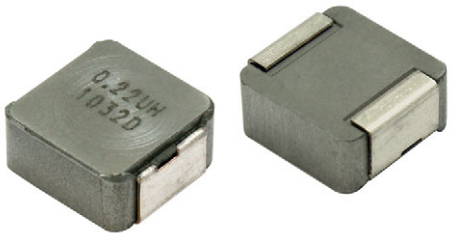
IHLP® Automotive Inductors, Low DCR Series



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

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE

LINKS TO ADDITIONAL RESOURCES

3D Models Design Tools

STANDARD ELECTRICAL SPECIFICATIONS

L_0 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) (1)	SATURATION CURRENT DC TYP. (A) (2)	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

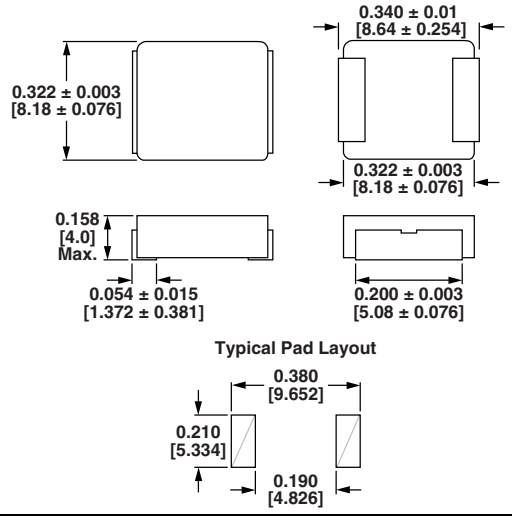
(1) DC current (A) that will cause an approximate ΔT of 40 °C

(2) DC current (A) that will cause L_0 to drop approximately 20 %

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

DIMENSIONS in inches [millimeters]



DESCRIPTION

IHLP3232DZ-1A	33 µH	± 20 %	EK	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 K	3 3 0	M	1 A
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	SERIES
		EK = tape and reel	**330** = 33 µH	**M** = ± 20 %	

PACKAGE CODE OPTIONS

EK = tape and reel packaging (1250 pcs on 13-inch reel)

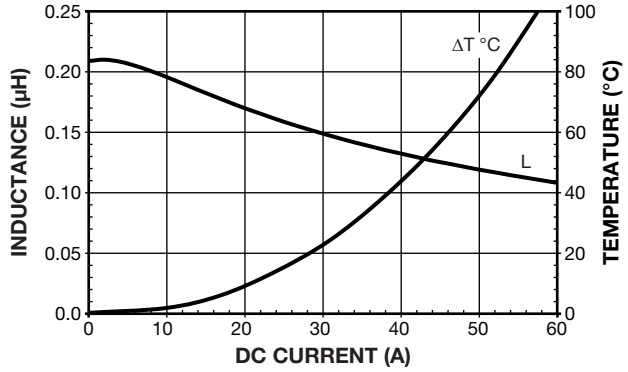
ER = tape and reel packaging (500 pcs on 13-inch reel)

Note

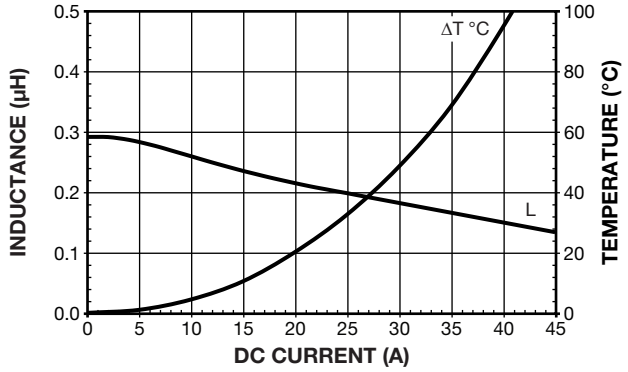
- For additional packaging details see "Packaging Methods"

