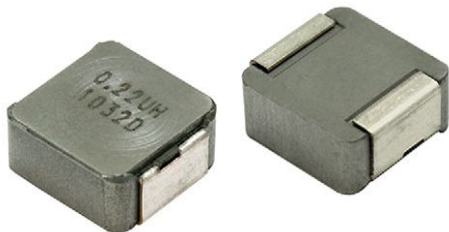


## IHLP® Automotive Inductors, Low DCR Series



### LINKS TO ADDITIONAL RESOURCES



### FEATURES

- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up to SRF (see “Standard Electrical Specifications” table)
- Operating temperature up to 125 °C
- Lowest DCR/μH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- 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)

### APPLICATIONS

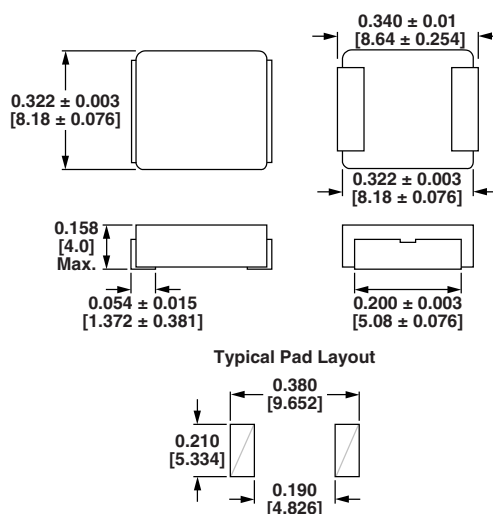
- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment/navigation systems
- Noise suppression for motors: windshield wipers / power seats / power mirrors / heating and ventilation blower / HID lighting
- LED drivers

STANDARD ELECTRICAL SPECIFICATIONS					
L <sub>0</sub> INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (μH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>	SRF TYP. (MHz)
0.22	1.26	1.35	34.0	22.0	117
0.33	2.01	2.15	27.5	16.0	108
0.47	2.35	2.50	25.0	14.0	80
0.68	3.01	3.22	22.2	14.5	62
0.82	3.63	3.88	19.5	15.0	57
1.0	4.33	4.63	18.2	12.0	49
2.2	8.8	9.41	14.5	10.2	25
3.3	14.0	14.9	10.5	9.7	22
4.7	21.1	22.6	8.0	8.7	17
5.6	26.7	28.6	7.4	7.6	15
6.8	31.2	33.4	7.0	6.7	13
8.2	42.1	45.0	5.7	6.6	12.6
10.0	48.4	51.8	5.4	6.4	12
15.0	61.0	65.3	4.9	3.7	10.3
22.0	84.0	89.0	4.3	3.3	8.2
33.0	135	144	3.2	3.2	6.7

#### Notes

- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +125 °C
- The part temperature (ambient + temp. rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB 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) = 50 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																	
IHLP-3232DZ-1A		33 μH		± 20 %		ER		e3									
MODEL		INDUCTANCE VALUE		INDUCTANCE TOLERANCE		PACKAGE CODE		JEDEC® LEAD (Pb)-FREE STANDARD									
GLOBAL PART NUMBER																	
I	H	L	P	3	2	3	2	D	Z	E	R	3	3	0	M	1	A
PRODUCT FAMILY				SIZE					PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES		

