IHLP8787MZERR47M5A Datasheet

DiGi Electronics Part Number	IHLP8787MZERR47M5A-DG
Manufacturer	Vishay Dale
Manufacturer Product Number	IHLP8787MZERR47M5A
Description	FIXED IND 470NH 80A 0.67MOHM SMD
Detailed Description	470 nH Shielded Molded Inductor 80 A 0.67mOhm Max Nonstandard

https://www.DiGi-Electronics.com

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

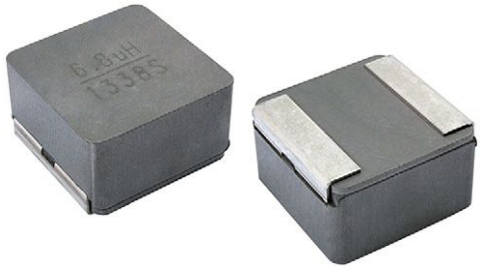
Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
IHLP8787MZERR47M5A	Vishay Dale
Series:	Product Status:
IHLP-8787MZ-5A	Active
Type:	Material - Core:
Molded	-
Inductance:	Tolerance:
470 nH	±20%
Current Rating (Amps):	Current - Saturation (Isat):
80 A	100A
Shielding:	DC Resistance (DCR):
Shielded	0.67mOhm Max
Q @ Freq:	Frequency - Self Resonant:
-	47.5MHz
Ratings:	Operating Temperature:
AEC-Q200	-55°C ~ 155°C
Inductance Frequency - Test:	Mounting Type:
100 kHz	Surface Mount
Package / Case:	Supplier Device Package:
Nonstandard	-
Size / Dimension:	Height - Seated (Max):
0.885" L x 0.866" W (22.48mm x 22.00mm)	0.512" (13.00mm)

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8504.50.4000	

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



AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

FEATURES

- High temperature rating, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up the SRF (see Standard Electrical Specifications table).
- 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
- IHLP design; PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

LINKS TO ADDITIONAL RESOURCES

3D Models Design Tools

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

STANDARD ELECTRICAL SPECIFICATIONS

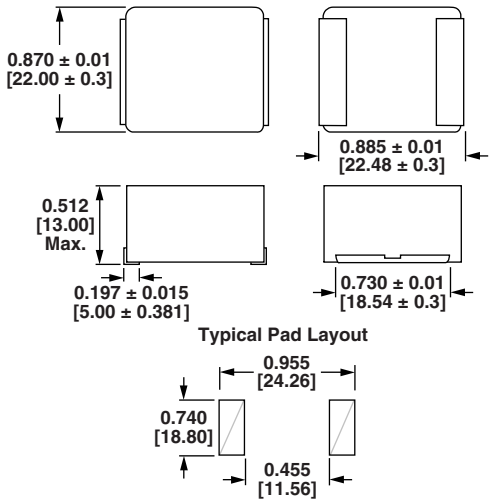
L_0 INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) (1)	SATURATION CURRENT DC TYP. (A) (2)	SRF TYP. (MHz)
0.47	0.56	0.67	80.0	100.0	47.5
1.0	0.82	0.89	69.0	71.0	25.7
2.2	1.15	1.25	58.0	48.0	17.5
3.3	1.63	1.77	49.0	41.0	12.8
4.7	1.69	1.84	47.0	37.0	10.2
6.8	2.84	3.09	36.0	36.0	8.03
10	4.04	4.14	28.0	28.0	6.04
15	5.62	6.11	23.5	24.0	4.71
22	10.60	10.80	17.5	16.0	3.88
33	15.10	15.40	15.5	10.5	3.01
47	17.30	17.70	13.5	10.0	2.99
75	29.76	32.35	10.6	9.5	2.01
82	31.46	34.20	10.2	9.0	2.07
100	36.25	39.40	9.1	7.0	2.01

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, 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) = 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 %

DIMENSIONS in inches [millimeters]



