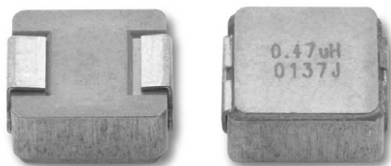


# IHLP® Automotive Inductors, High Saturation Series



## LINKS TO ADDITIONAL RESOURCES


**RoHS**  
COMPLIANT

**HALOGEN**  
**FREE**
**GREEN**  
(5-2008)

## FEATURES

- Shielded construction
- Frequency range up to 5.0 MHz
- Lowest DCR/μH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- Excellent temperature stability for inductance and saturation
- 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

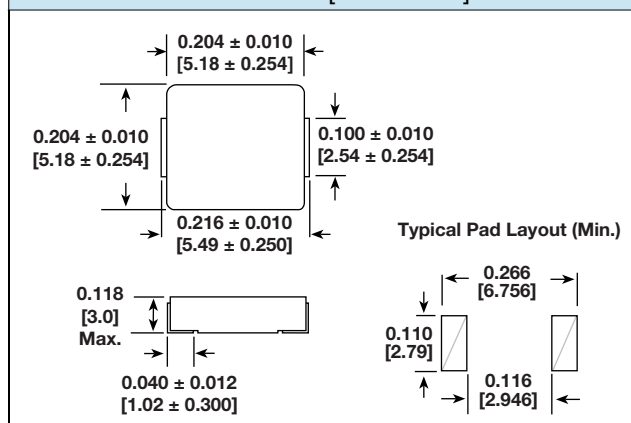
- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment / navigation systems
- Noise suppression for motors
  - Windshield wipers
  - Power seats
  - Power mirrors
  - Heating and ventilation blowers
  - HID lighting
- LED drivers

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)
0.10	3.00	3.16	23.0	27.0	255
0.22	4.30	4.52	15.5	21.0	160
0.33	5.70	6.10	13.7	19.0	128
0.47	6.70	7.04	12.2	16.0	84
0.68	8.53	8.96	10.2	13.5	80
0.82	11.3	11.9	9.3	13.0	73
1.0	13.1	13.7	9.2	12.0	59
1.5	19.7	20.7	7.2	11.0	42
2.2	27.8	29.2	5.8	10.0	39
3.3	52.1	54.7	5.0	8.5	31
4.7	73.8	77.5	3.5	8.2	25
5.6	103	108	3.0	4.1	24
10.0	158	164	2.5	4.0	16

### 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
- (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-2020CZ-A1	4.7 μH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