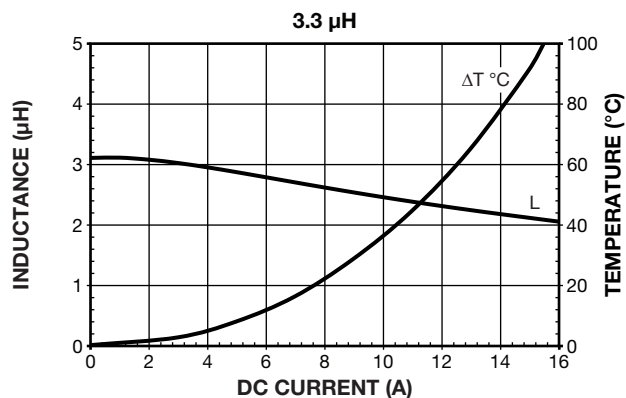
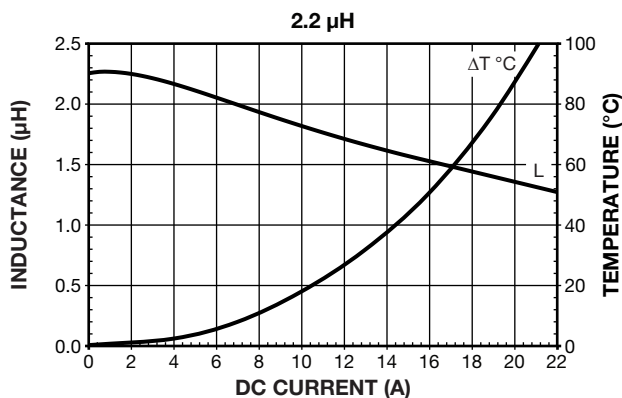
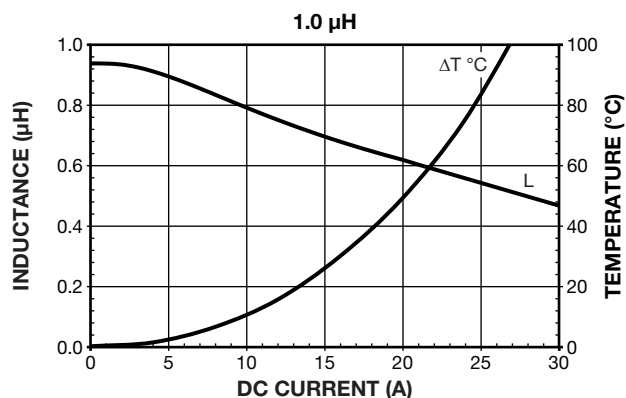
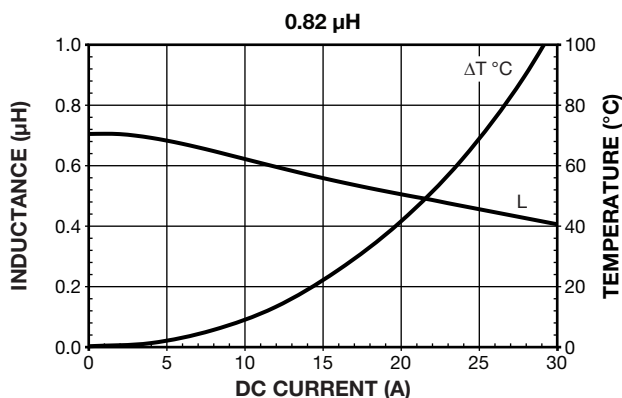
