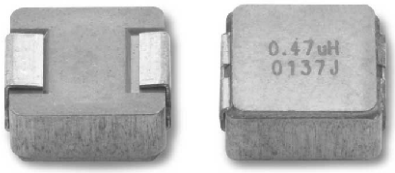
Low Profile, High Current IHLP® Inductors



Manufactured under one or more of the following:
US Patents; 6,198,375/6,204,744/6,449,829/6,460,244.
Several foreign patents, and other patents pending.

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

Pb-free
RoHS COMPLIANT
HALOGEN FREE GREEN (5-2008)

APPLICATIONS

- PDA / notebook / desktop / server applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)

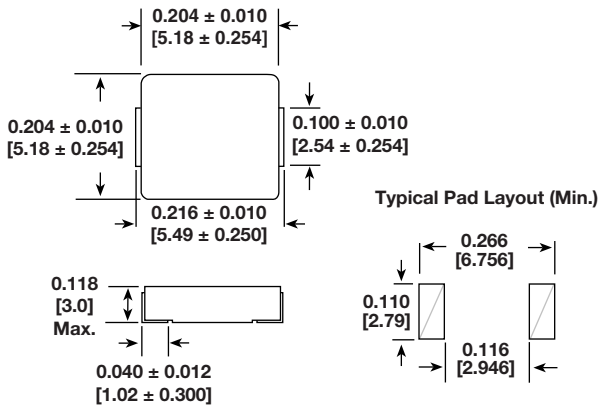
STANDARD ELECTRICAL SPECIFICATIONS

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) (3)	SATURATION CURRENT DC TYP. (A) (4)	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	5.30	5.56	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	152	158	2.5	4.0	16
15.0	252	265	1.9	2.5	13.5

Notes

(1) All test data is referenced to 25 °C ambient
(2) Operating temperature range -55 °C to +125 °C
(3) DC current (A) that will cause an approximate ΔT of 40 °C
(4) DC current (A) that will cause L_0 to drop approximately 20 %
(5) 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.

DIMENSIONS in inches [millimeters]



DESCRIPTION

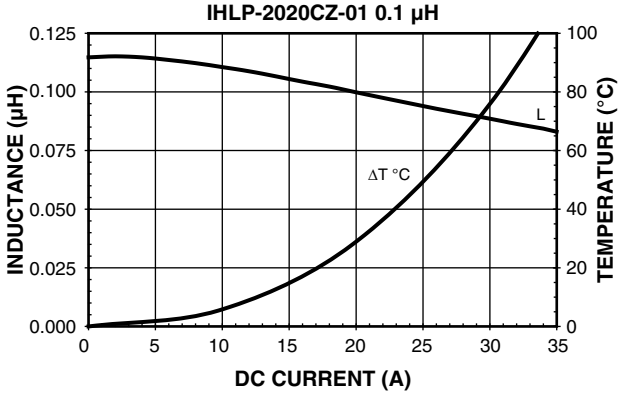
IHLP-2020CZ-01	4.7 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

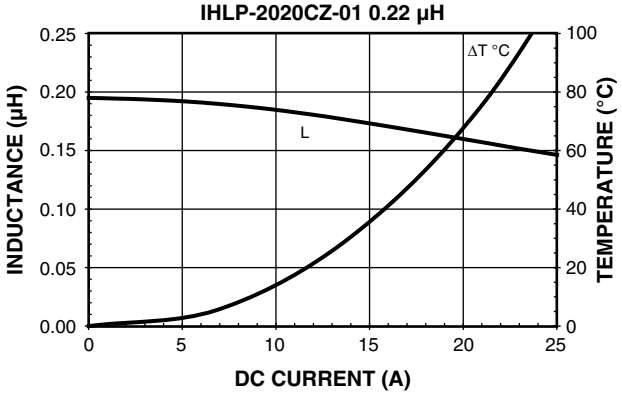
I	H	L	P	2	0	2	0	C	Z	E	R	4	R	7	M	0	1
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES	