## GLOBAL PART NUMBER

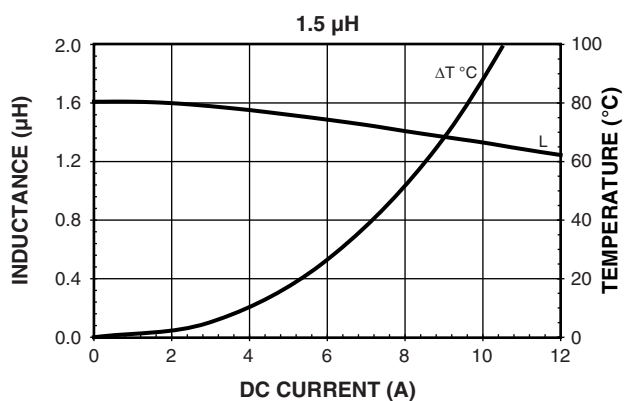
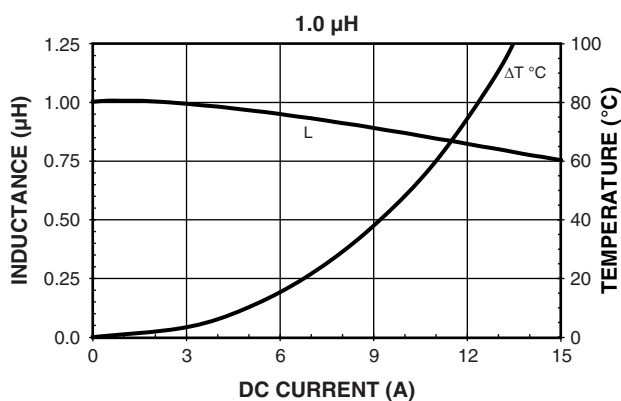
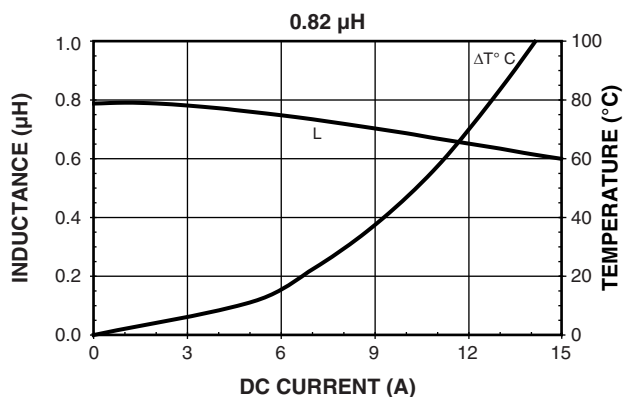
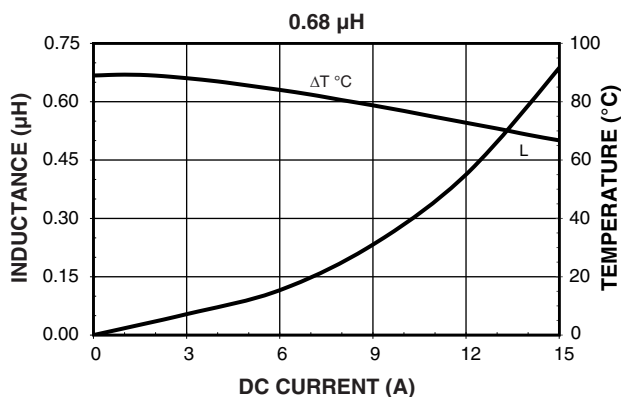
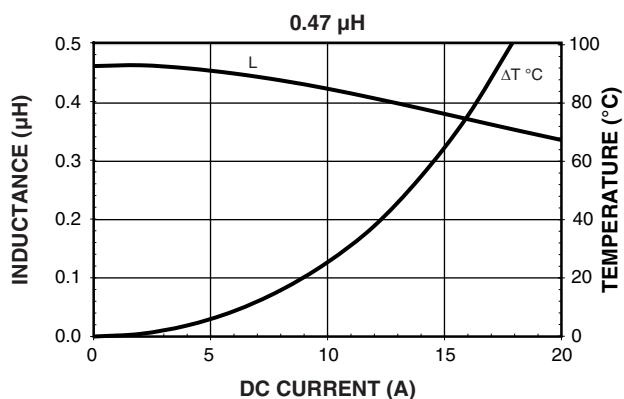