PERFORMANCE GRAPHS

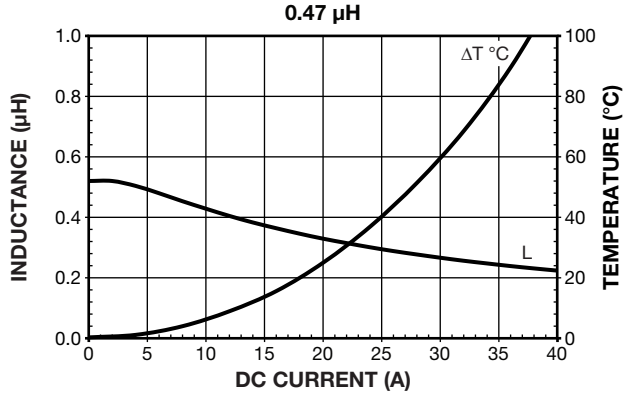
0.22 µH



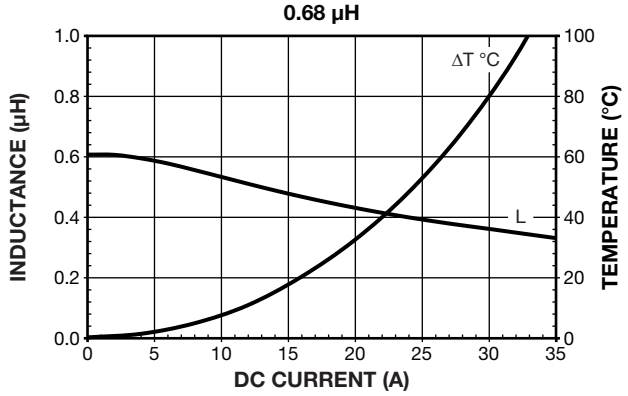
0.33 µH



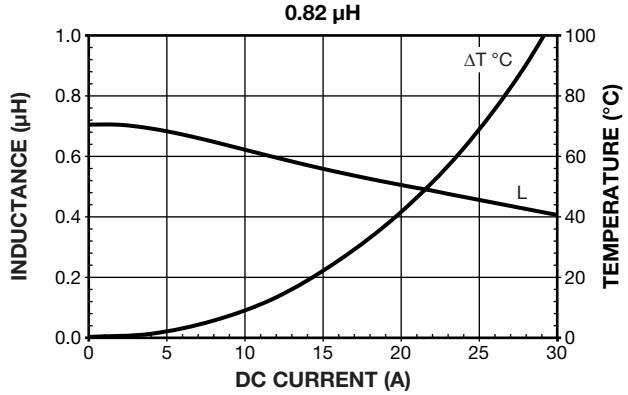
0.47 µH



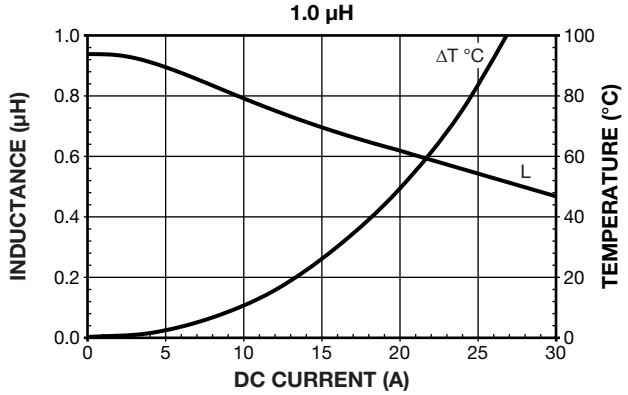
0.68 µH