PERFORMANCE GRAPHS

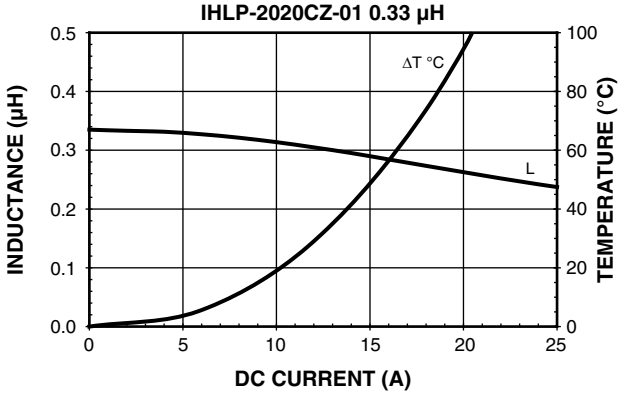
IHLP-2020CZ-01 0.1 µH



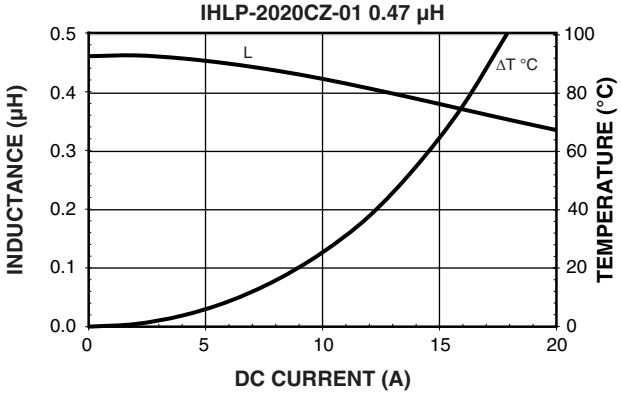
IHLP-2020CZ-01 0.22 µH



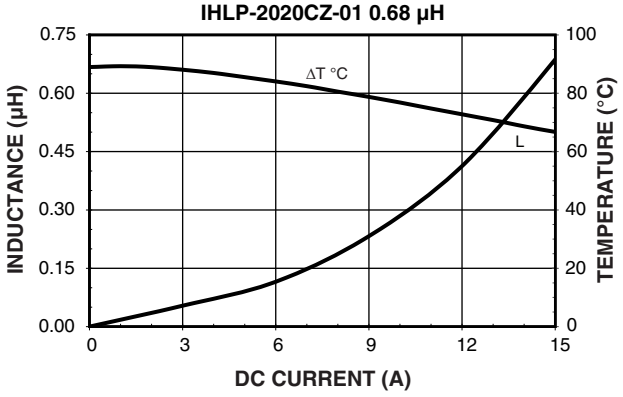
IHLP-2020CZ-01 0.33 µH



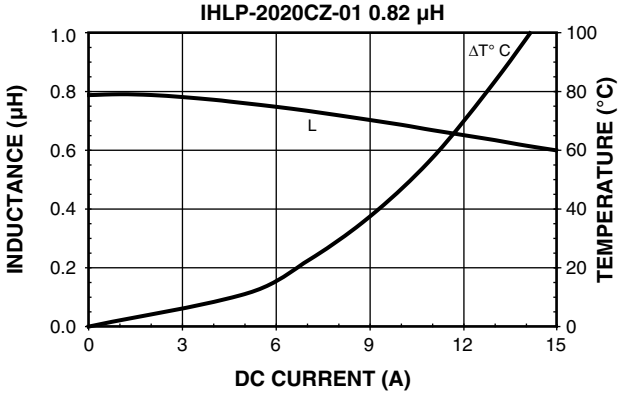
IHLP-2020CZ-01 0.47 µH



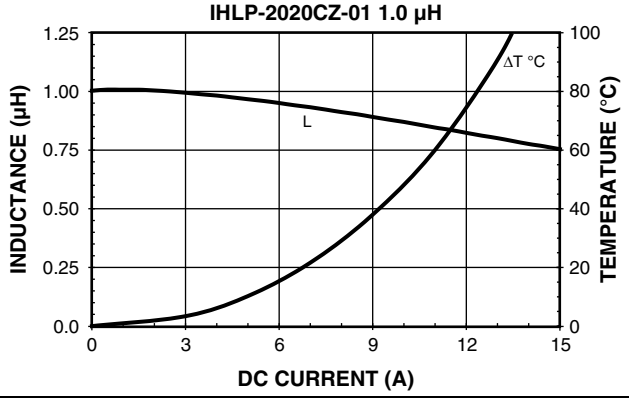
IHLP-2020CZ-01 0.68 µH