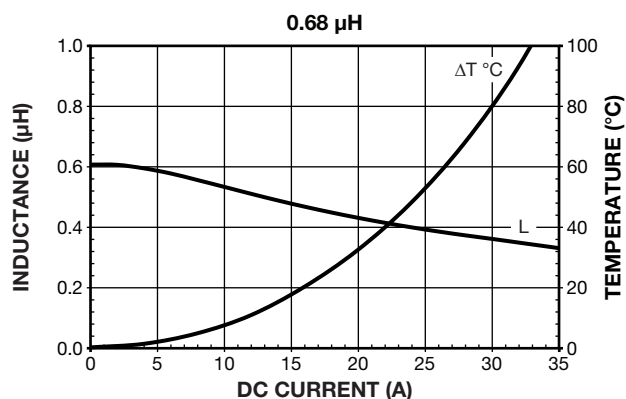
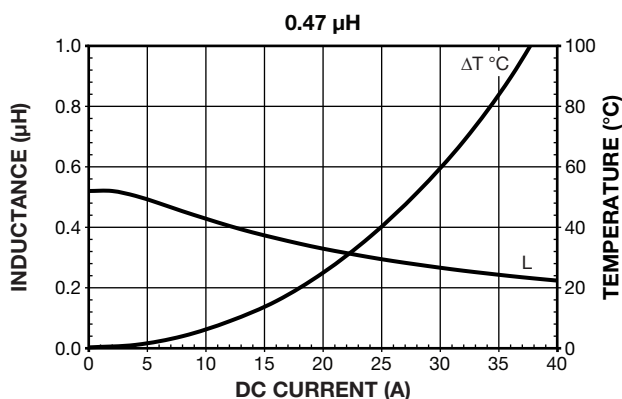
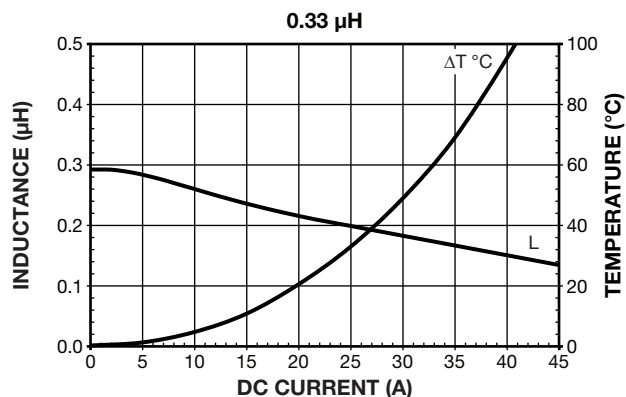
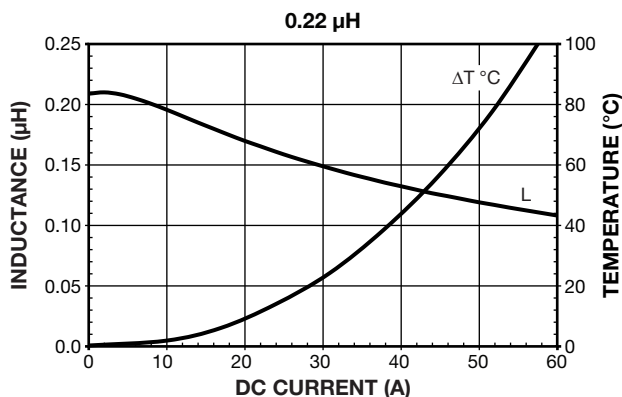
#### PATENT(S):