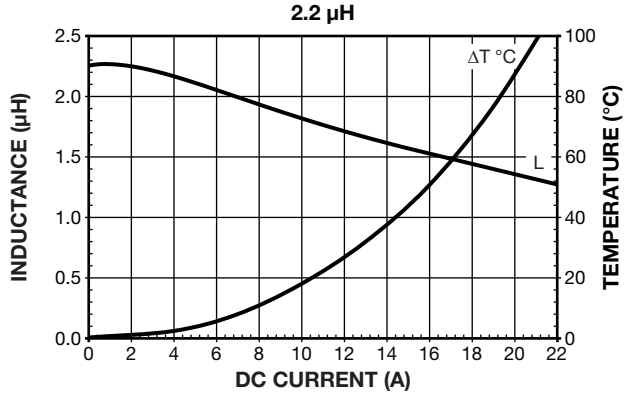
0.82 µH



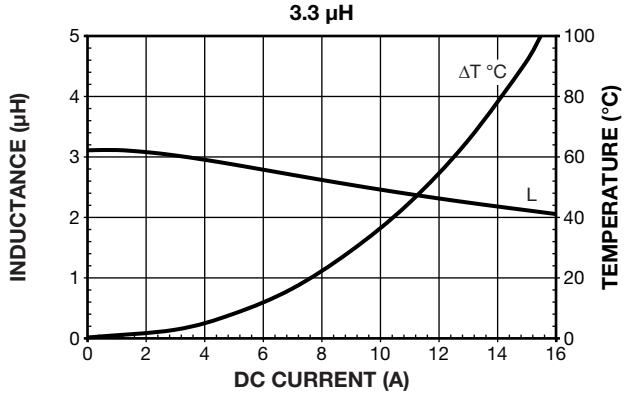
1.0 µH



2.2 µH

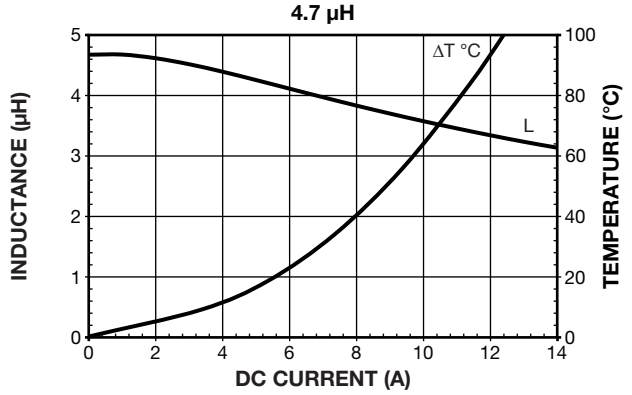


3.3 µH

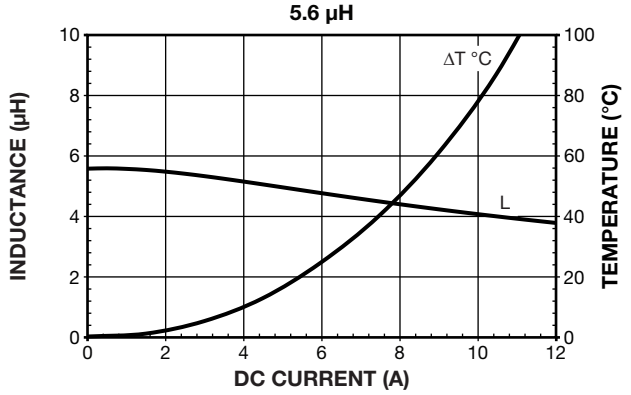


PERFORMANCE GRAPHS

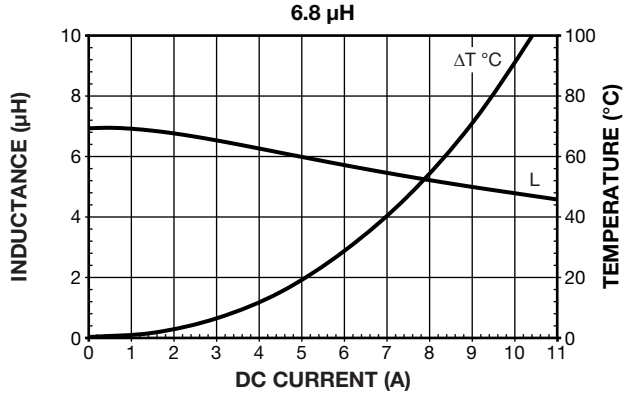
