

# IHLP2020CZETR47M11 Datasheet

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DiGi Electronics Part Number IHLP2020CZETR47M11-DG

Manufacturer [Vishay Dale](#)

Manufacturer Product Number IHLP2020CZETR47M11

Description FIXED IND 470NH 14A 6 MOHM SMD

Detailed Description 470 nH Shielded Molded Inductor 14 A 6mOhm Max Nonstandard

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DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

IHLP2020CZETR47M11

Series:

IHLP-2020CZ-11

Type:

Molded

Inductance:

470 nH

Current Rating (Amps):

14 A

Shielding:

Shielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

100 kHz

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.118" (3.00mm)

Manufacturer:

Vishay Dale

Product Status:

Obsolete

Material - Core:

-

Tolerance:

±20%

Current - Saturation (Isat):

9A

DC Resistance (DCR):

6mOhm Max

Frequency - Self Resonant:

88MHz

Operating Temperature:

-55°C ~ 125°C

Features:

-

Package / Case:

Nonstandard

Size / Dimension:

0.216" L x 0.204" W (5.49mm x 5.18mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

ECCN:

EAR99

Moisture Sensitivity Level (MSL):

1 (Unlimited)

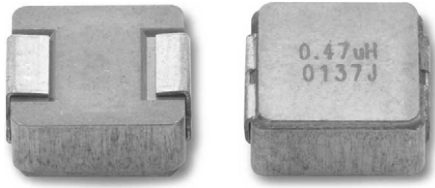
HTSUS:

8504.50.4000





## IHLP<sup>®</sup> Commercial Inductors, Low DCR Series



### LINKS TO 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.		SRF TYP. (MHz)
				(A) <sup>(2)</sup>	(A) <sup>(3)</sup>	
0.1	2.6	2.9	26.3	20.5	31.7	312
0.22	3.5	3.9	20.0	8.8	13.4	144
0.33	4.5	5.0	18.5	8.7	13.0	121
0.47	5.4	6.0	15.4	7.4	11.0	89
1	10.0	11.0	11.6	6.4	9.4	62
1.5	17.1	18.5	9.0	5.2	7.6	46
2.2	22.5	25.0	8.5	4.9	7.2	35
3.3	36.4	40.4	6.3	4.7	6.8	30
4.7	54.0	60.0	5.1	3.7	5.4	25
5.6	63.0	70.6	4.2	3.0	4.4	21
10	122.1	131.9	3.2	1.4	2.1	16
22	260.0	270.0	2.12	1.13	1.61	10.9

#### 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) = 40 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 %
- (3) DC current (A) that will cause L<sub>0</sub> to drop approximately 30 %

### FEATURES

- Shielded construction
- 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
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up to SRF (see “Standard Electrical Specifications” table)
- 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)

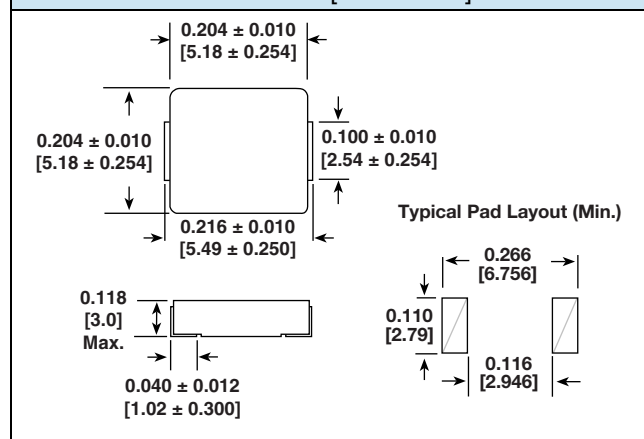


RoHS  
COMPLIANT  
HALOGEN  
FREE

### 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)

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

IHLP-2020CZ-11	4.7 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC <sup>®</sup> LEAD (Pb)-FREE STANDARD

