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



LINKS TO ADDITIONAL RESOURCES

Product Page | 3D Models | Calculators

FEATURES

- 6.86 mm x 6.47 mm x 3.0 mm size
- Magnetically shielded construction
- Metal alloy core
- Polarity marking available for EMI sensitive applications (see “EP” package code below for more information)
- Handles high transient current spikes without saturation
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

APPLICATIONS

- Automotive domain control units (DCU) and transmission / engine control
- DC/DC converters for infotainment, navigation systems, braking systems, motors, LED lighting
- Power line noise suppression and filtering

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	INDUCTANCE ± 20 % (µH) AT 0 A	DCR 25 °C (mΩ)		HEAT RATING CURRENT DC TYP. (A) (1)	SATURATION CURRENT DC TYP. (A) (2)		SRF TYP. (MHz)
		TYP.	MAX.		20 % DROP	30 % DROP	
IHLP2525CZE_R33M5A	0.33	3.25	3.48	22.0	16.0	23.0	112
IHLP2525CZE_R47M5A	0.47	3.87	4.14	20.0	14.0	21.0	82.4
IHLP2525CZE_R68M5A	0.68	5.38	5.76	16.5	17	20	56.1
IHLP2525CZE_R82M5A	0.82	6.75	7.22	13.8	16.8	22	68.6
IHLP2525CZE_1R0M5A	1.0	7.9	8.45	12	13	15	53.2
IHLP2525CZE_1R5M5A	1.5	12.3	13.2	10.6	11.6	16	45.9
IHLP2525CZE_2R2M5A	2.2	17.1	18.3	8.1	10.8	12	31.2
IHLP2525CZE_3R3M5A	3.3	26.5	28.4	6.8	8.3	11	28.6
IHLP2525CZE_4R7M5A	4.7	35.9	38.4	5.6	5.6	6.5	25.5
IHLP2525CZE_5R6M5A	5.6	42.6	45.6	5.3	4.8	6.5	22.8
IHLP2525CZE_6R8M5A	6.8	53.8	57.6	4.4	4.4	5	19.6
IHLP2525CZE_100M5A	10	71.9	76.9	4	2.9	4	14
IHLP2525CZE_150M5A	15	98.9	105.9	3.7	2.8	4.5	10.4
IHLP2525CZE_220M5A	22	163	174	2.8	2.2	3.5	8.3

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, 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

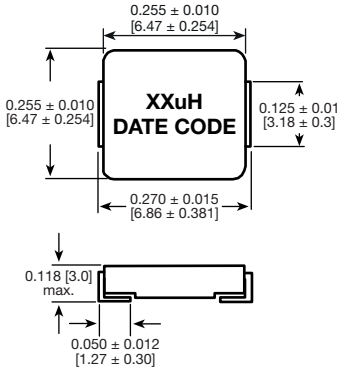
(1) DC current (A) that will cause an approximate ΔT of 40 °C

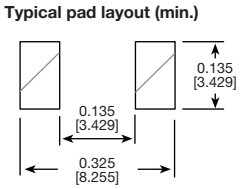
(2) DC current (A) that will cause L_0 to drop approximately 20 %

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DIMENSIONS in inches [millimeters]





DESCRIPTION

IHLP-2525CZ-5A	22 µH	± 20 %	EK	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I	H	L	P	2	5	2	5	C	Z	E	K	2	2	0	M	5	A
PRODUCT FAMILY				SIZE						PACKAGE CODE		IMPEDANCE VALUE			INDUCTANCE TOLERANCE	SERIES	

EK = tape and reel **220** = 22 µH **M** = ± 20 %

PACKAGE CODE OPTIONS

EK = tape and reel packaging (2500 pcs on 13-inch reel)

ER = tape and reel packaging (2000 pcs on 13-inch reel)

EP = tape and reel packaging (2000 pcs on 13-inch reel), includes polarity part marking