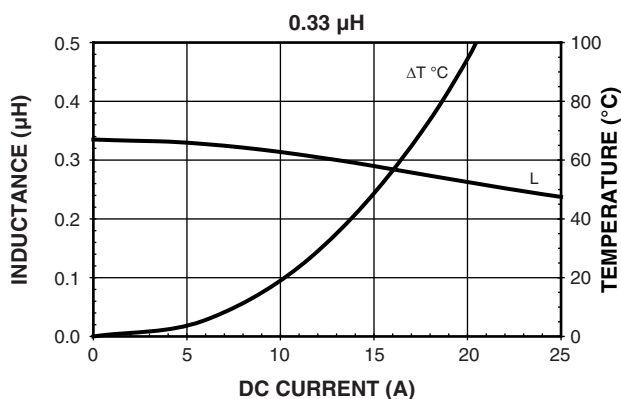
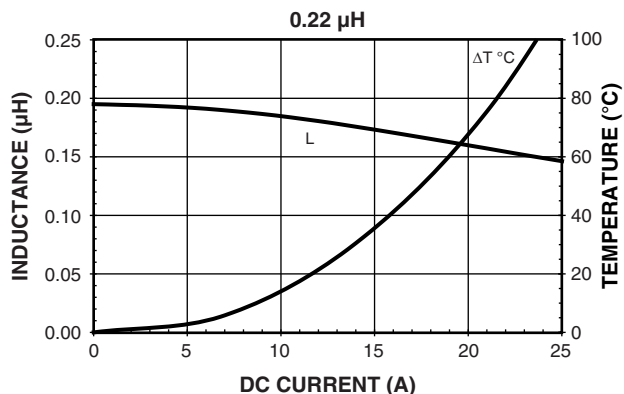
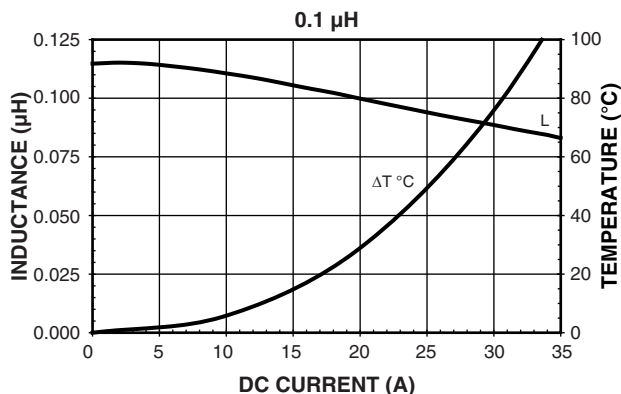
I	H	L	P	2	0	2	0	C	Z	E	R	4	R	7	M	A	1
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES	

