



**THE DATASHEET OF  
IHLP8787MZER1R0M51**





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



## FEATURES

- High temperature rating, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up the SRF (see Standard Electrical Specifications table).
- Lowest DCR/μH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- 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)

## ADDITIONAL RESOURCES



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)
0.47	0.56	0.67	80.0	100.0	47.5
1.0	0.82	0.89	69.0	71.0	25.7
2.2	1.15	1.25	58.0	48.0	17.5
3.3	1.63	1.77	49.0	41.0	12.8
4.7	1.69	1.84	47.0	37.0	10.2
6.8	2.84	3.09	36.0	36.0	8.03
10	4.04	4.14	28.0	28.0	6.04
15	5.62	6.11	23.5	24.0	4.71
22	10.60	10.80	17.5	16.0	3.88
33	15.10	15.40	15.5	10.5	3.01
47	17.30	17.70	13.5	10.0	2.99
75	29.76	32.35	12.0	12.0	2.01
82	31.46	34.20	10.2	9.0	2.07
100	36.25	39.40	9.1	7.0	2.01

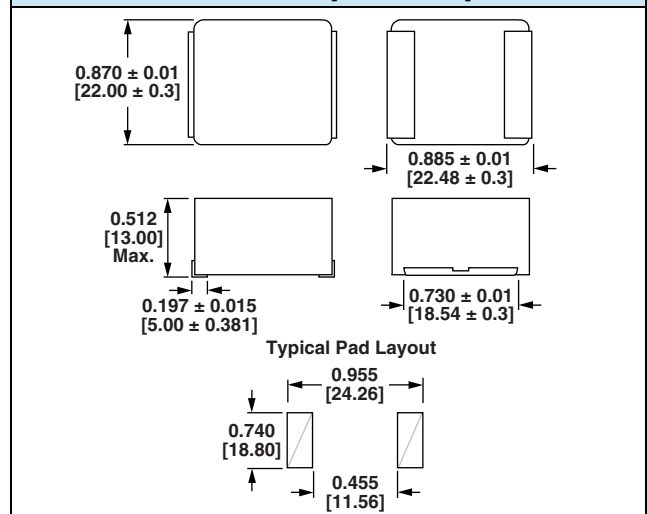
### Notes

- All test data is referenced to 25 °C ambient
- 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, 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) = 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 %

## APPLICATIONS

- Low profile, high current power supplies
- High current POL converters
- DC/DC converters in distributed power systems
- Servers
- Solar inverters
- Industrial lighting
- Industrial power supplies

## DIMENSIONS in inches [millimeters]



DESCRIPTION					
IHLP-8787MZ-51	100 μH	± 20 %	ER	e3	
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD	