Note

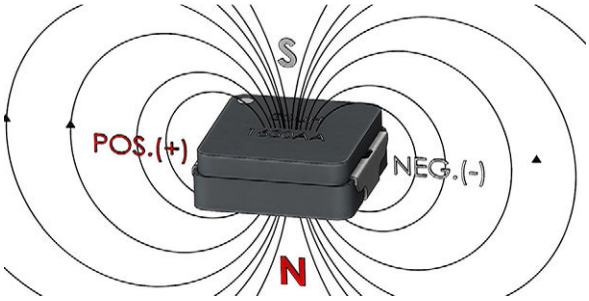
- For additional packaging details see "Packaging Methods"

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MAGNETIC FIELD

CONFIGURATION OF THE "B" (FLUX) FIELD FOR THE IHLP WITH POLARITY MARKING



When a positive (+) voltage is placed on the terminal marked with the polarity dot and the opposite terminal is negative (-), the resulting current flow will create a magnetic south pole on the top side of the IHLP.

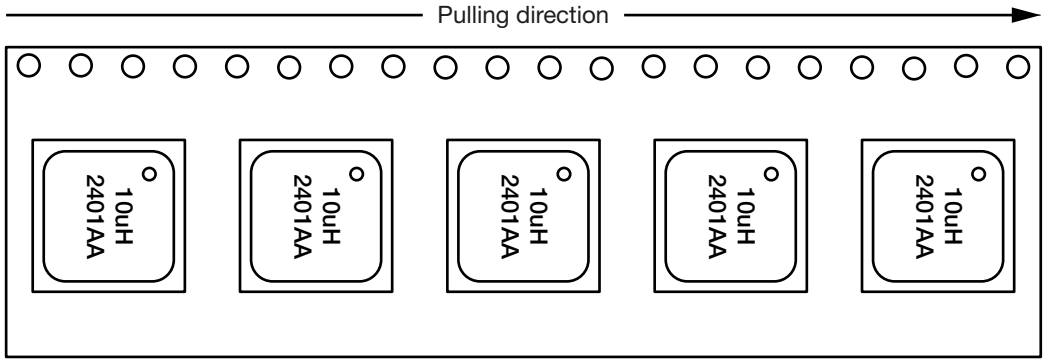
For the IHLP-2525CZ-5A series, the polarity mark also indicates the "start" or "inside" lead of the winding.

Observing the polarity orientation when mounting the inductor will ensure the most consistent EMI reduction performance.

Drawing is for illustrative purposes only. The flux leakage from the inductor is minimal.

