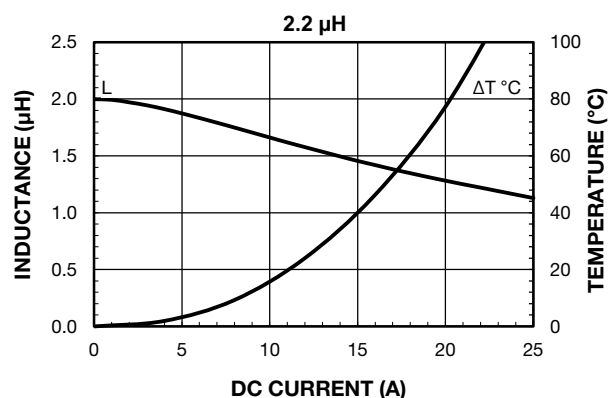
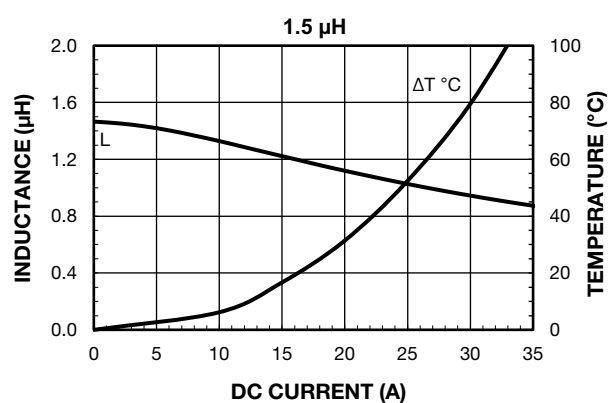
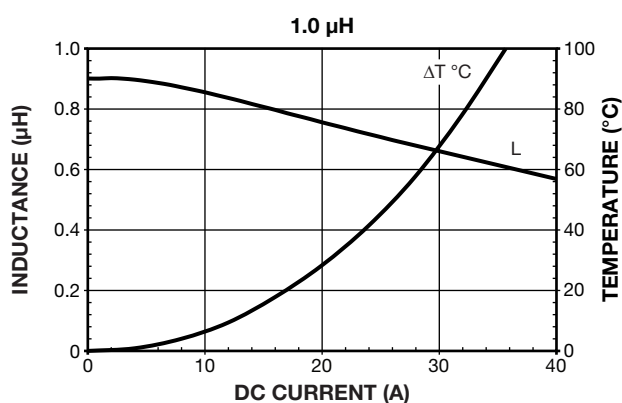
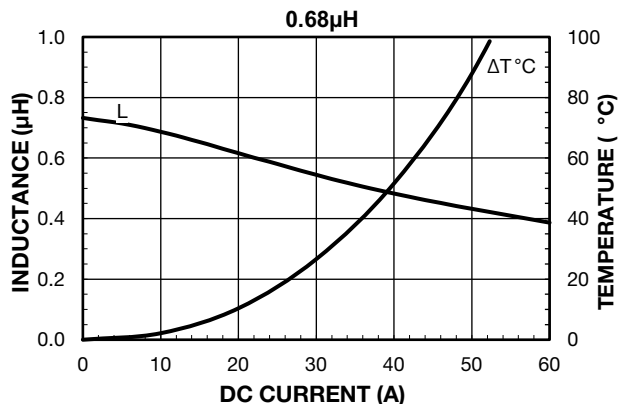
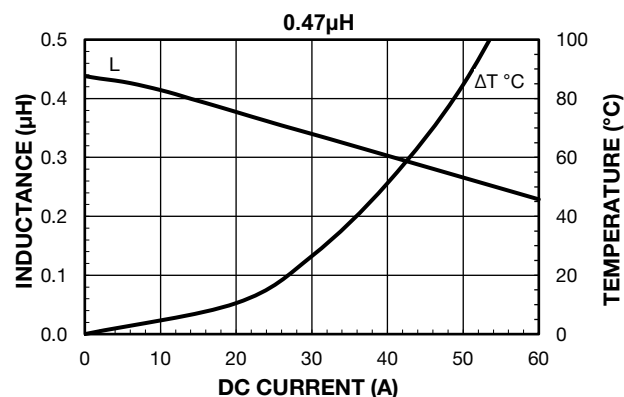
- ER = tape and reel packaging (500 piece reel)
- EK = tape and reel packaging (1000 piece reel)