4.7 µH



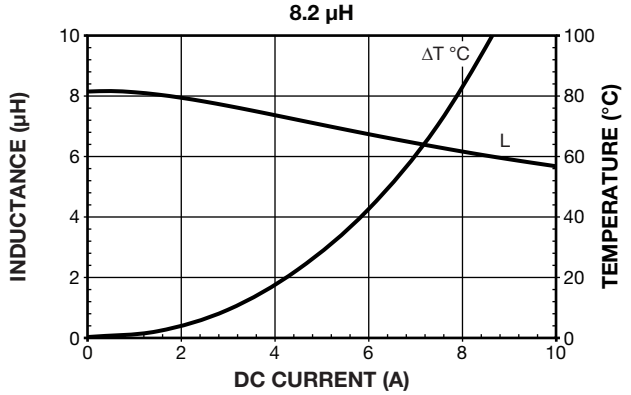
5.6 µH



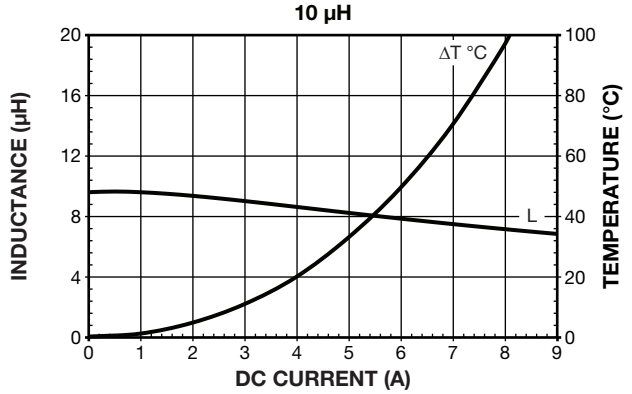
6.8 µH



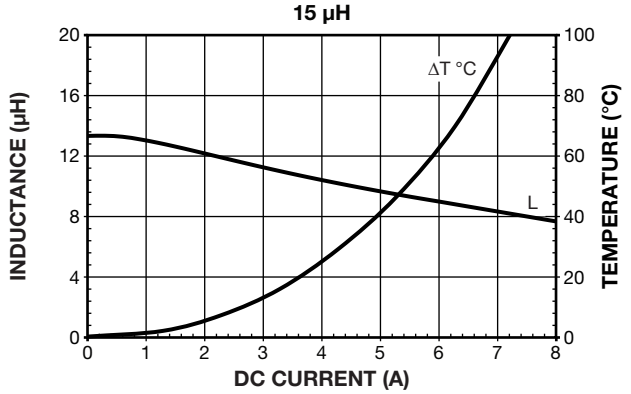
8.2 µH



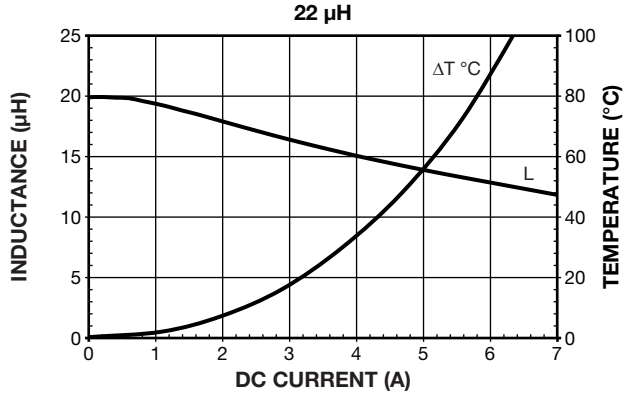
10 µH