PART MARKING / POCKET TAPE ORIENTATION

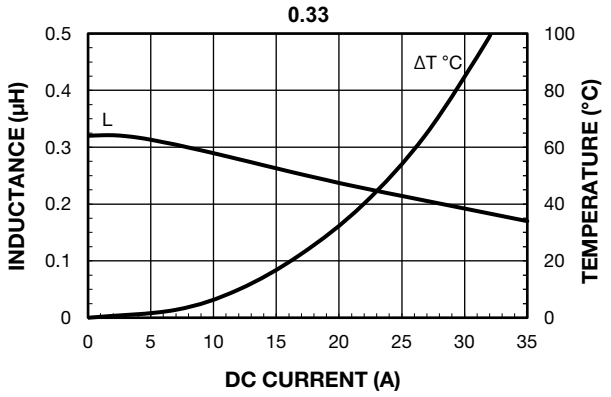
For IHLP with polarity marking option

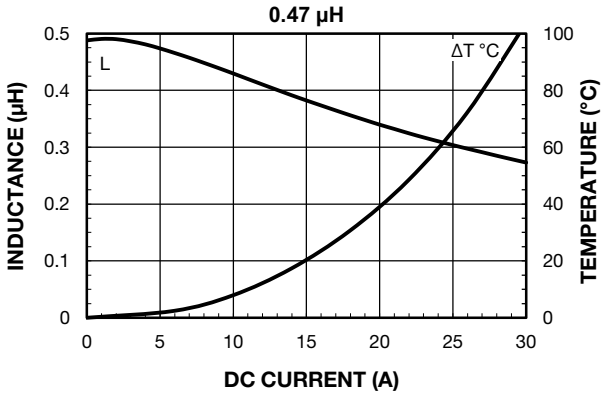


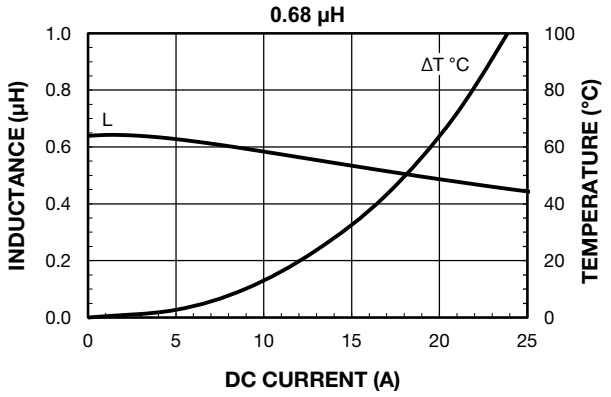
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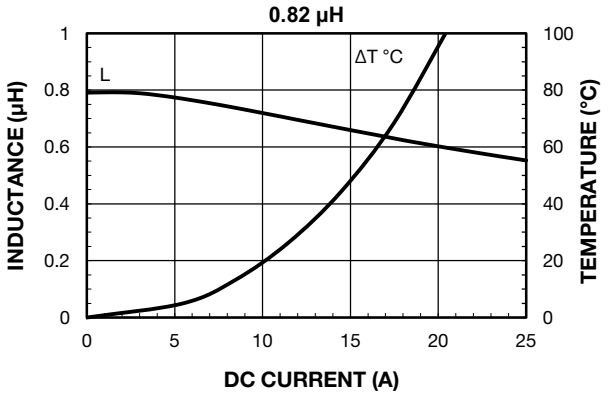
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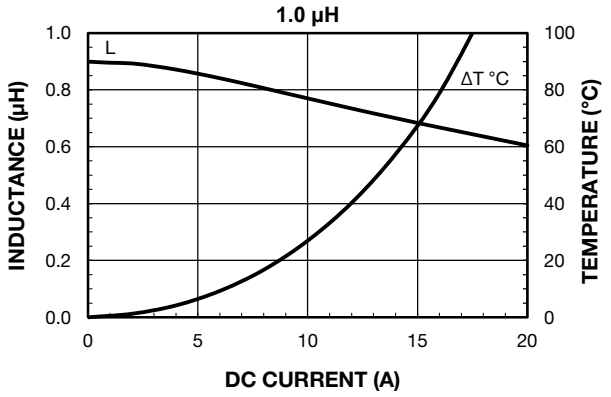
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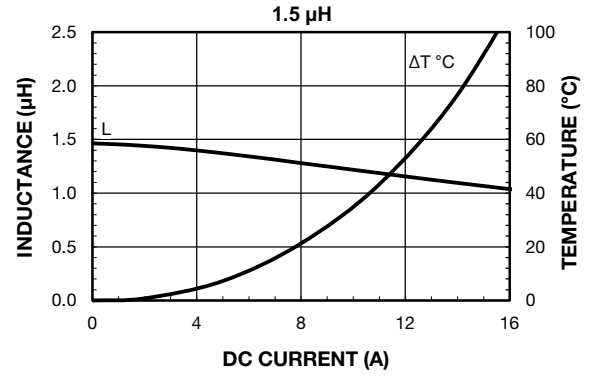