DESCRIPTION

IHLP-8787MZ-5A	100 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

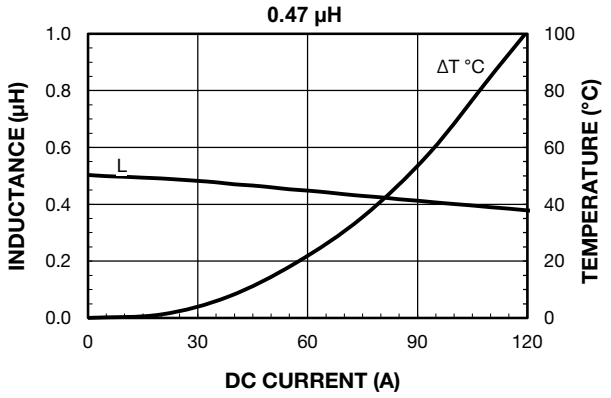
GLOBAL PART NUMBER

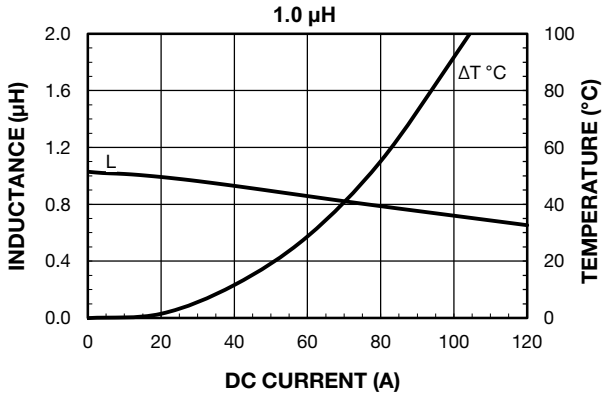
I	H	L	P	8	7	8	7	M	Z	E	R	1	0	1	M	5	A
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES	

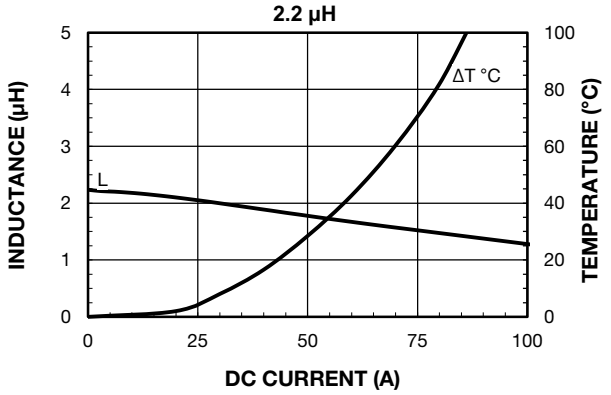
PATENT(S): www.vishay.com/patents

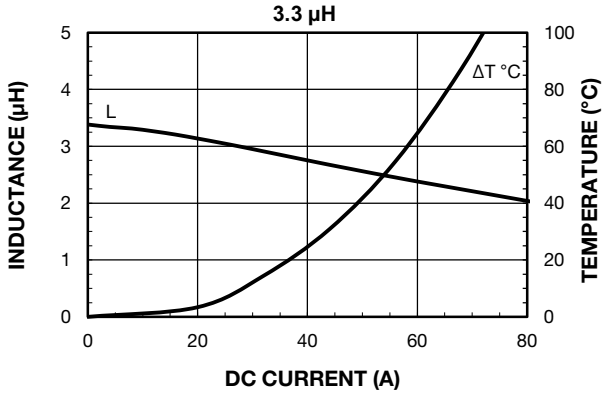
For technical questions, contact: magnetics@vishay.com