### GLOBAL PART NUMBER

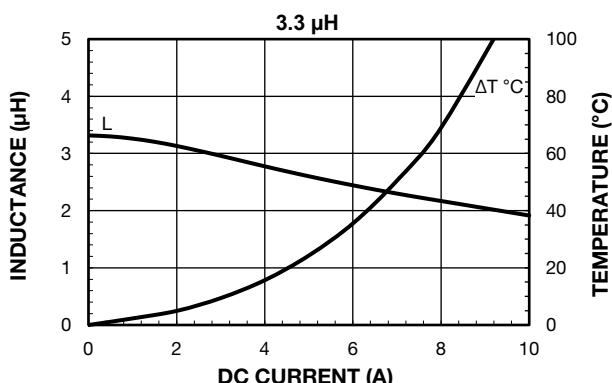
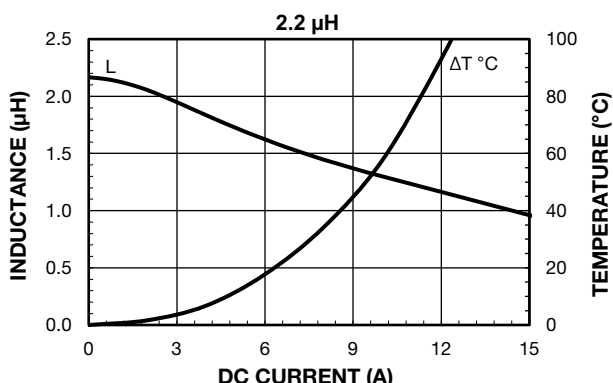
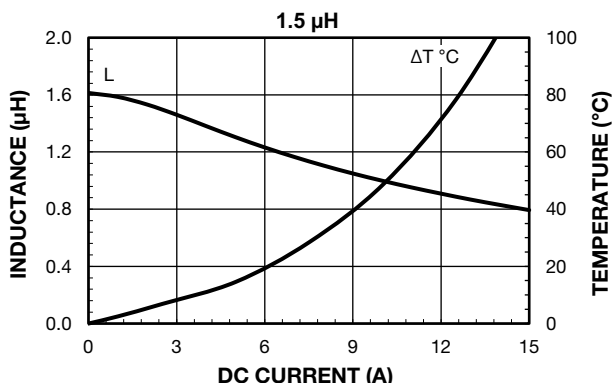
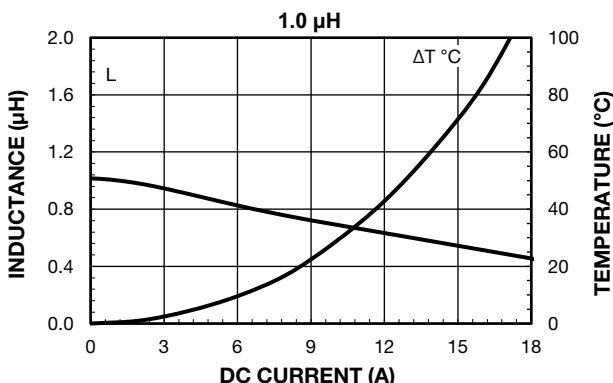
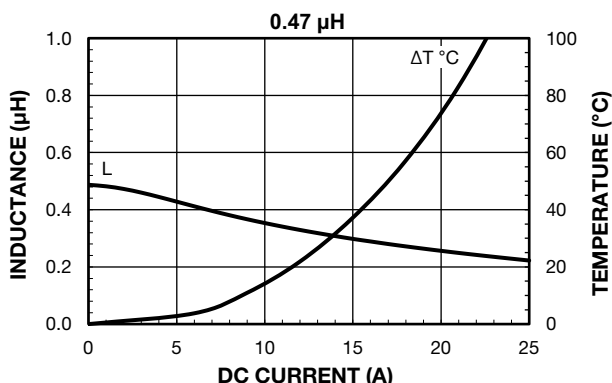
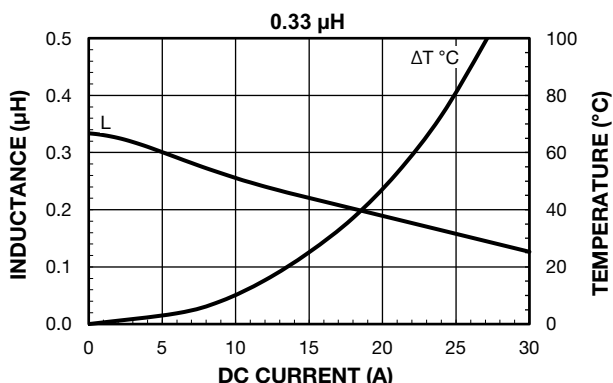
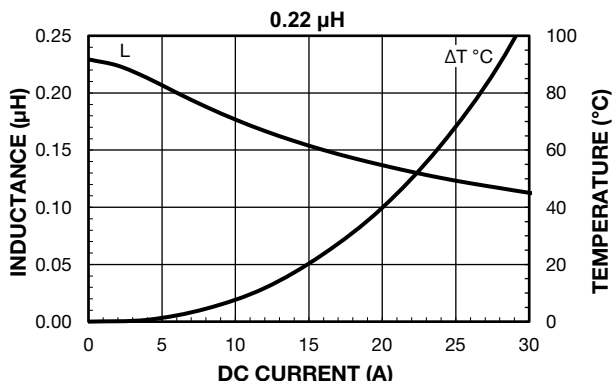
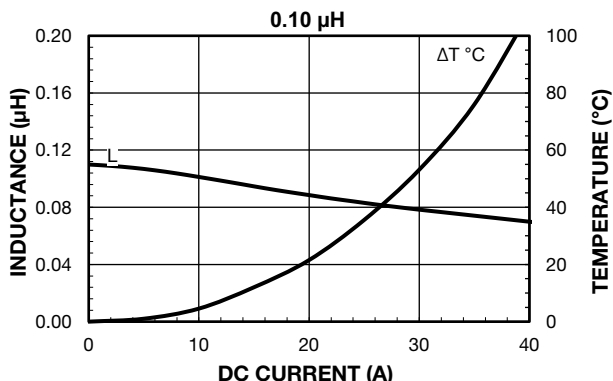
I	H	L	P	2	0	2	0	C	Z	E	R	4	R	7	M	1	1
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES			