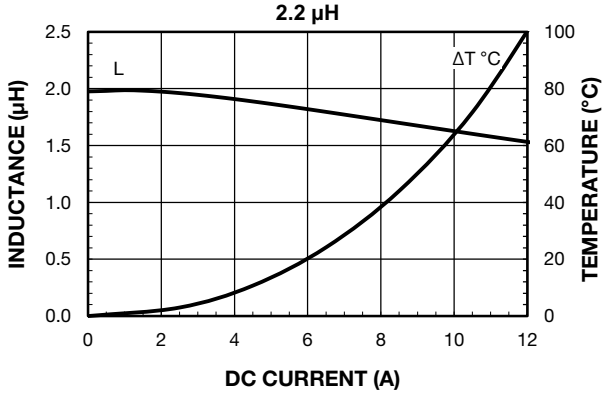


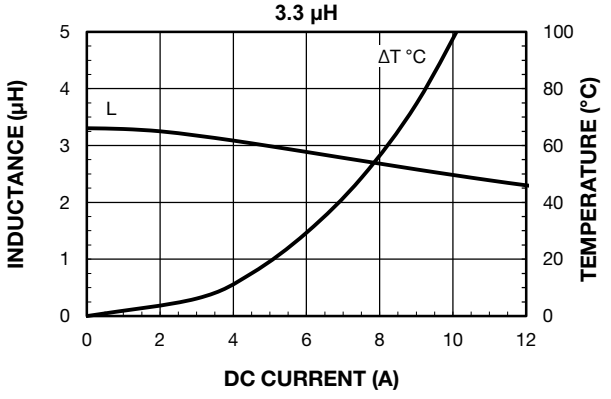






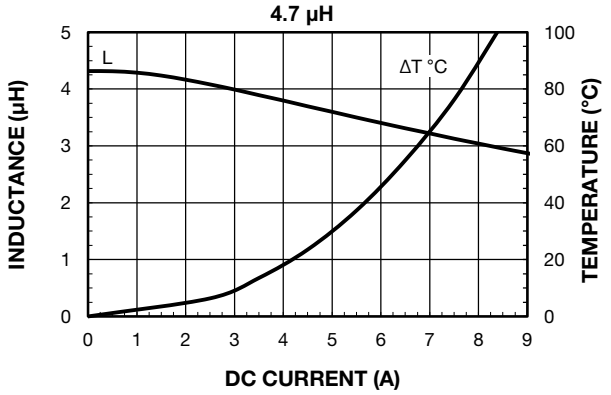


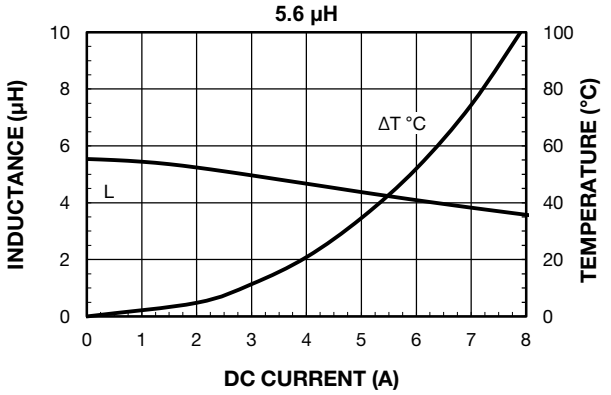


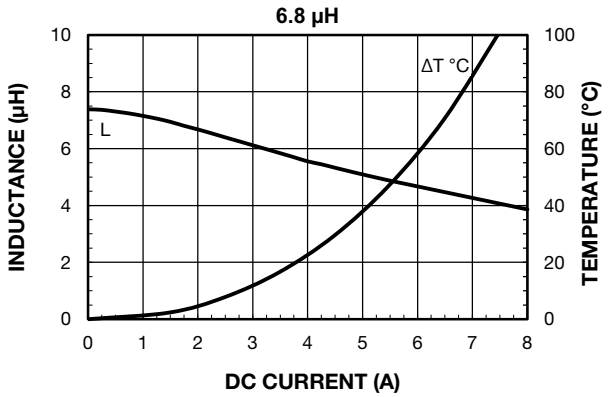