IHLP-2020CZ-01 0.82 µH



IHLP-2020CZ-01 1.0 µH



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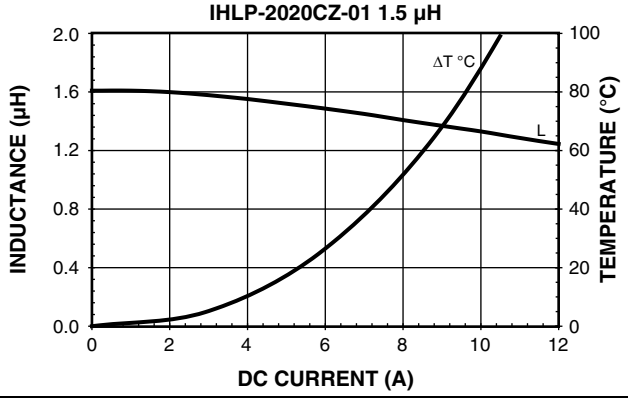

PERFORMANCE GRAPHS

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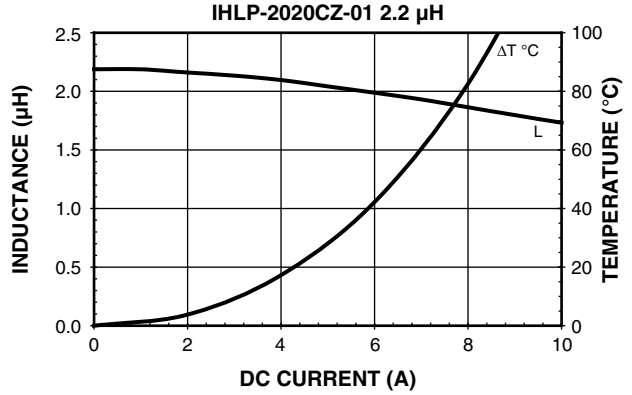
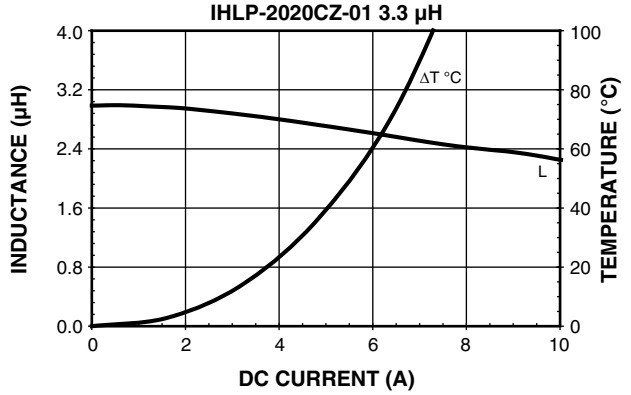
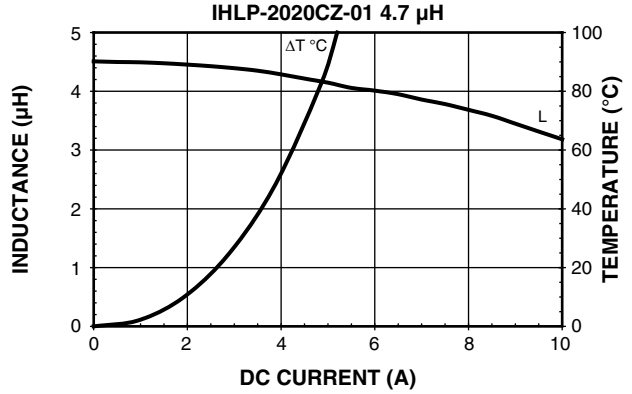