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.

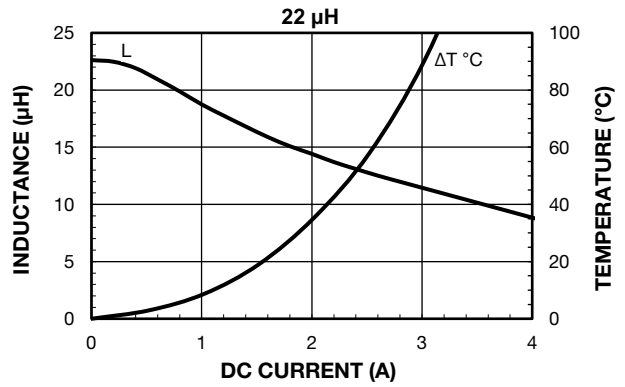
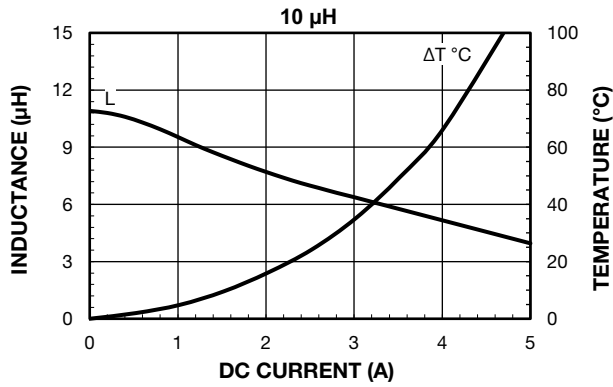
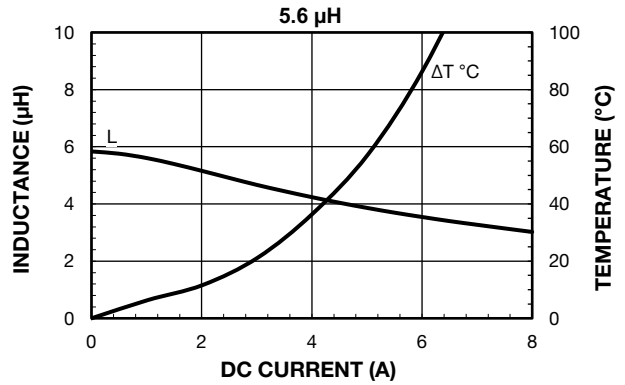
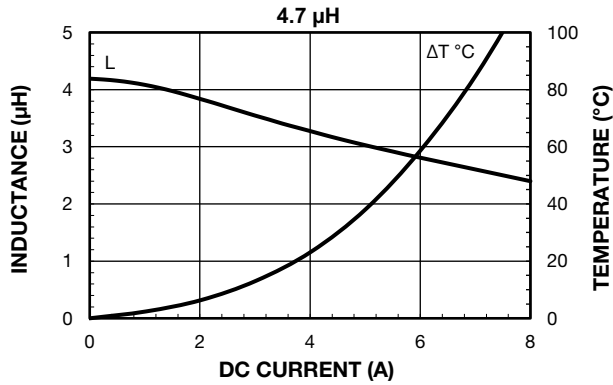