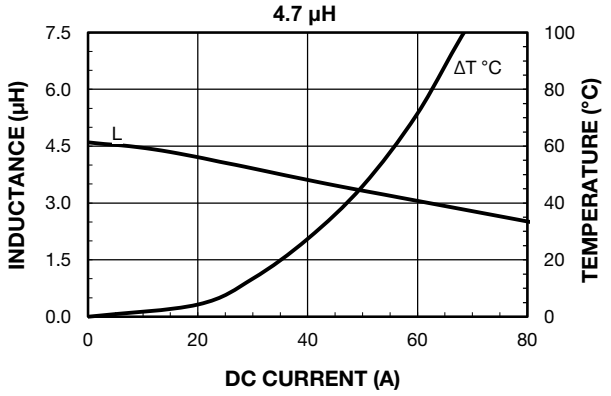
PERFORMANCE GRAPHS

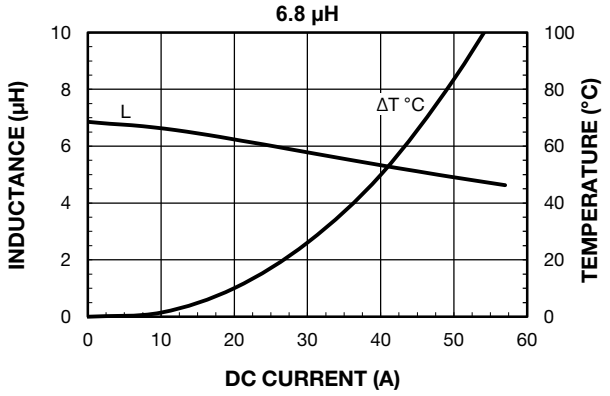


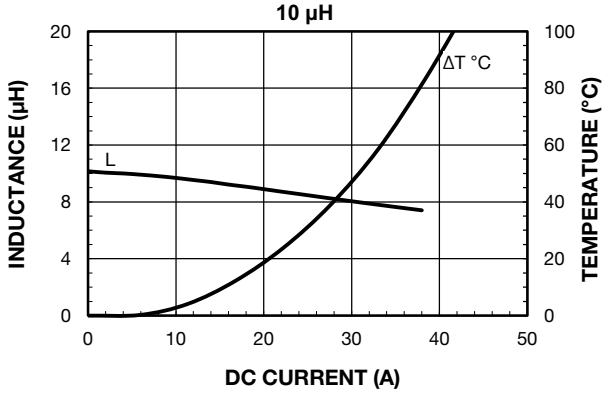


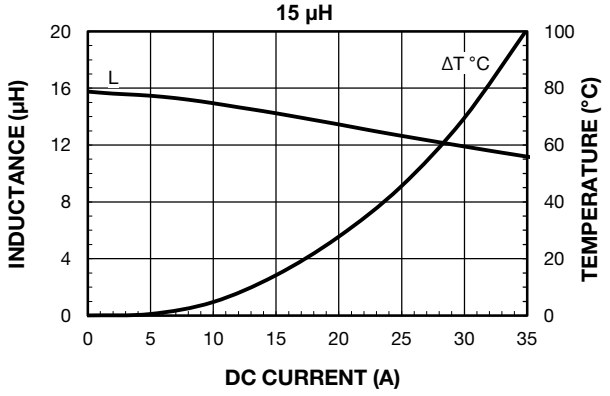












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