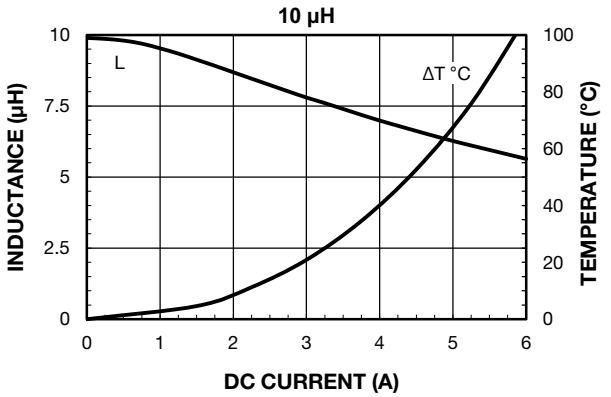
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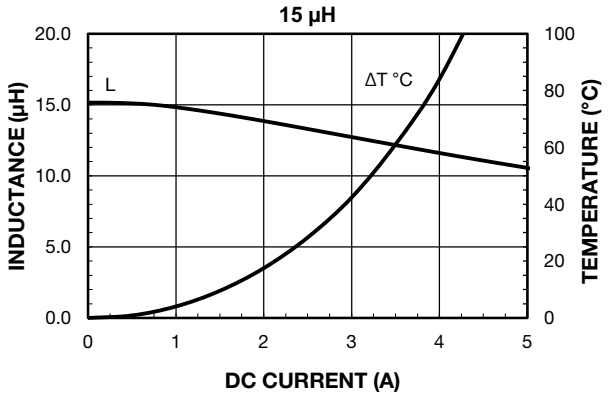
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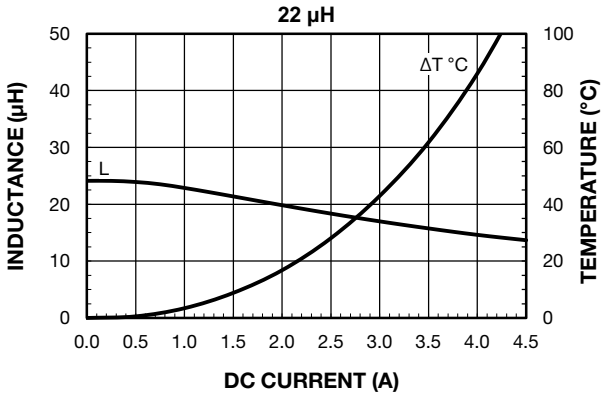