**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.

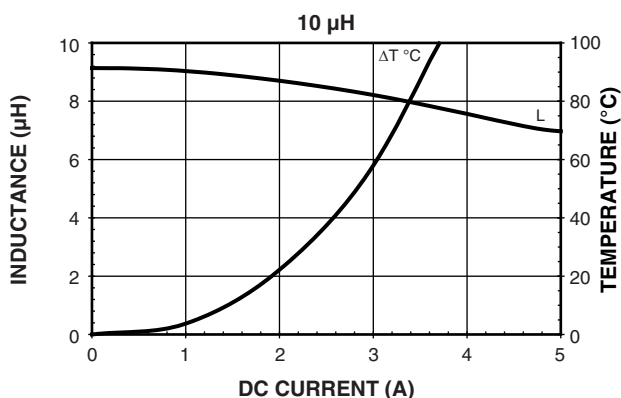
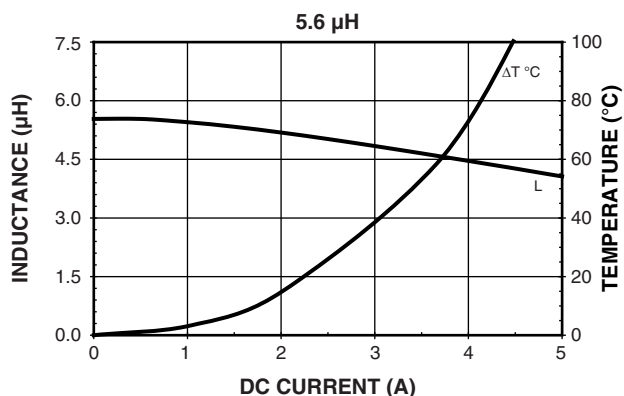
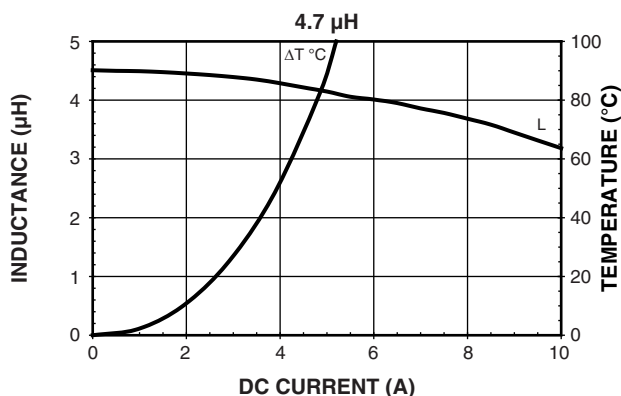
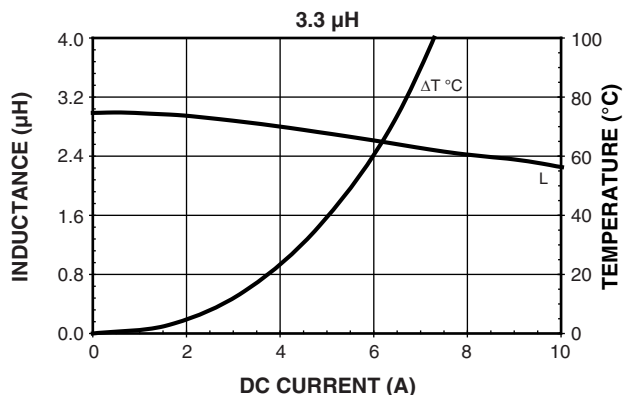
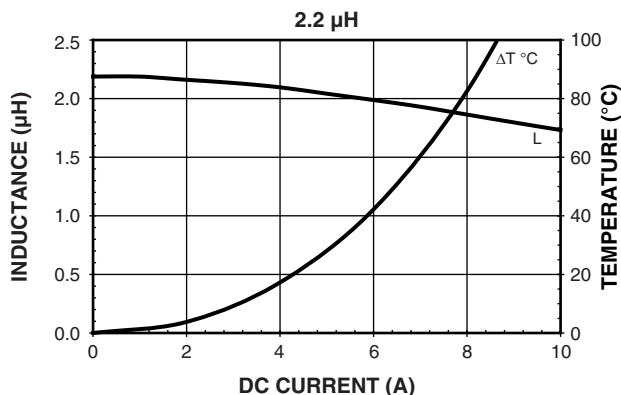