**PERFORMANCE GRAPHS**



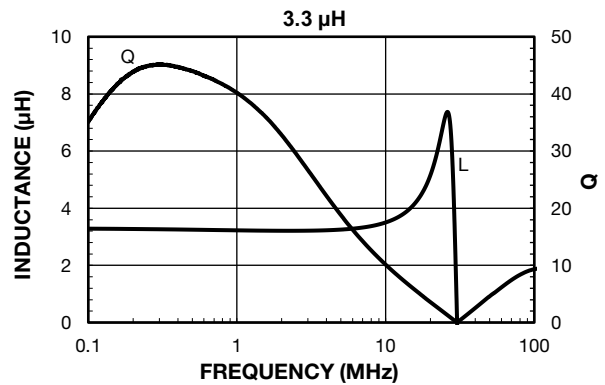
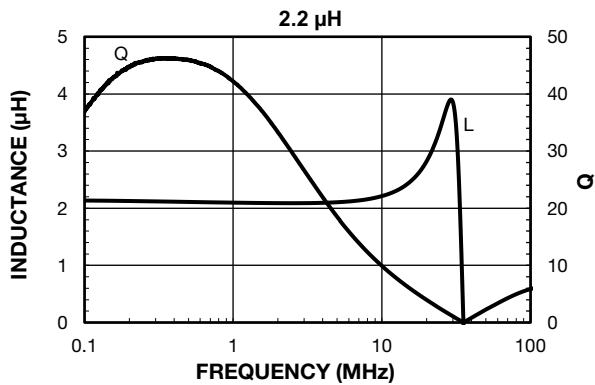
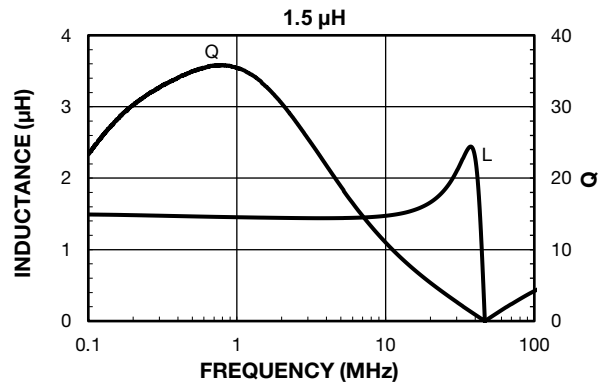
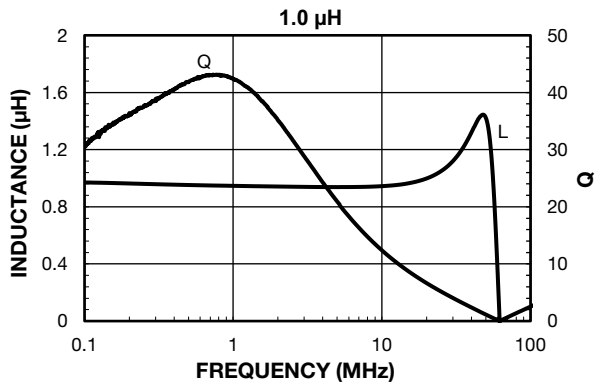
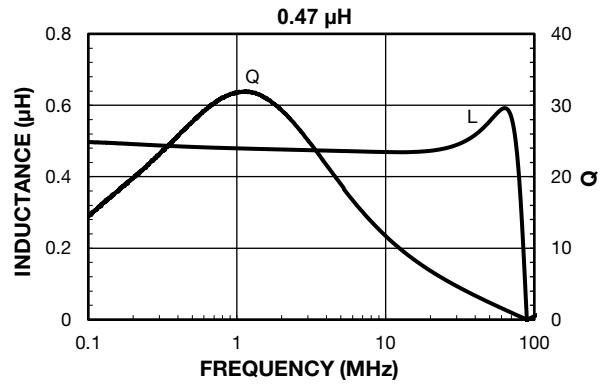
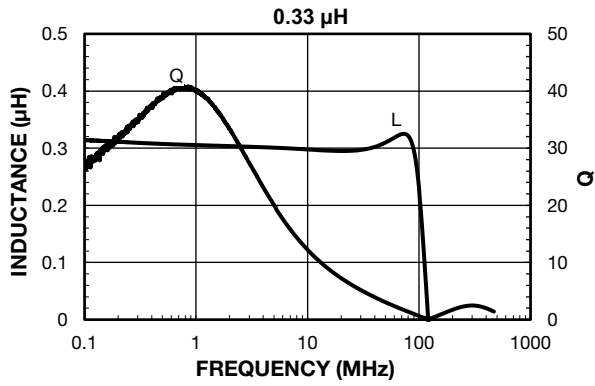
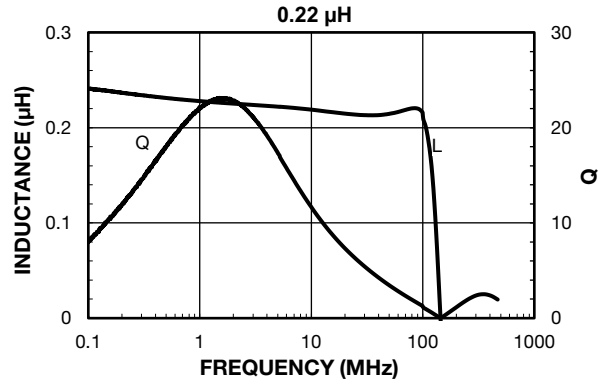
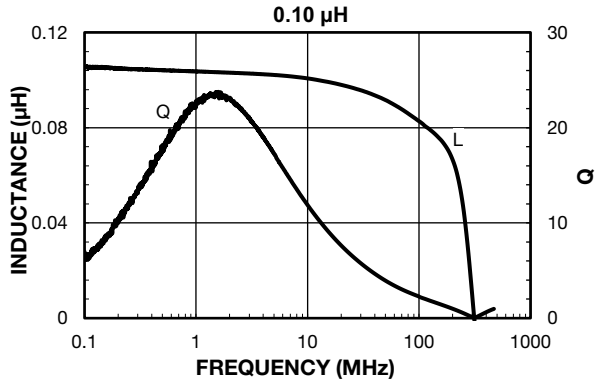