IHLP-2020CZ-01 3.3 µH



IHLP-2020CZ-01 4.7 µH



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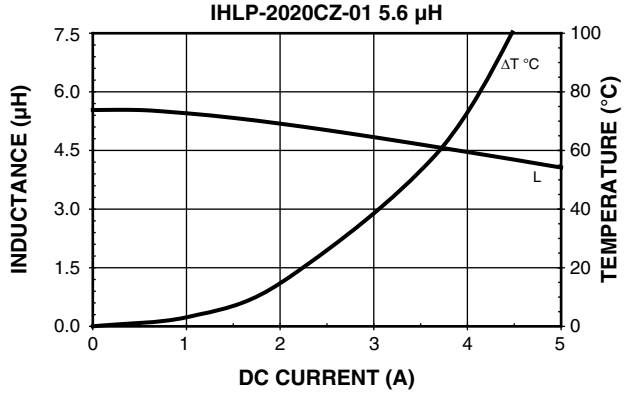
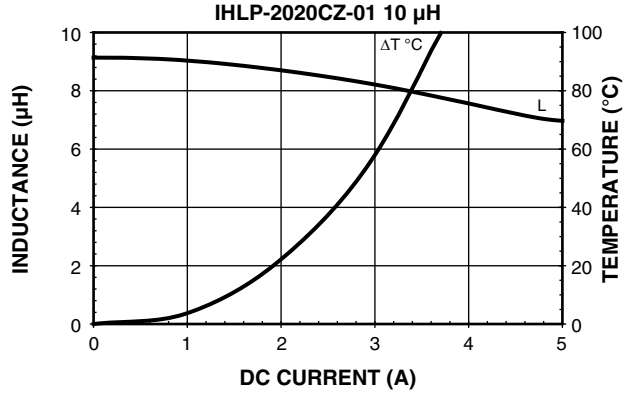
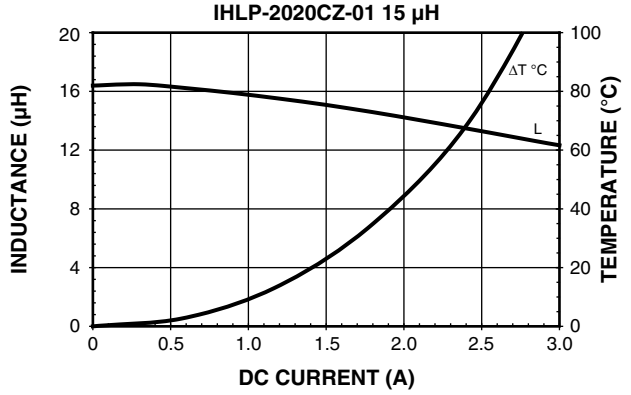


IHLP-2020CZ-01 10 µH

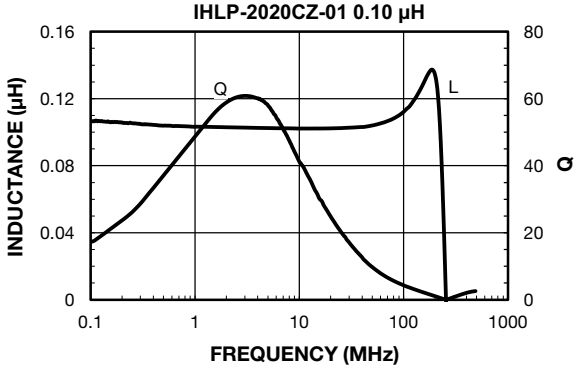


IHLP-2020CZ-01 15 µH

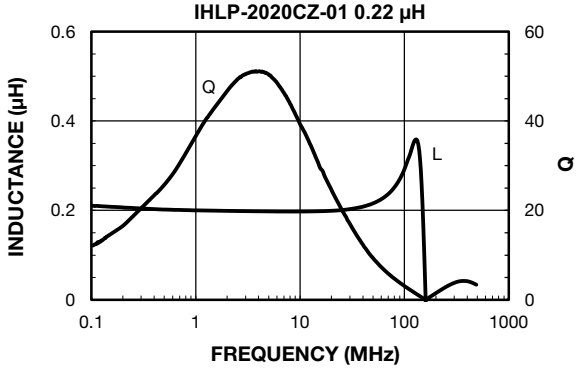


PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

IHLP-2020CZ-01 0.10 µH



IHLP-2020CZ-01 0.22 µH



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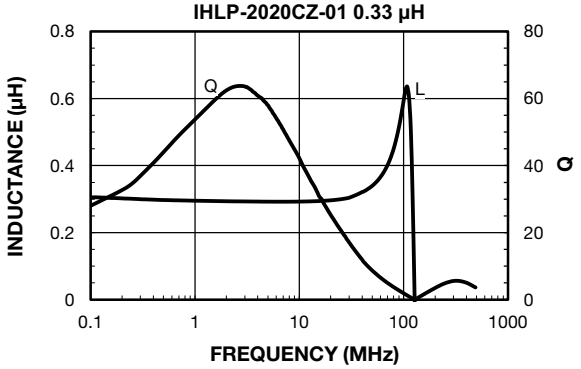