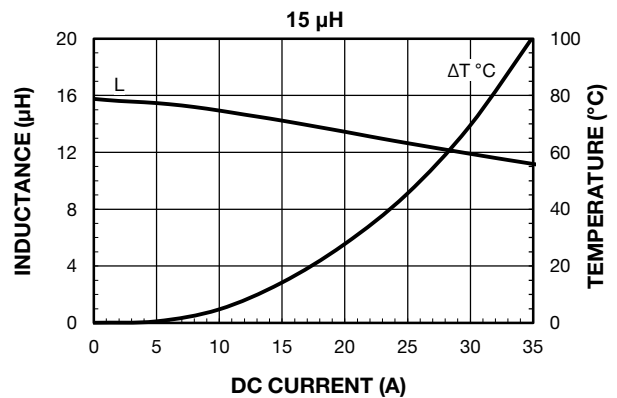
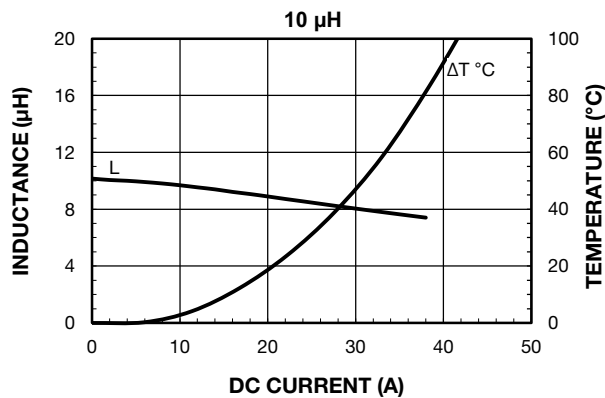
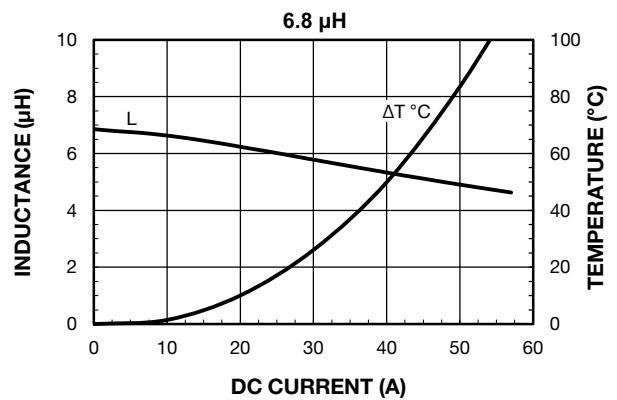
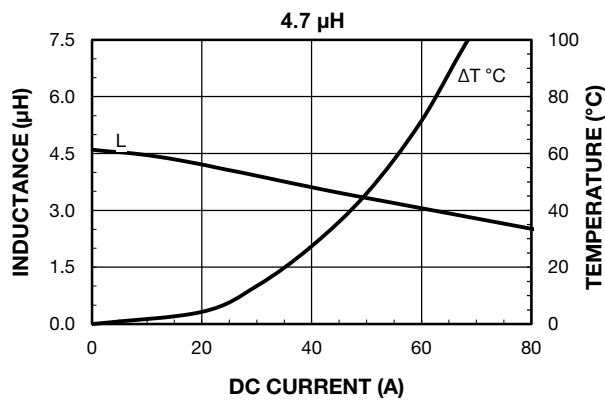
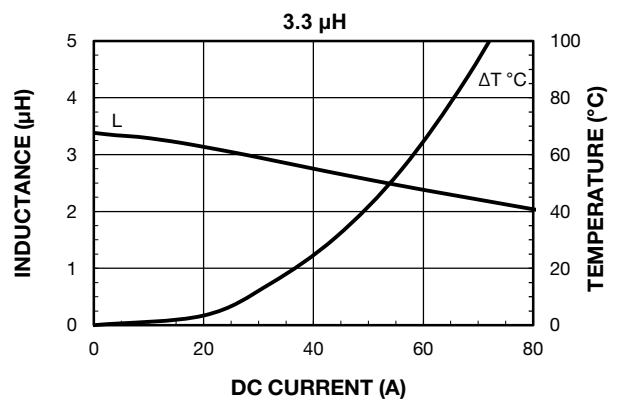
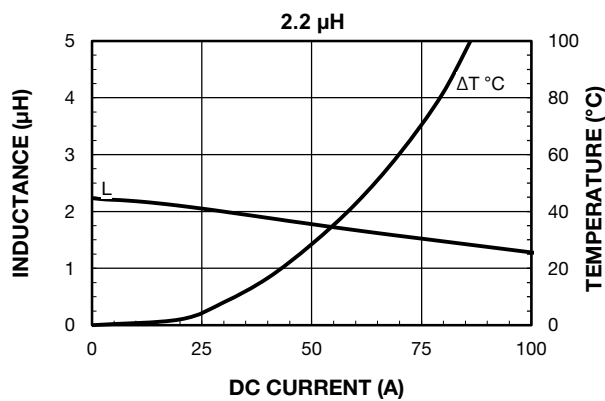