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

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

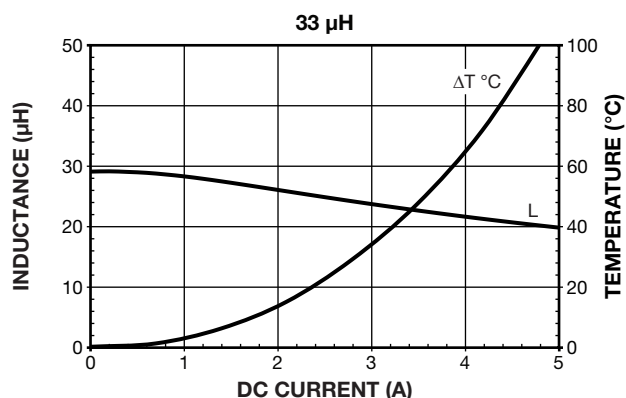
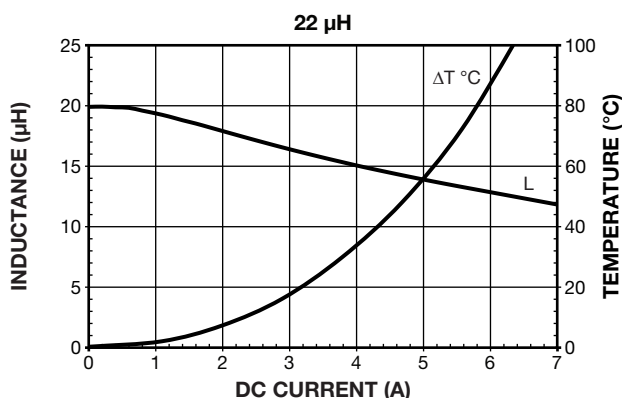
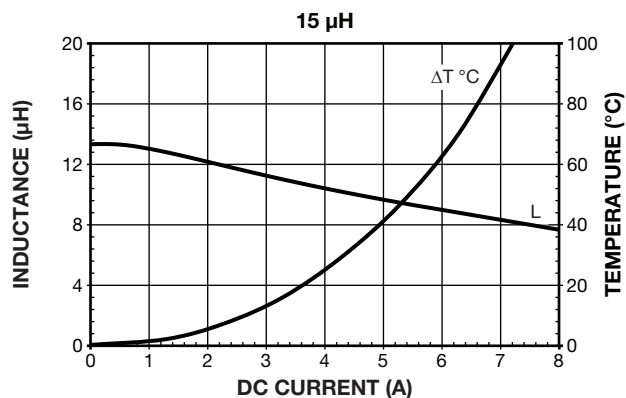
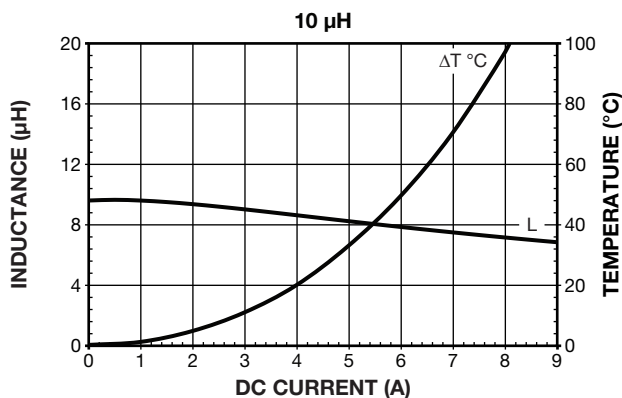
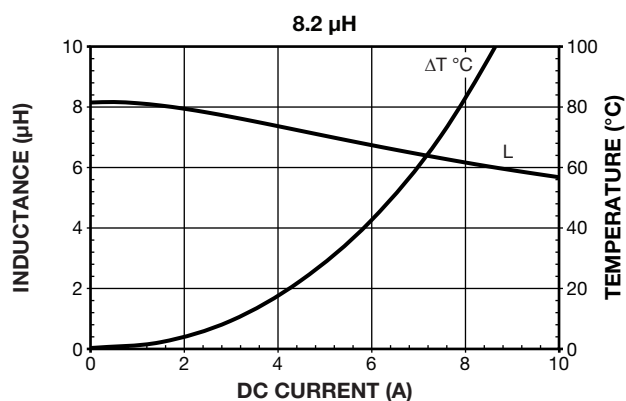
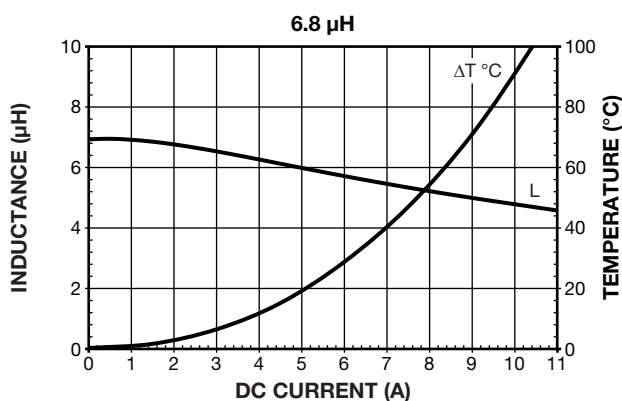
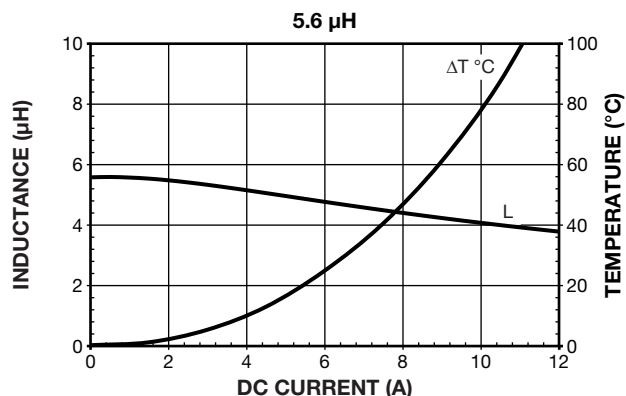
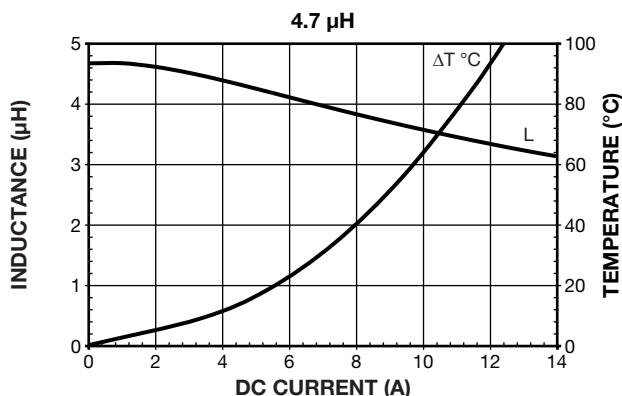