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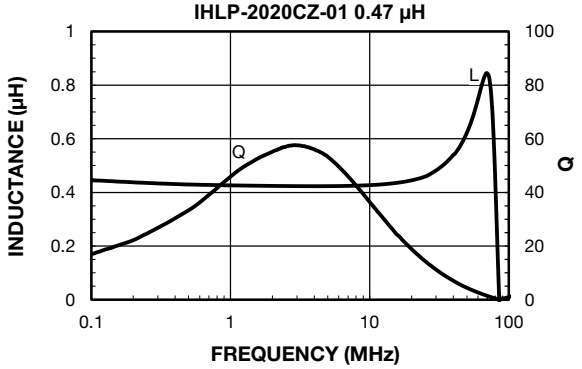
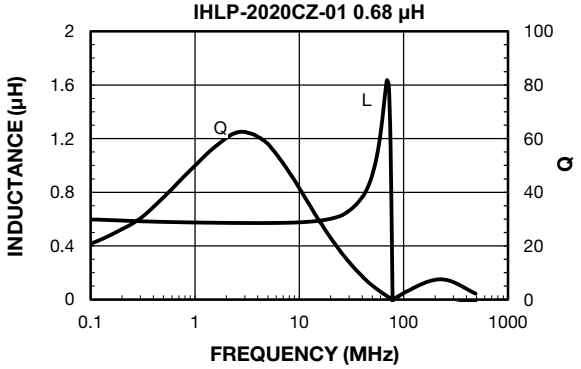


IHLP-2020CZ-01 0.68 µH



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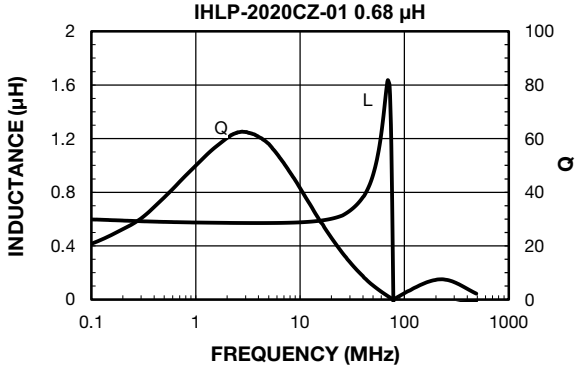
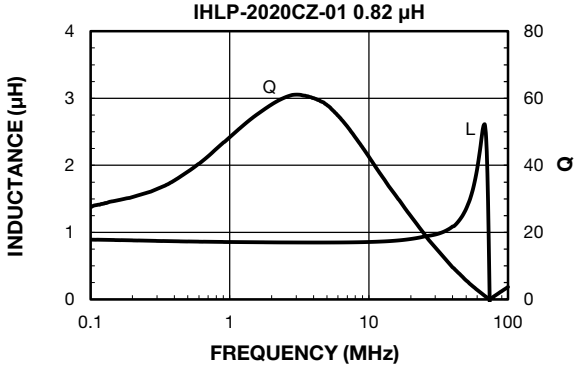