- EP = tape and reel packaging (1000 piece reel) + polarity marking

**Notes**

- For additional packaging details see "[Packaging Methods](#)"
- 1000 piece reel for IHLP4040DZ models contains tape pitch change

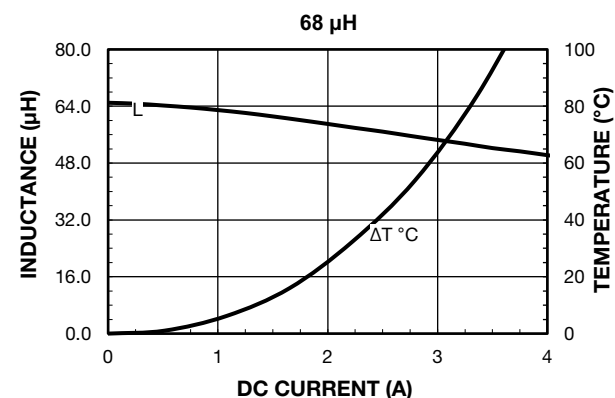
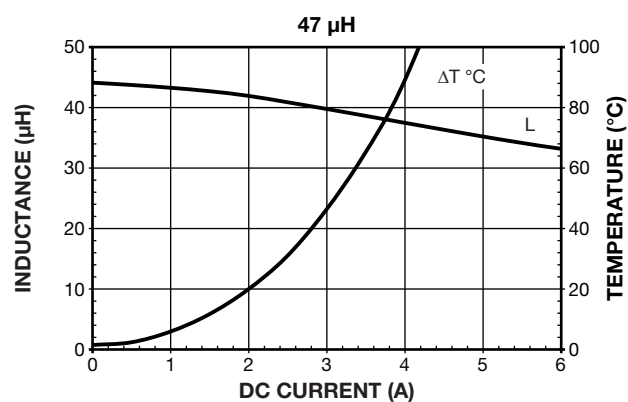
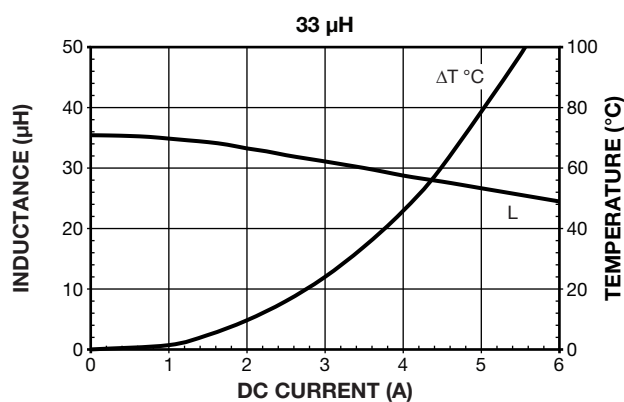
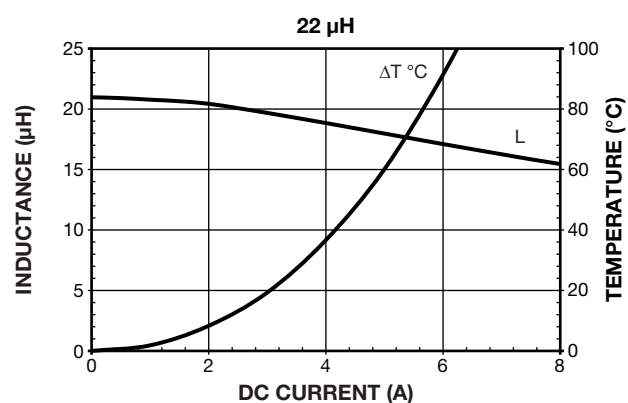
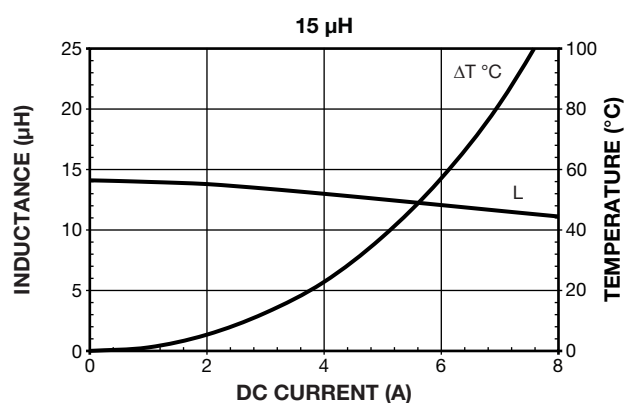
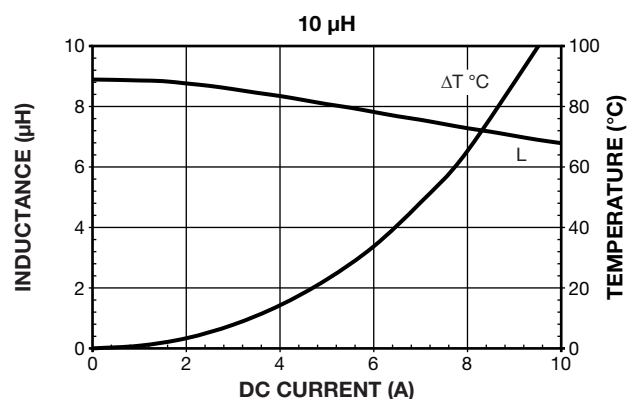
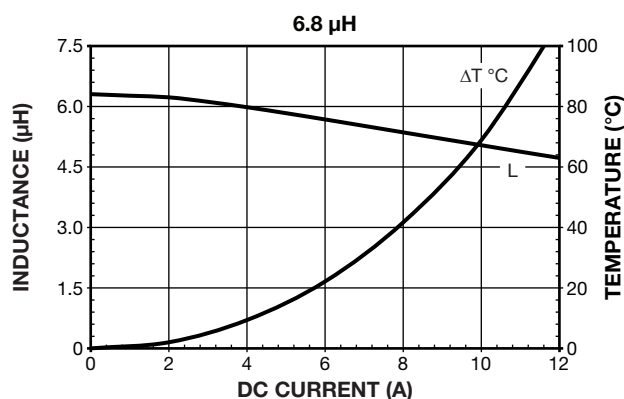


## PERFORMANCE GRAPHS



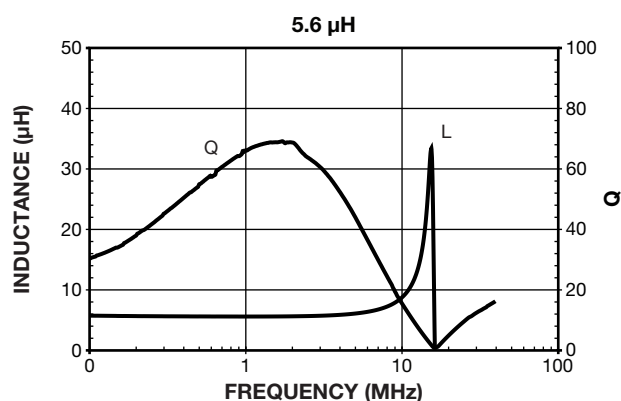