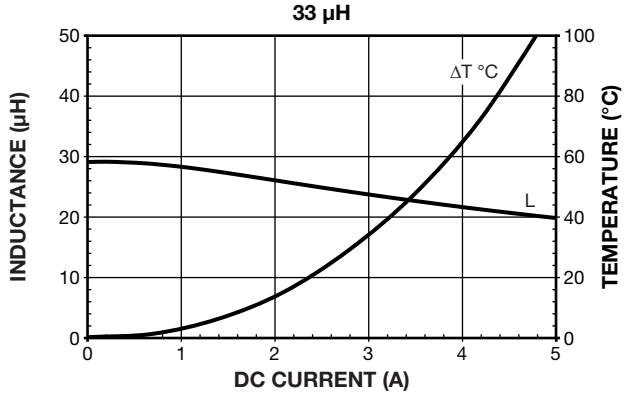
15 µH



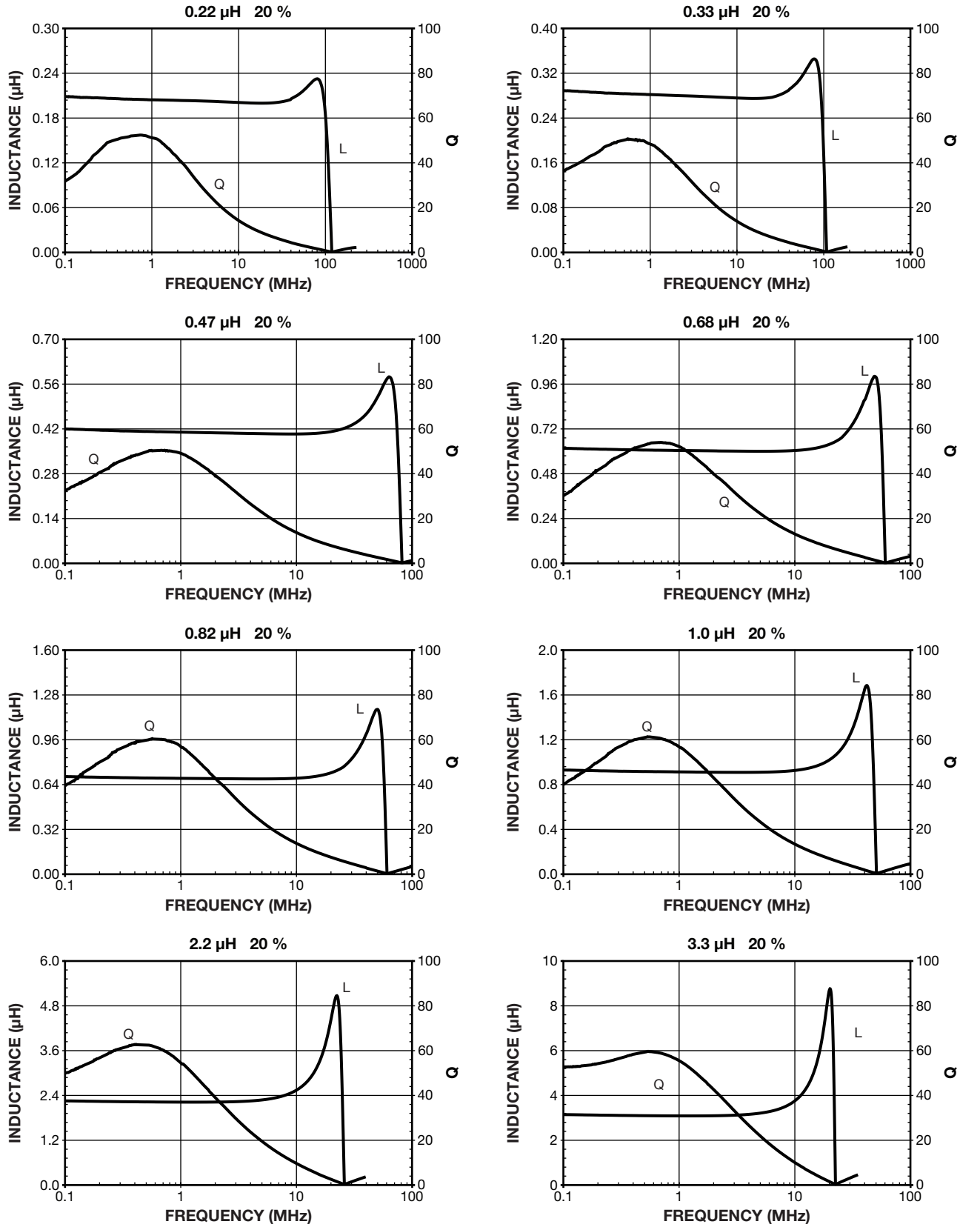
22 µH



33 µH

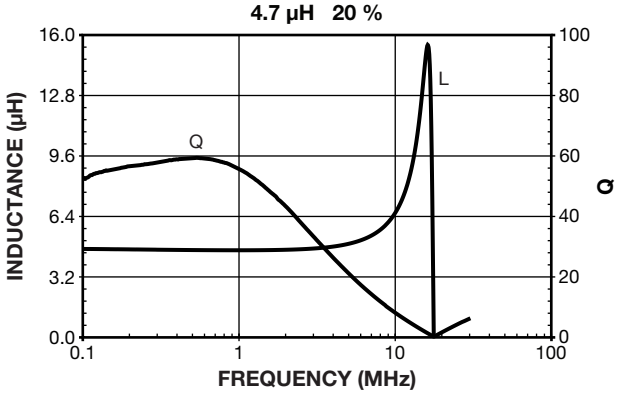


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

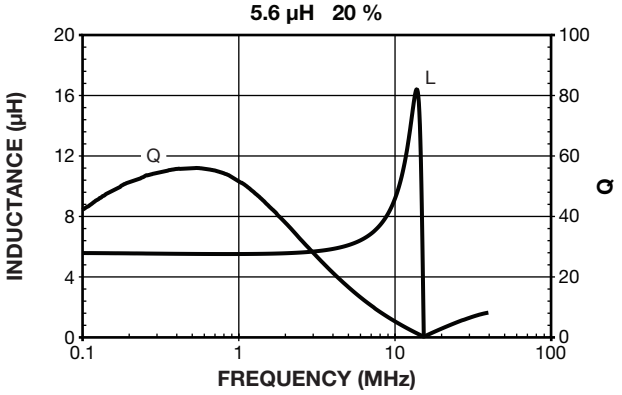