PERFORMANCE GRAPHS



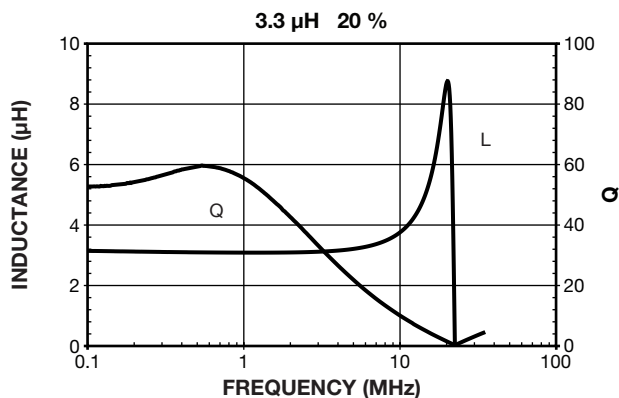
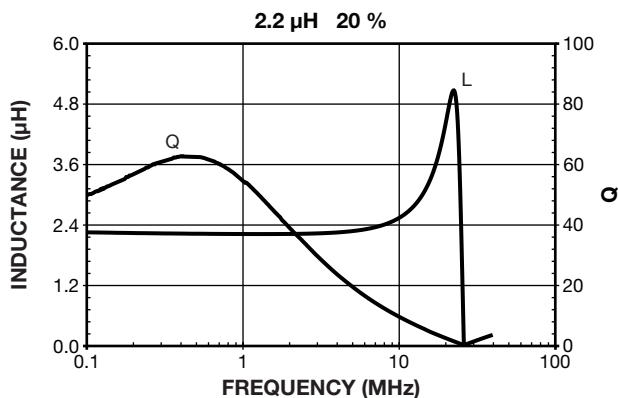
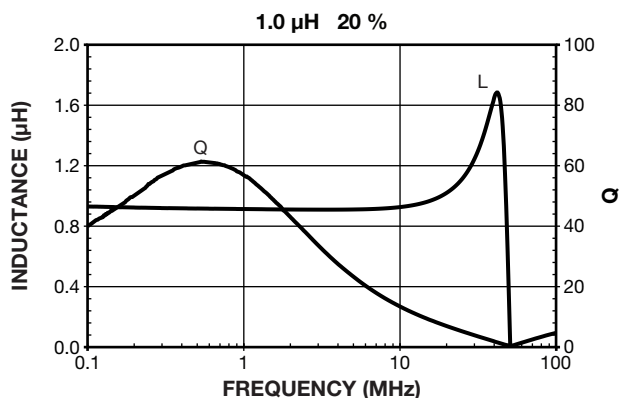
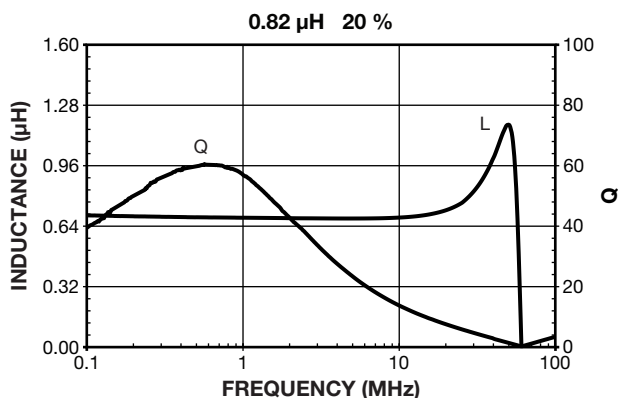