IHLP-2020CZ-01 0.82 µH



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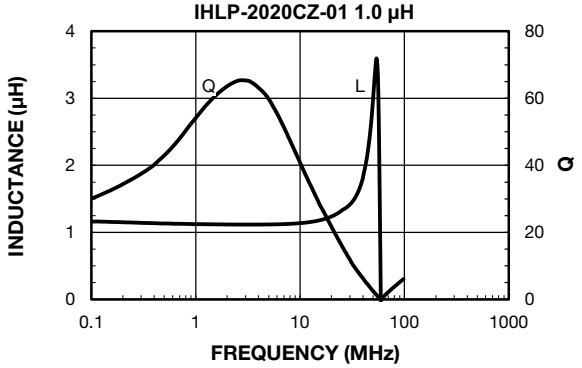
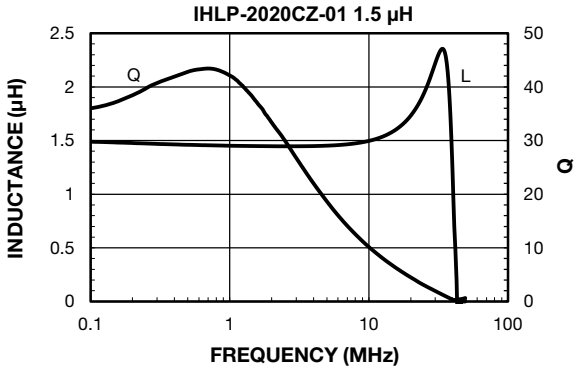
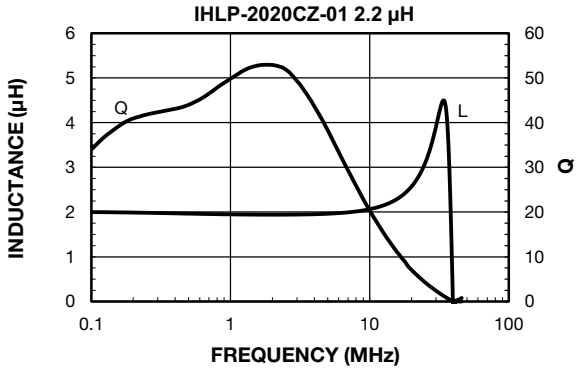
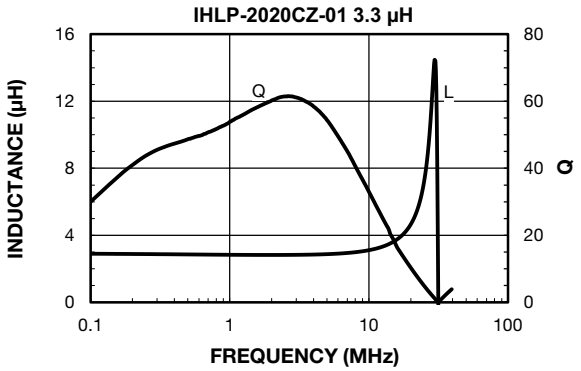
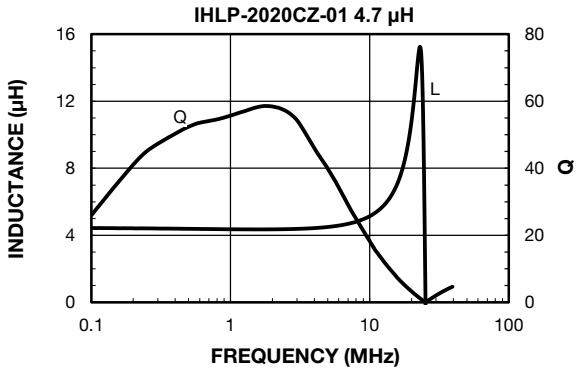


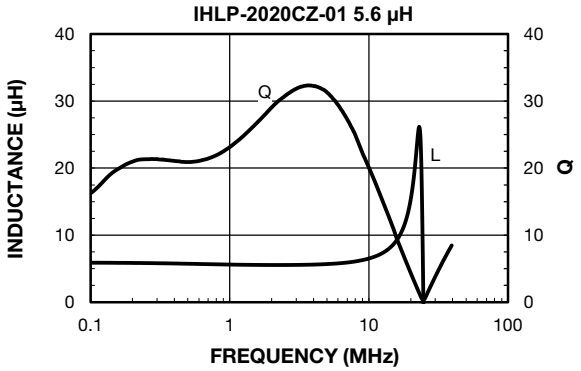
PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

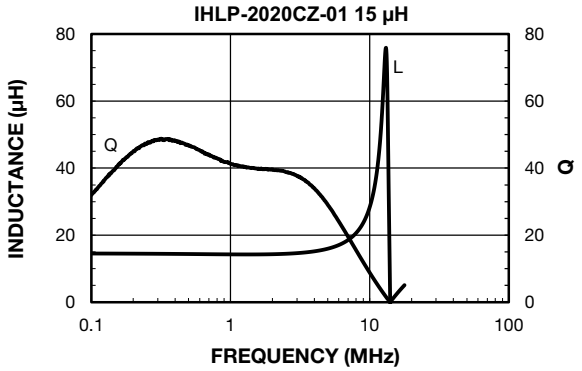












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