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

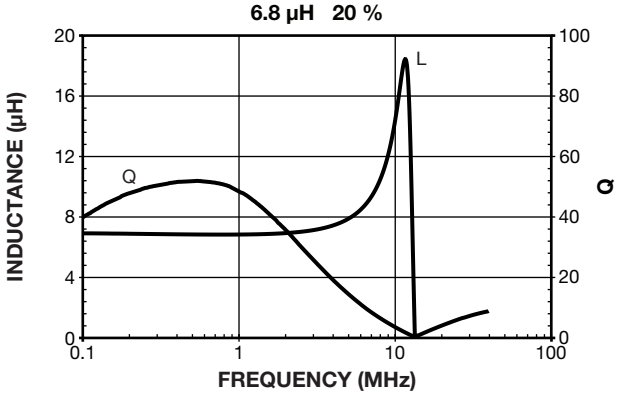
4.7 µH 20 %



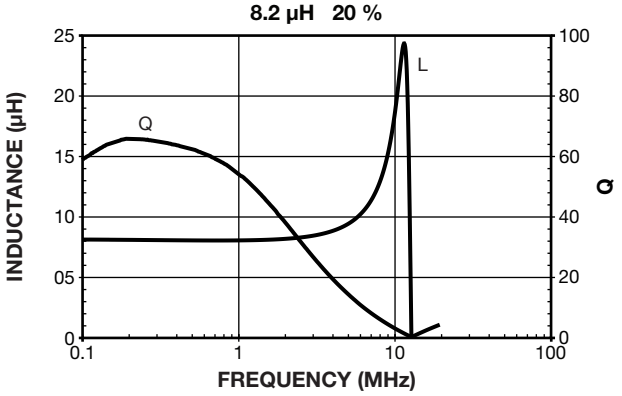
5.6 µH 20 %



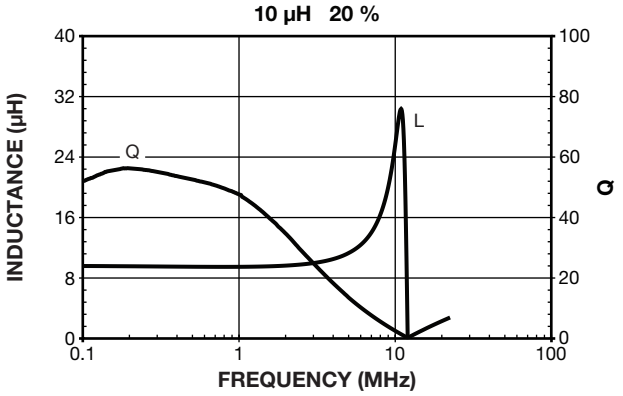
6.8 µH 20 %