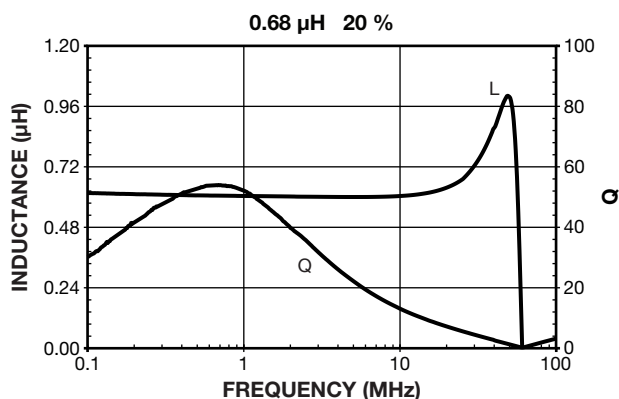
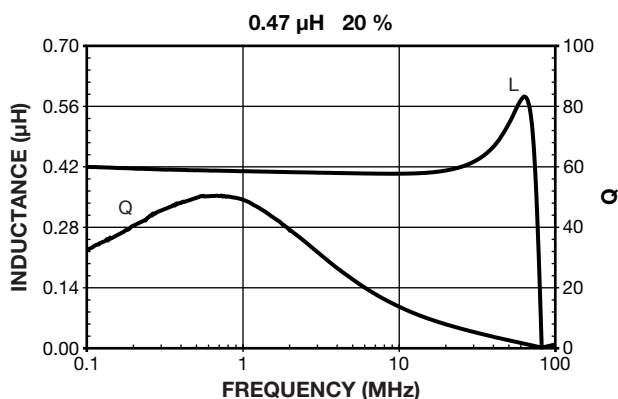
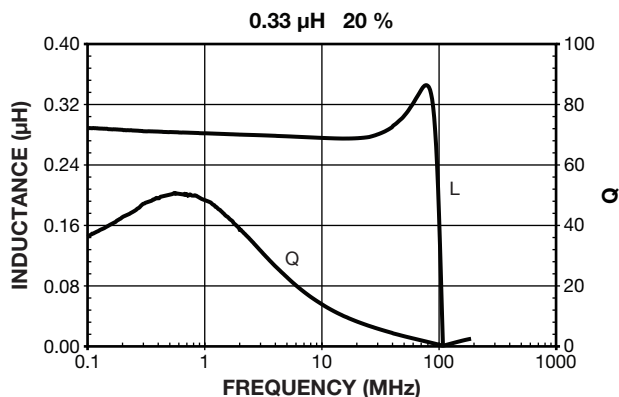
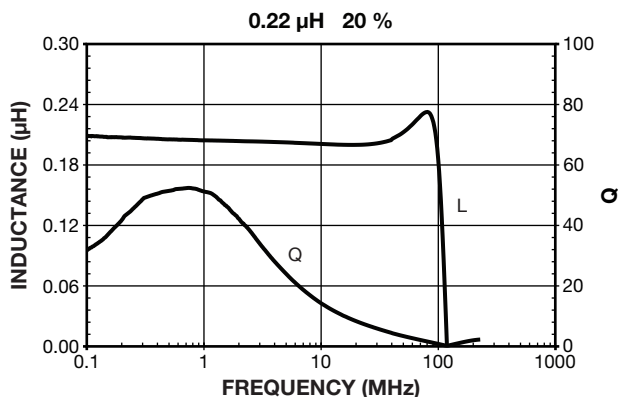