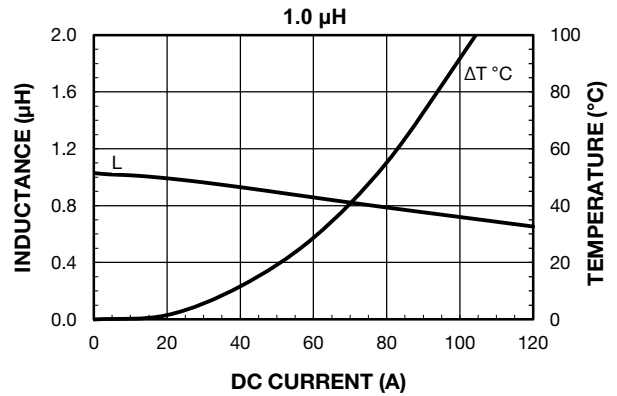
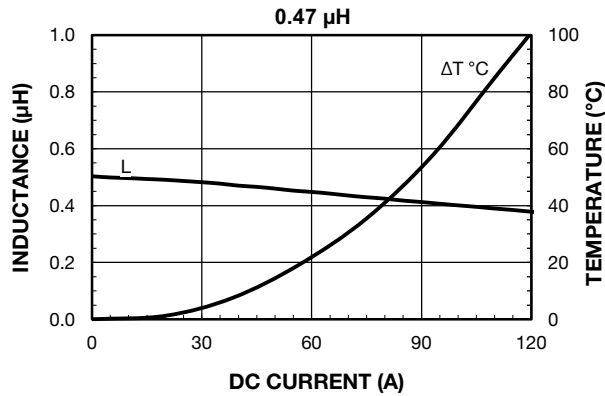
GLOBAL PART NUMBER																	
I	H	L	P	8	7	8	7	M	Z	E	R	1	0	1	M	5	1
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES			