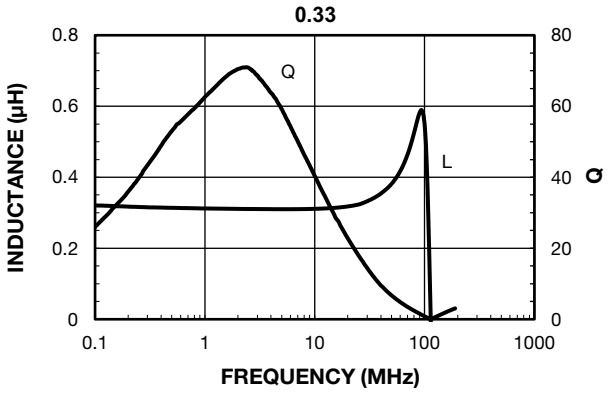


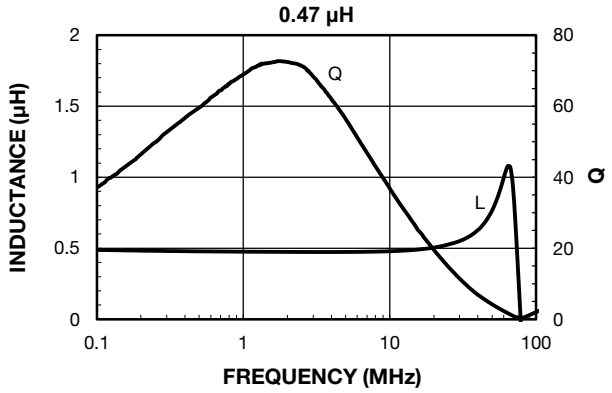


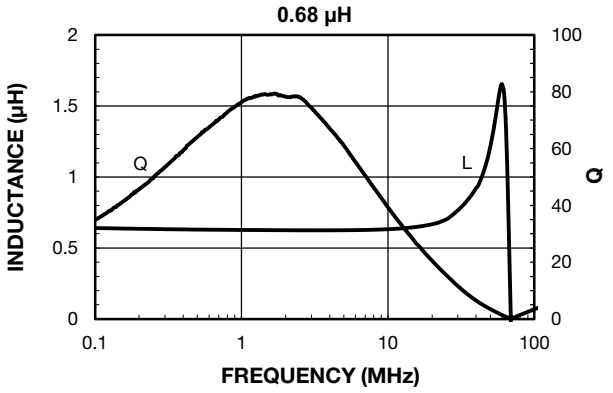
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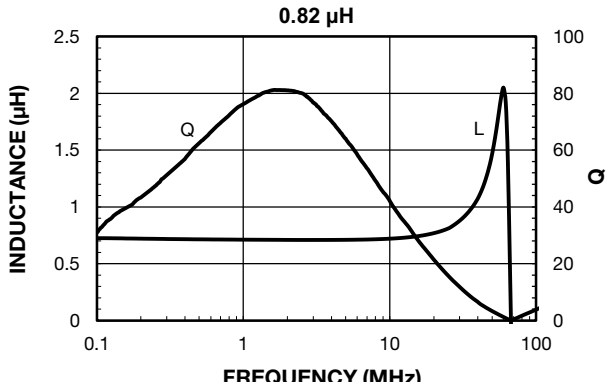
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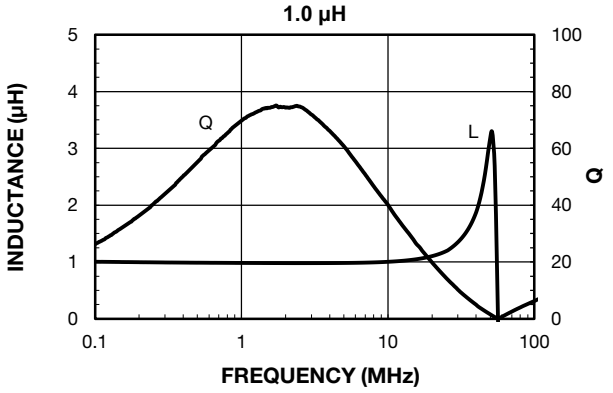
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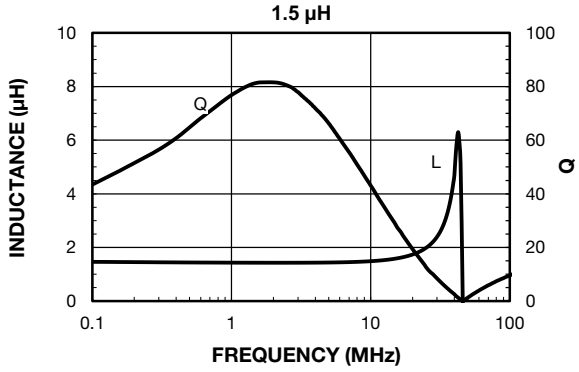