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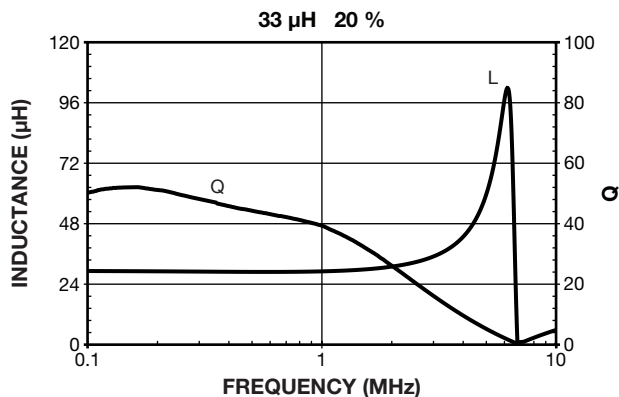
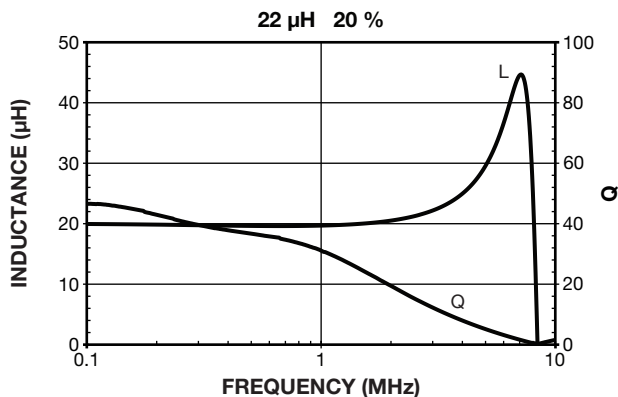
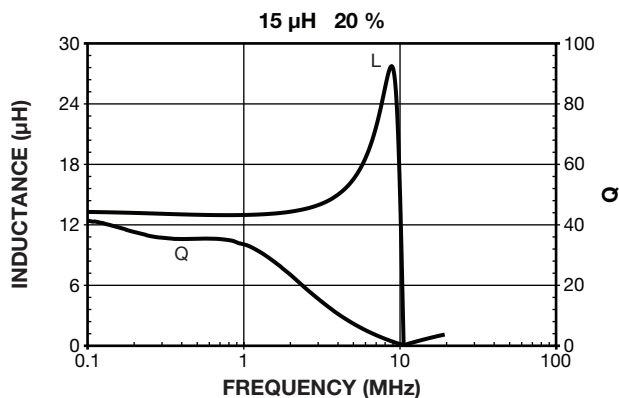
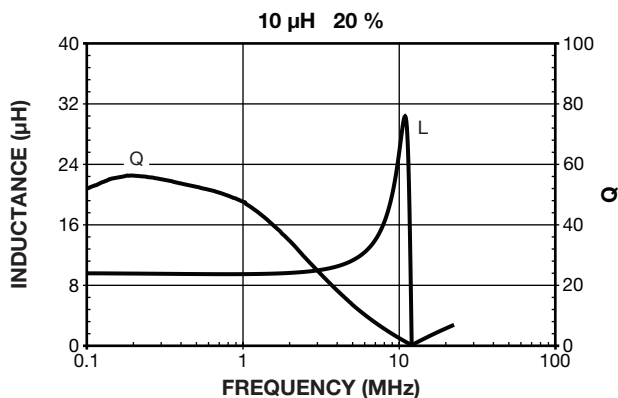
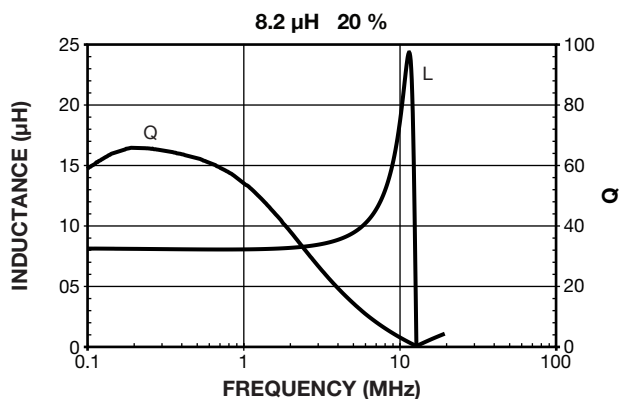