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.

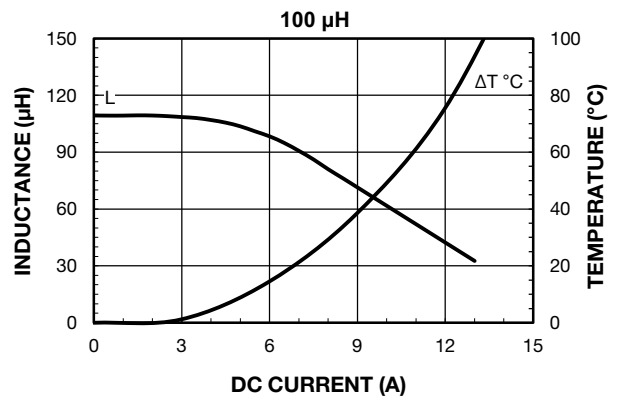
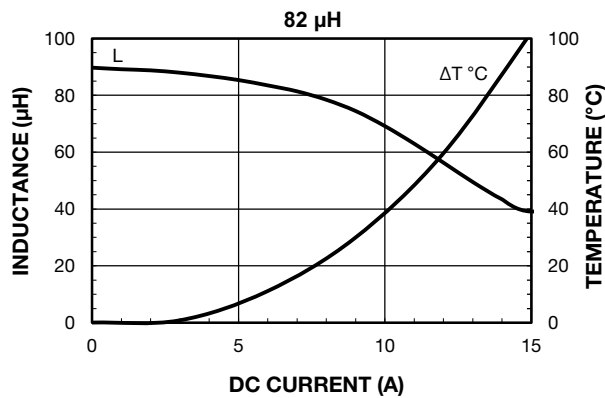
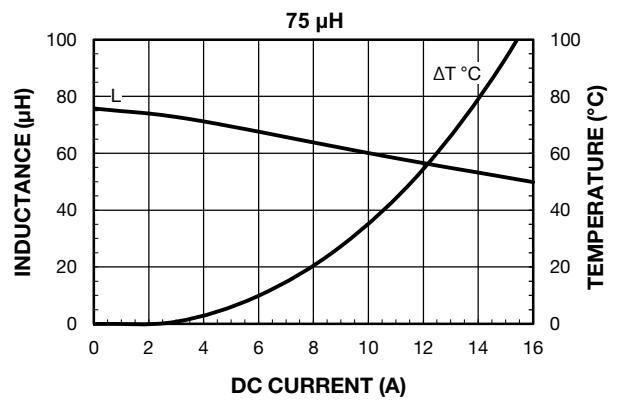
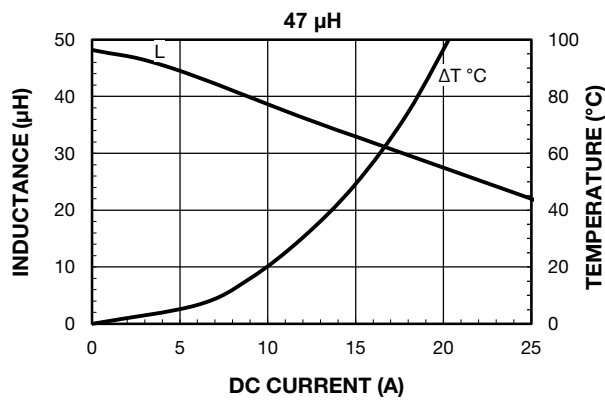
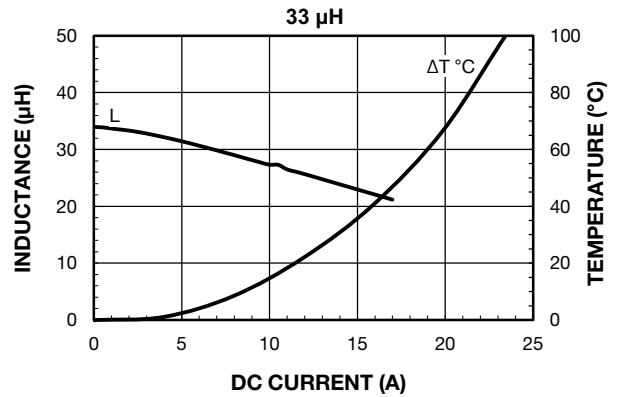
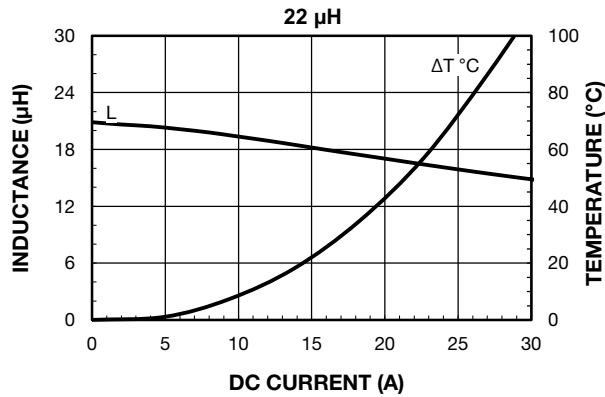