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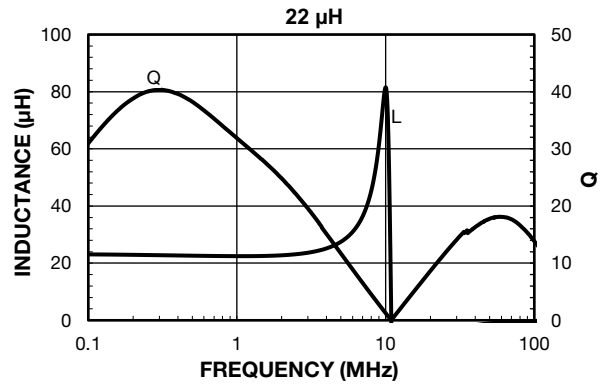
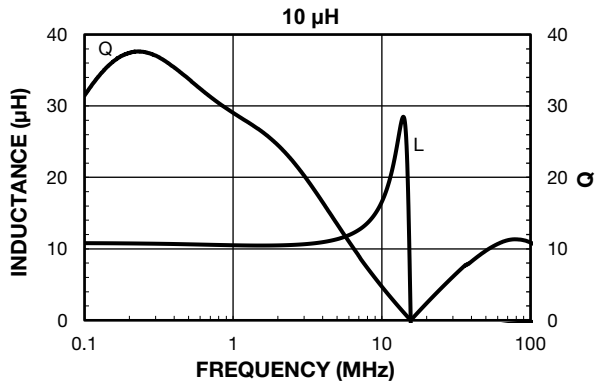
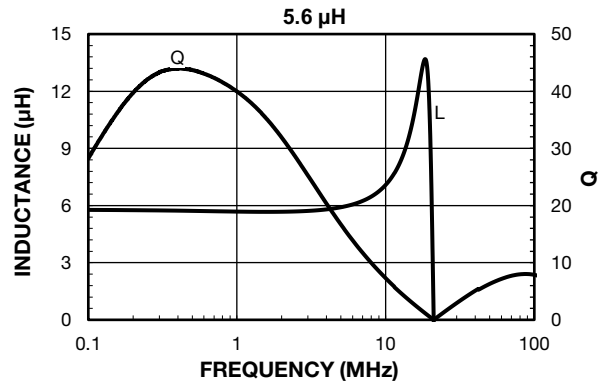
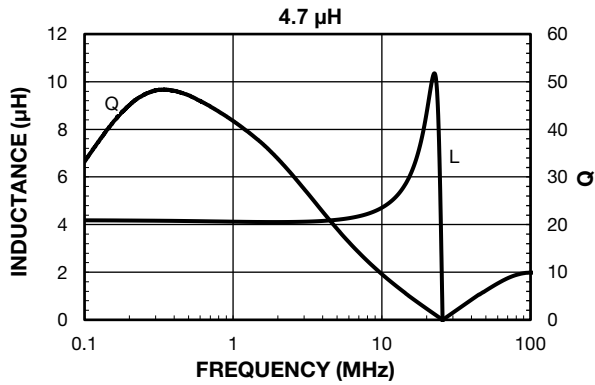


**PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY**





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





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