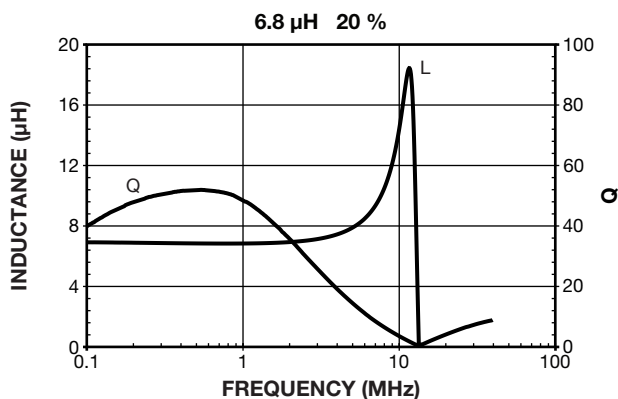
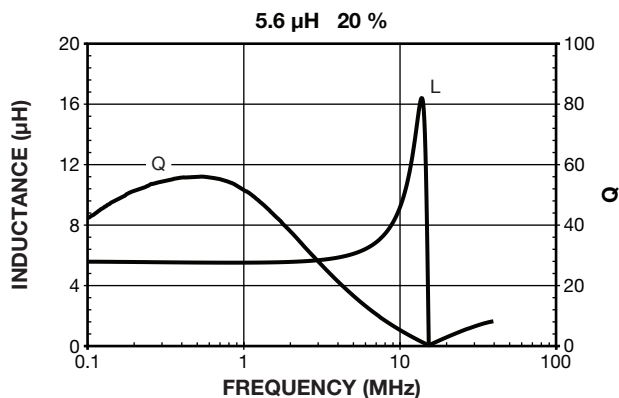
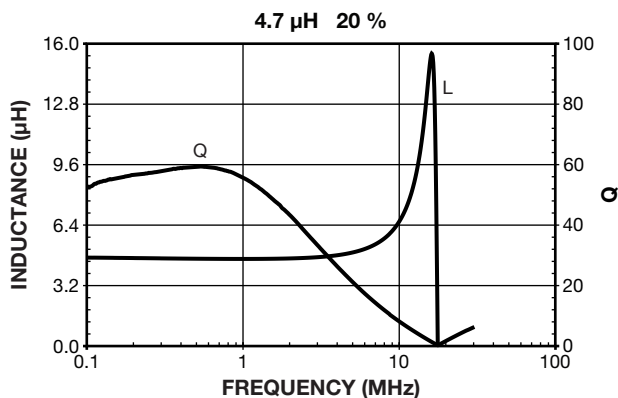


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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