PERFORMANCE GRAPHS

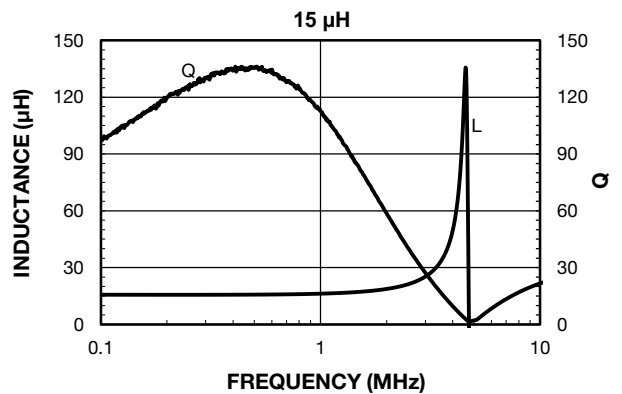
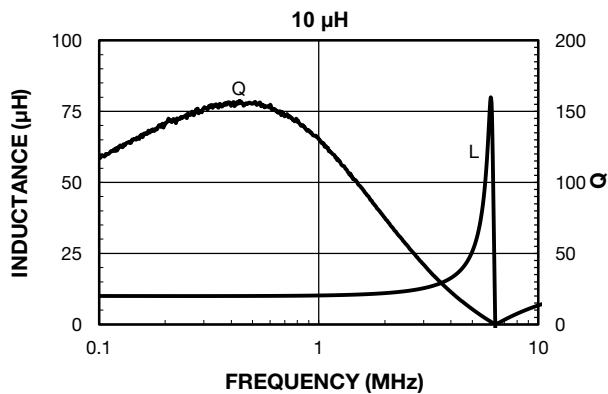
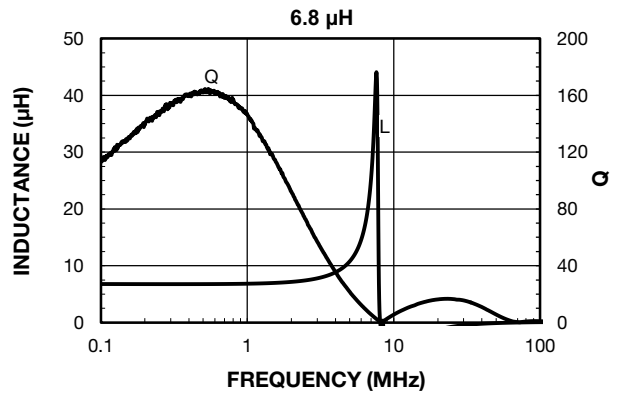
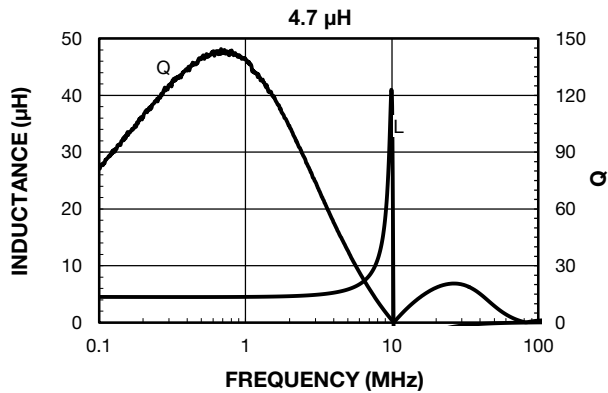
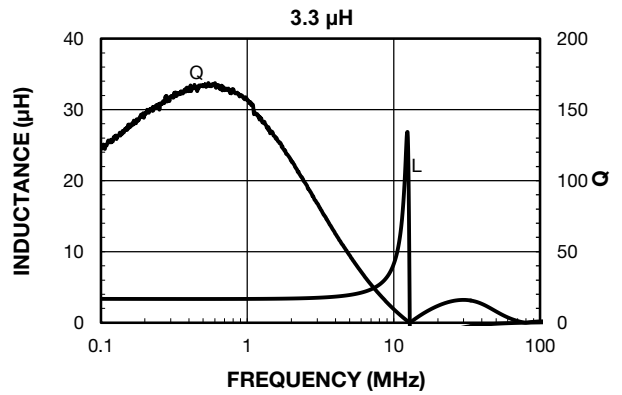
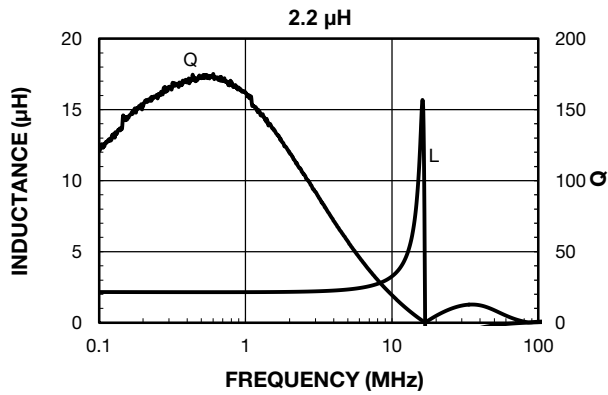
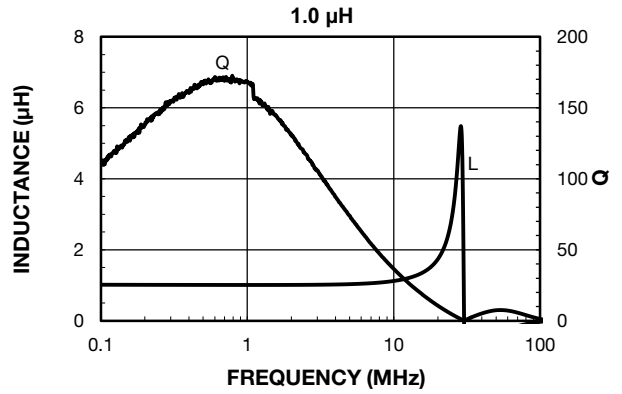
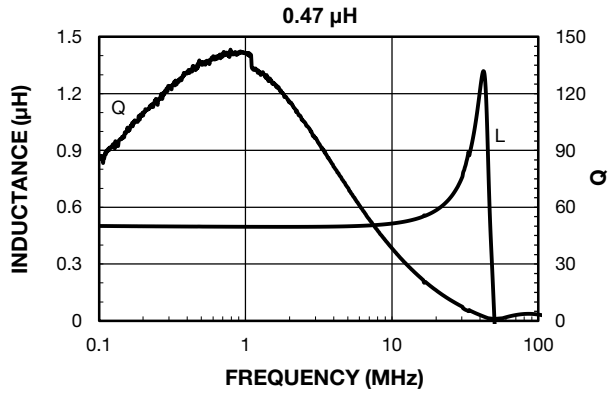