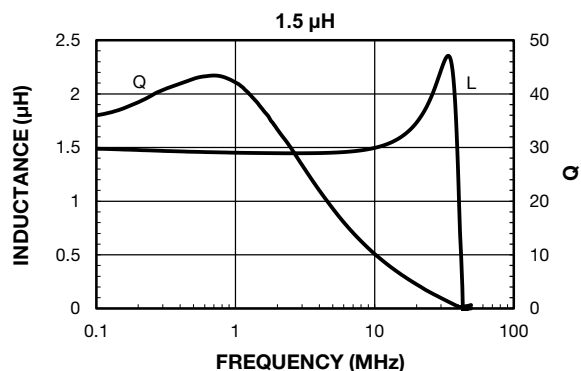
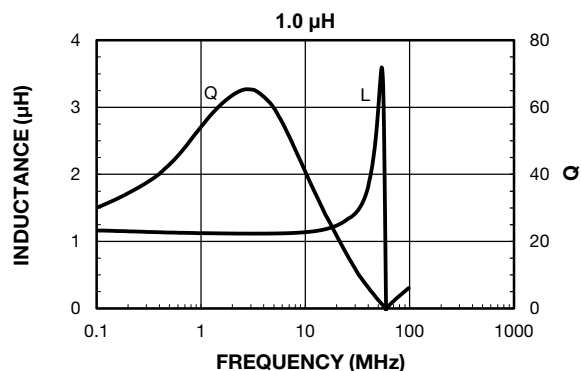
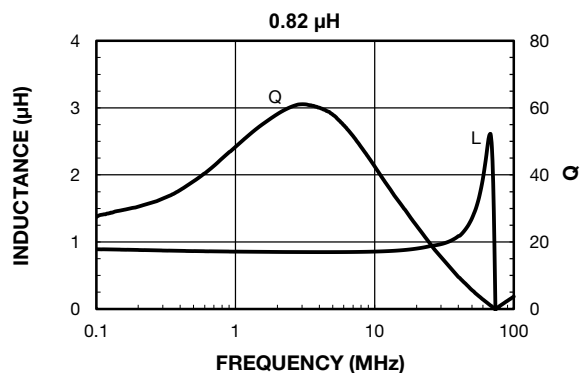
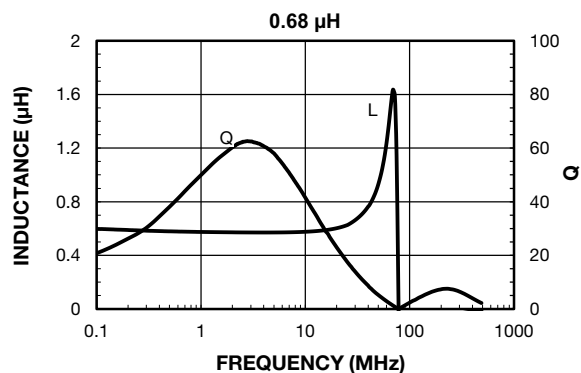
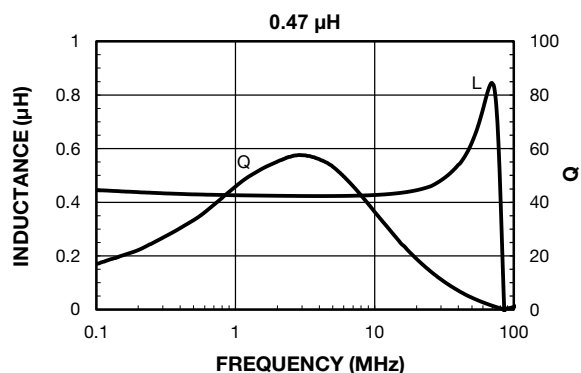
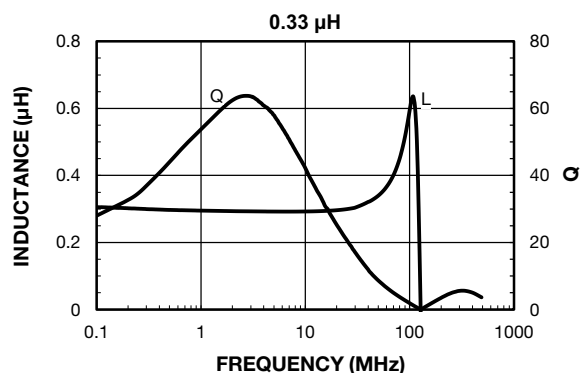
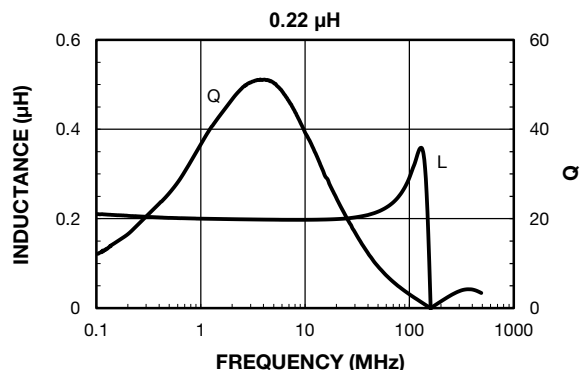
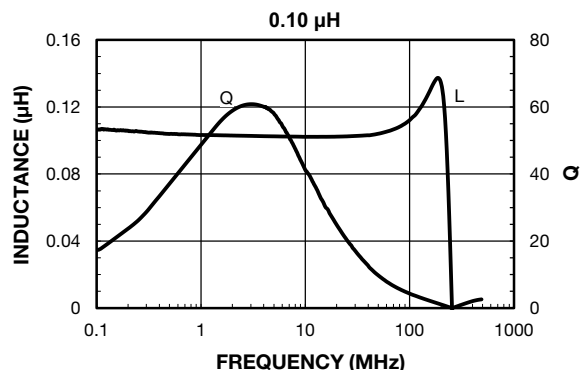
PERFORMANCE GRAPHS