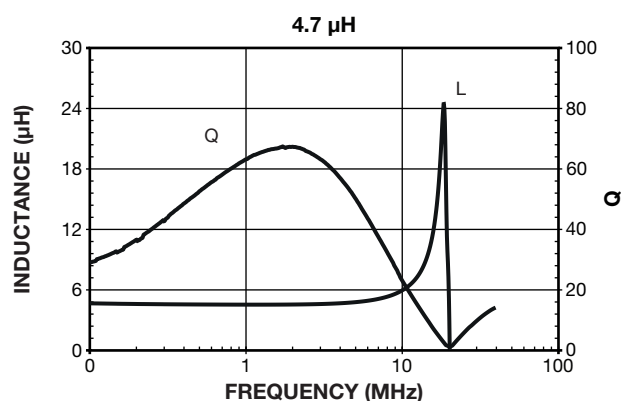
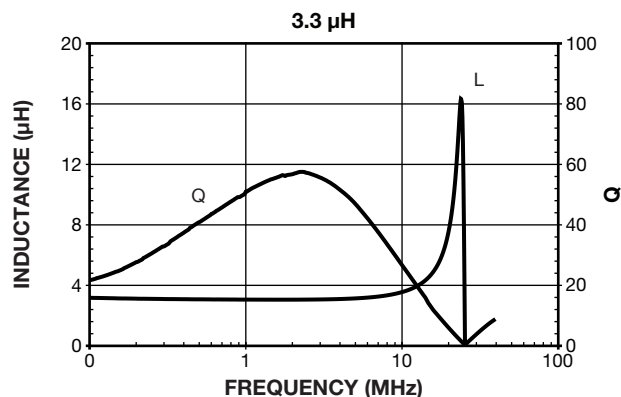
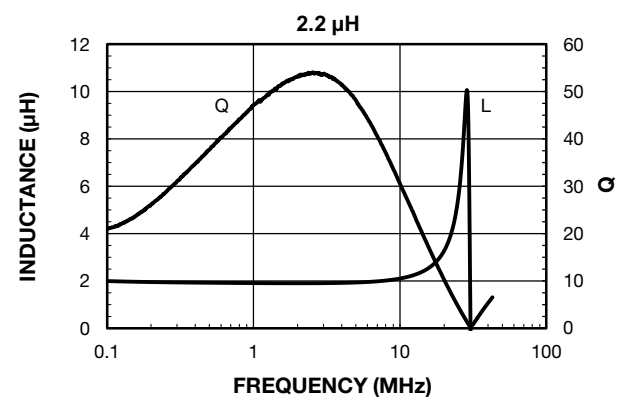
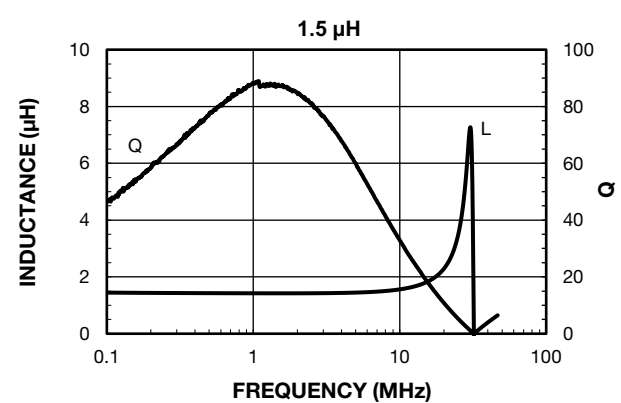
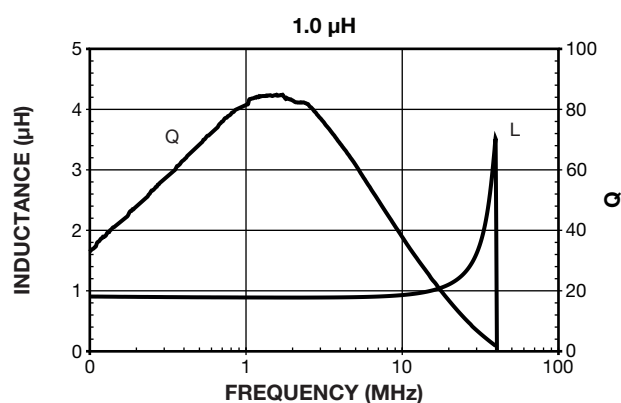
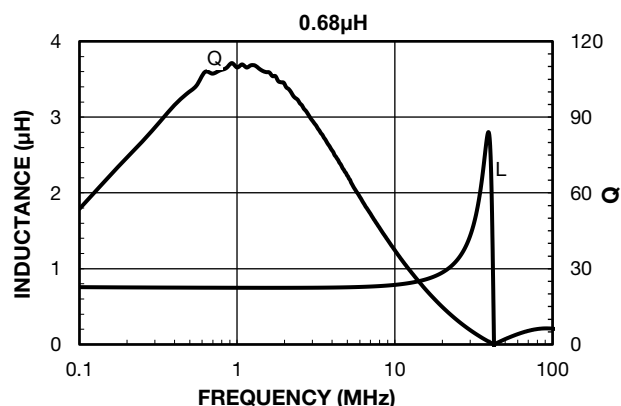