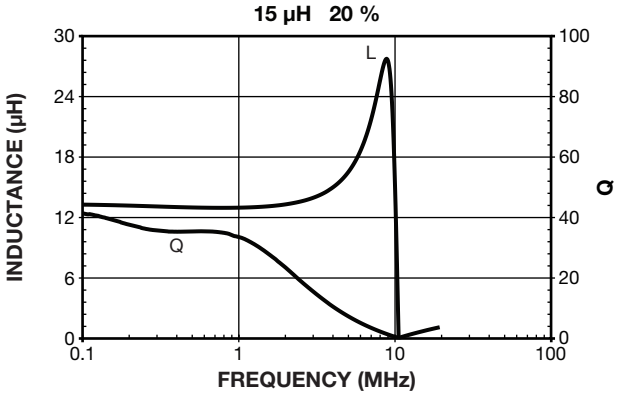
8.2 µH 20 %



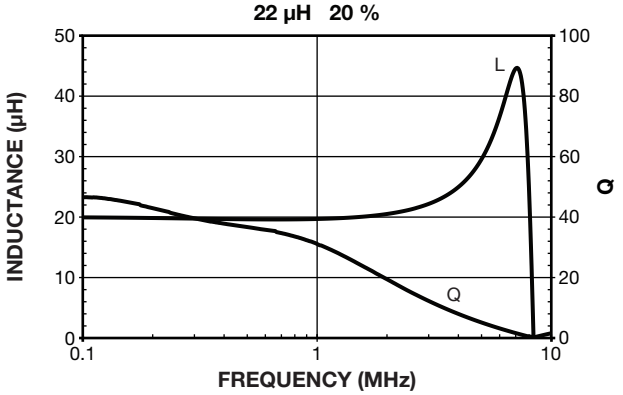
10 µH 20 %



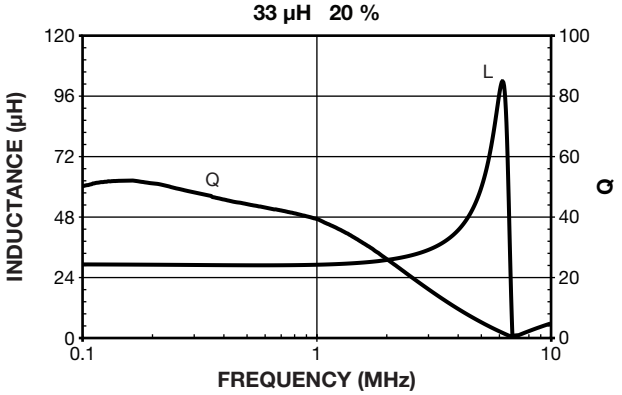
15 µH 20 %



22 µH 20 %



33 µH 20 %



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