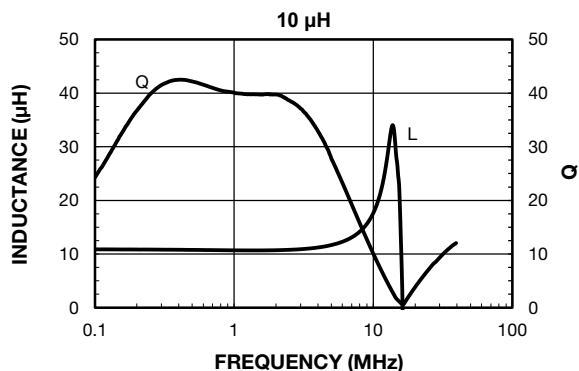
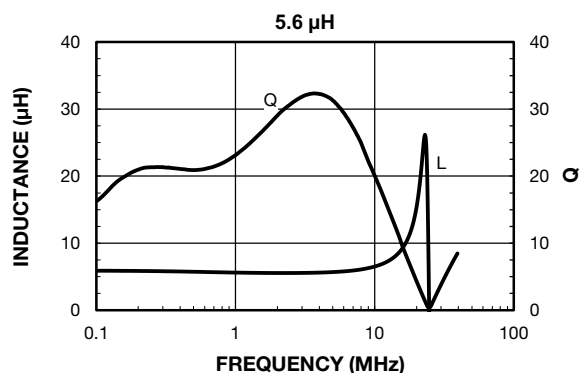
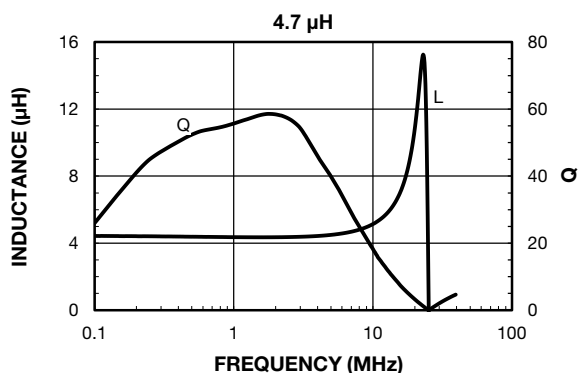
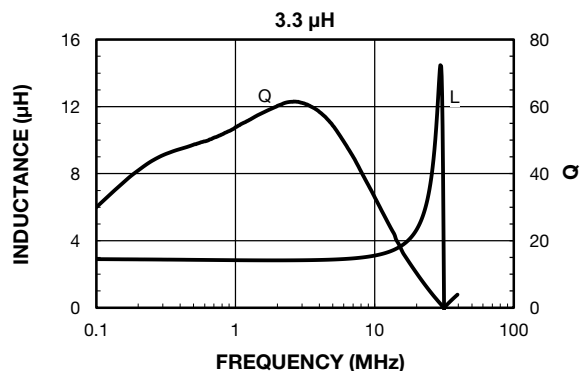
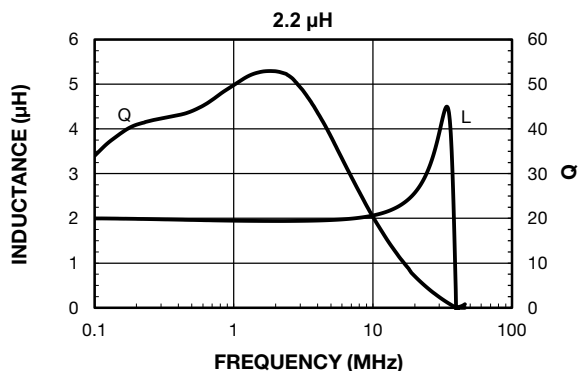




PERFORMANCE GRAPHS



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


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




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