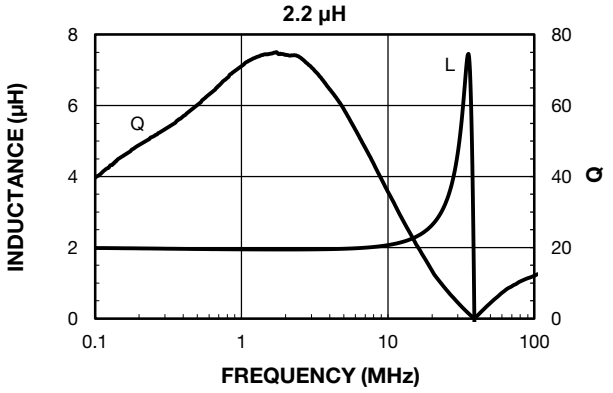


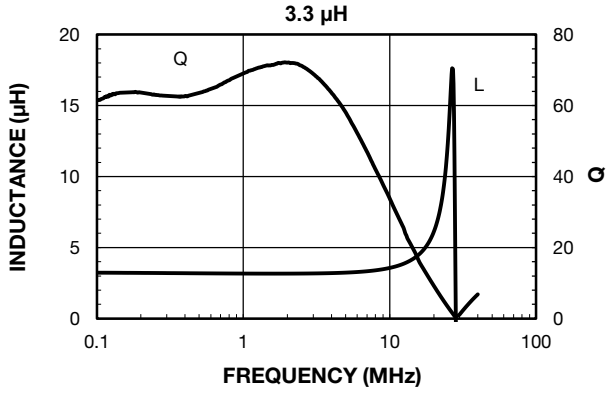








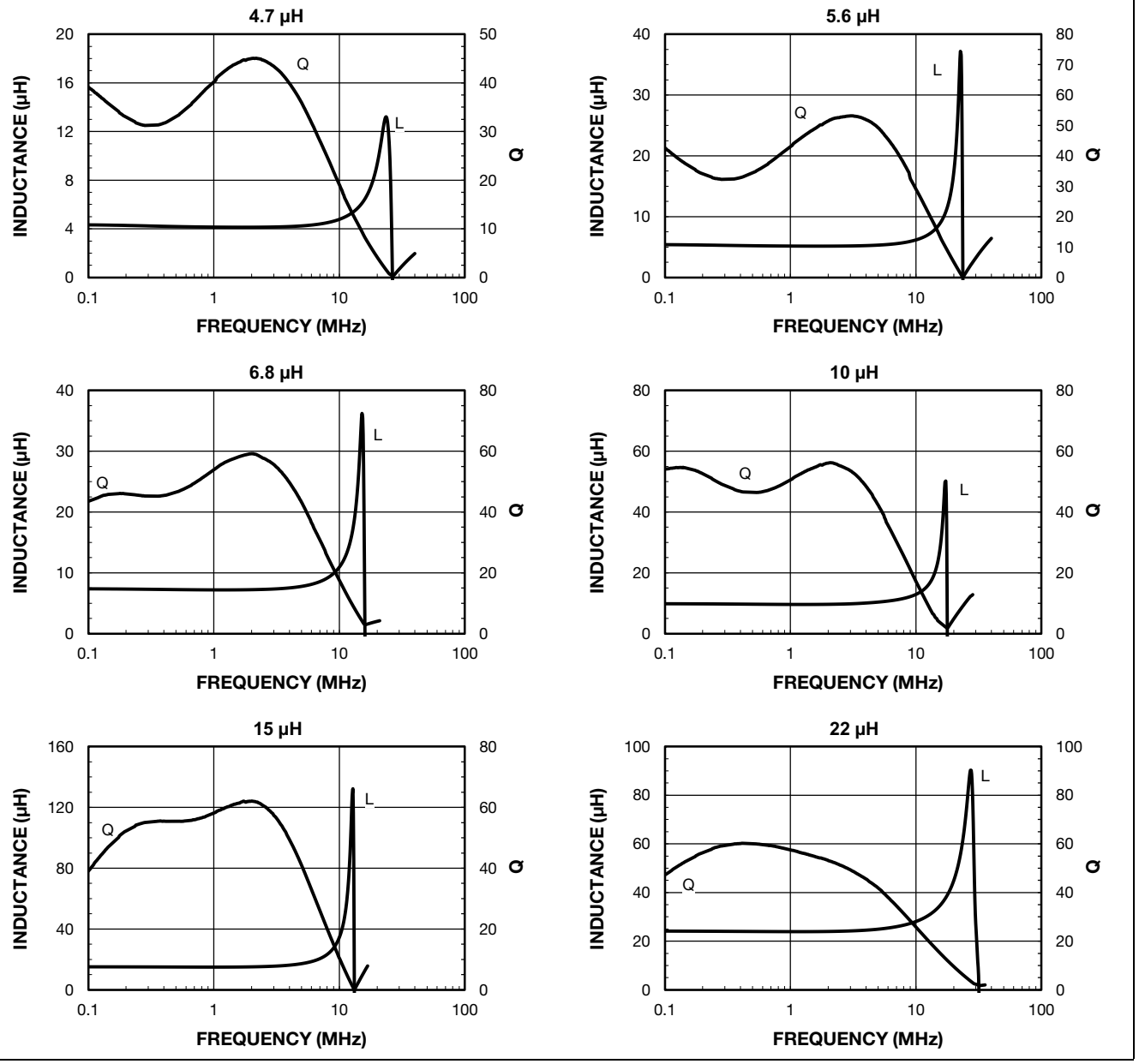




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