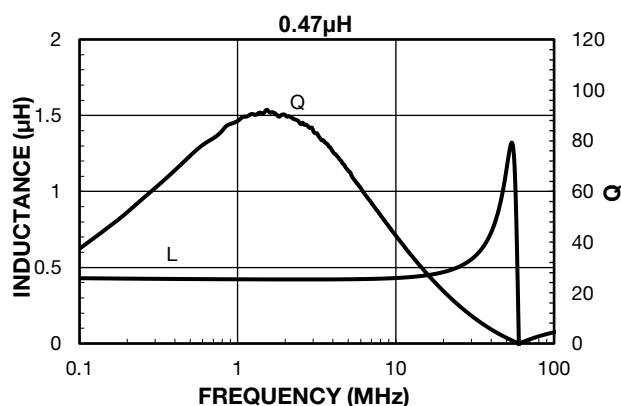


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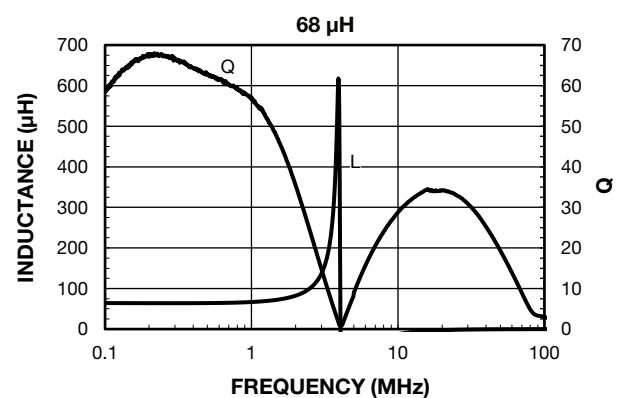
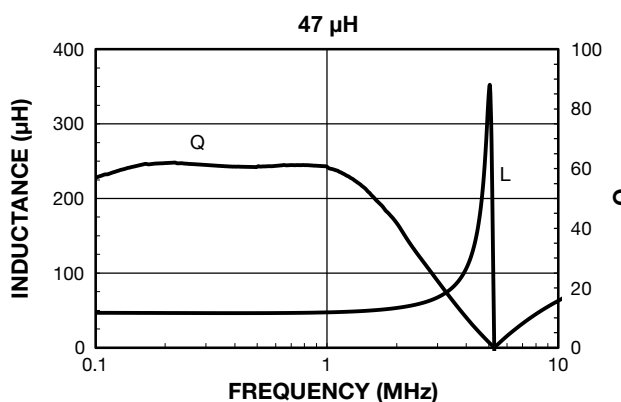
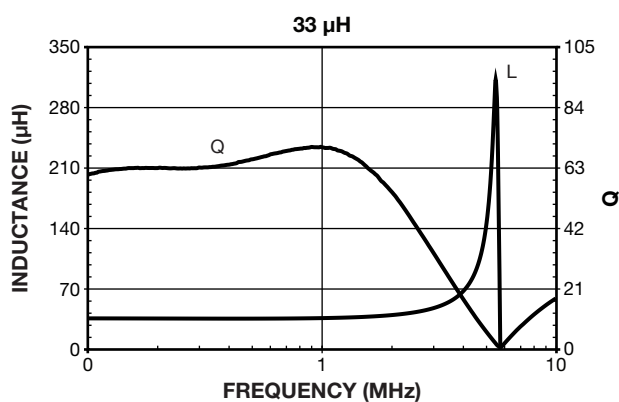
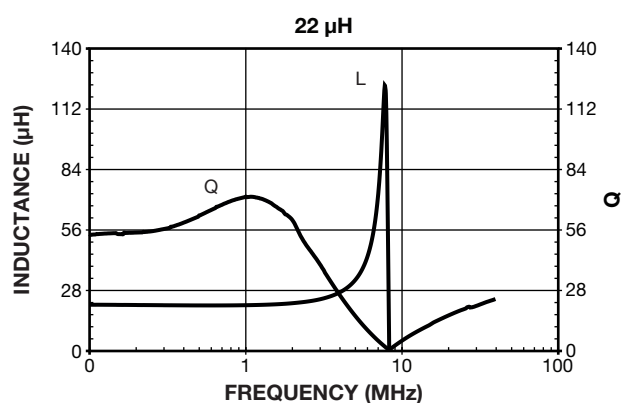