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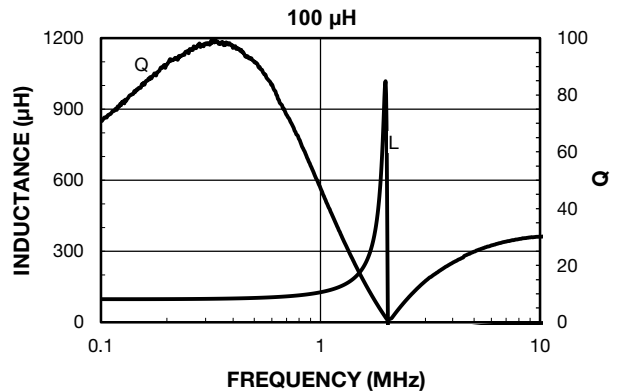
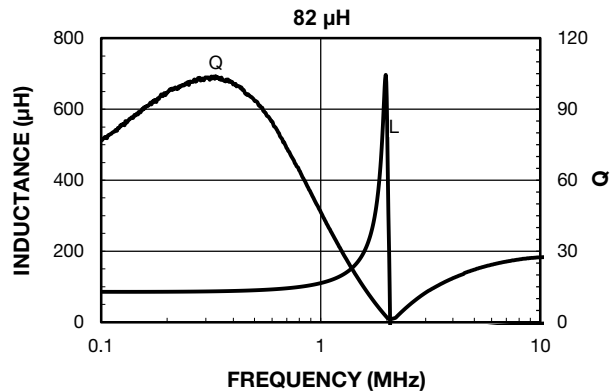
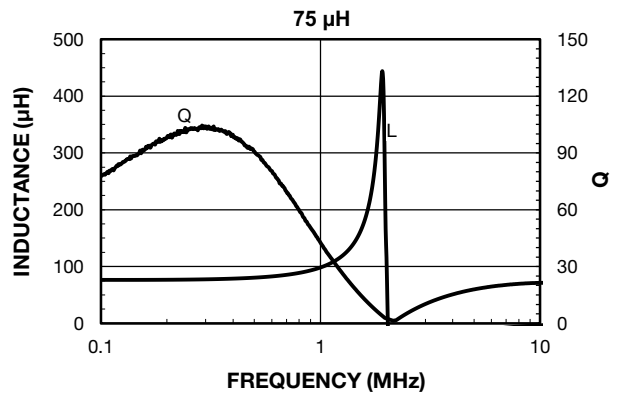
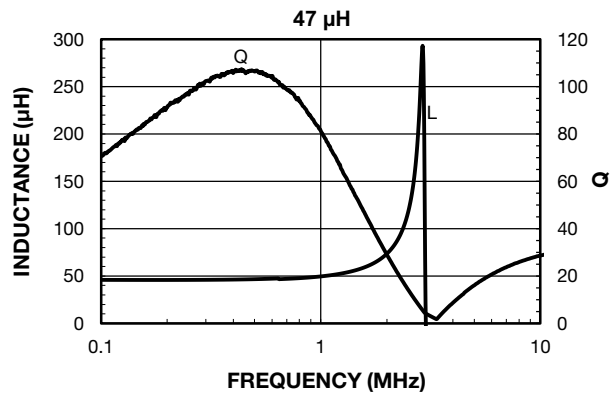
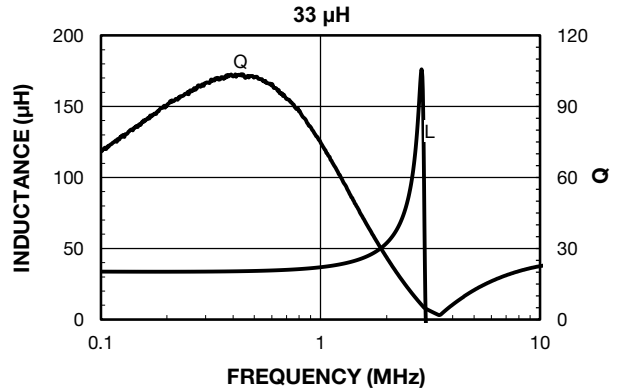
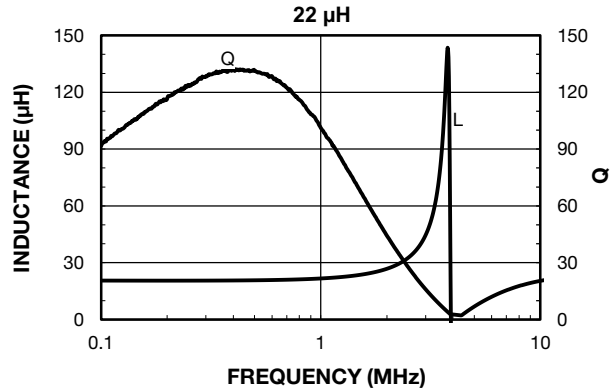


**PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY**





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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