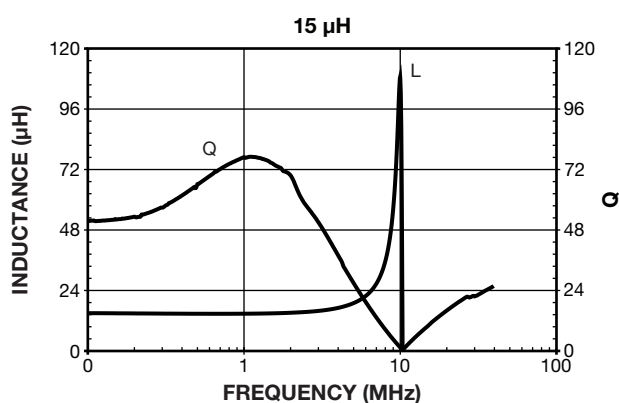
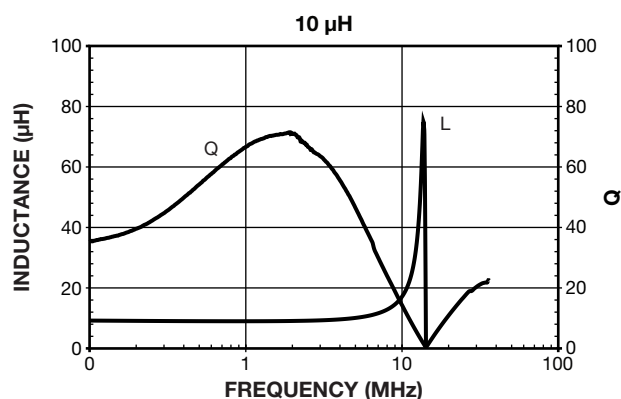
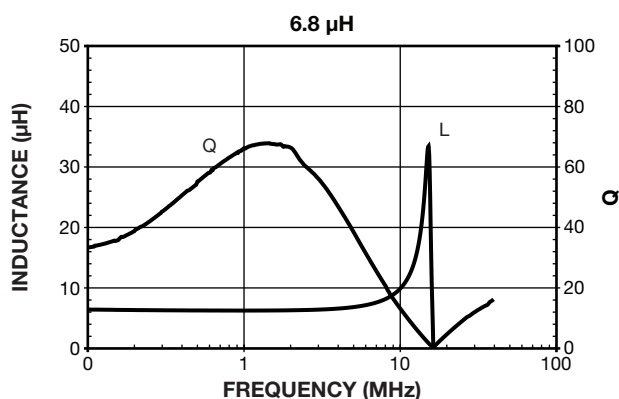


## PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





## PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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