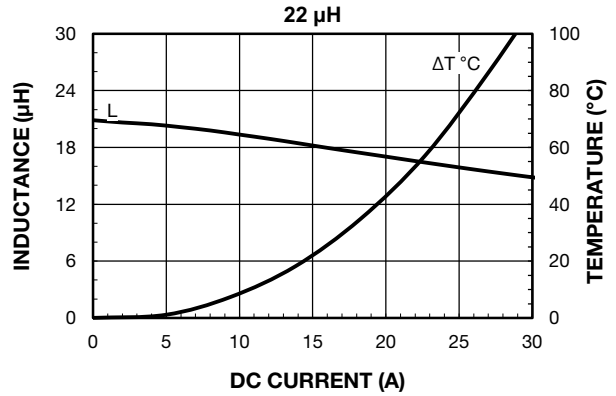
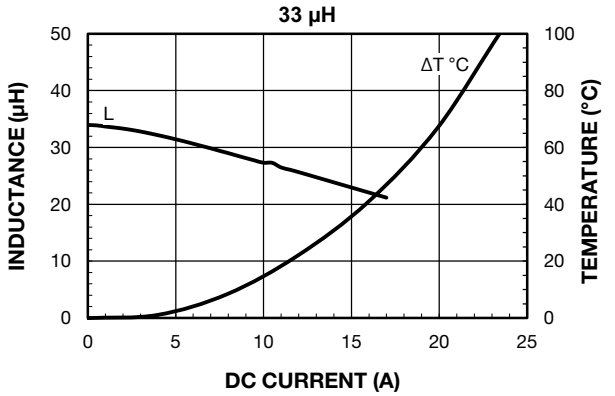
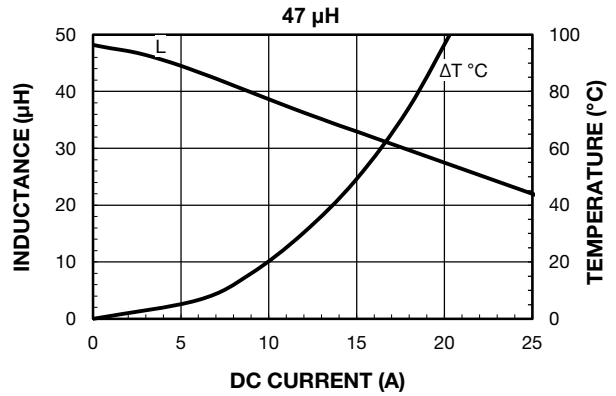
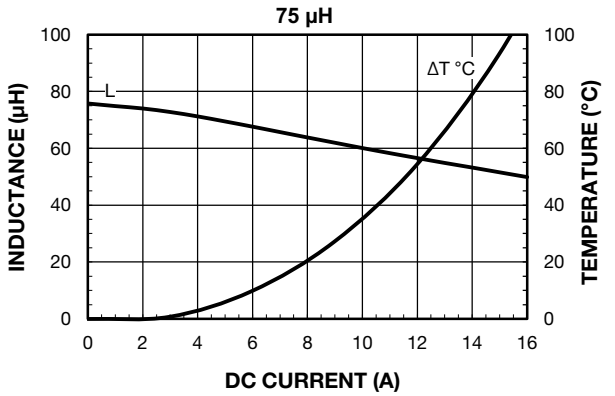
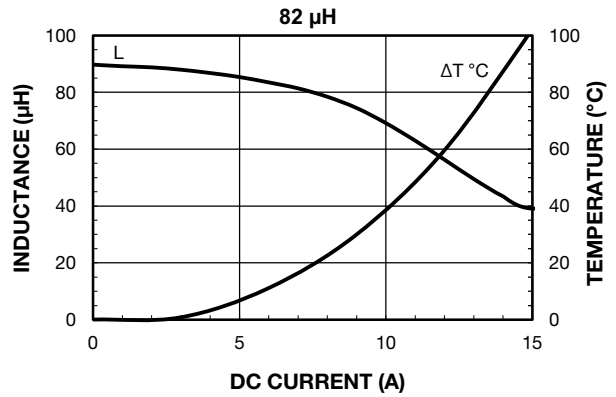
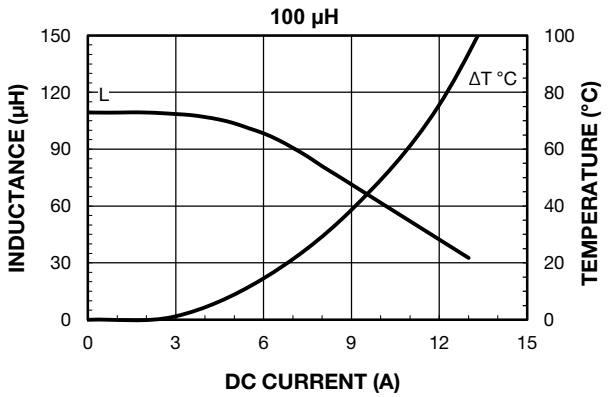




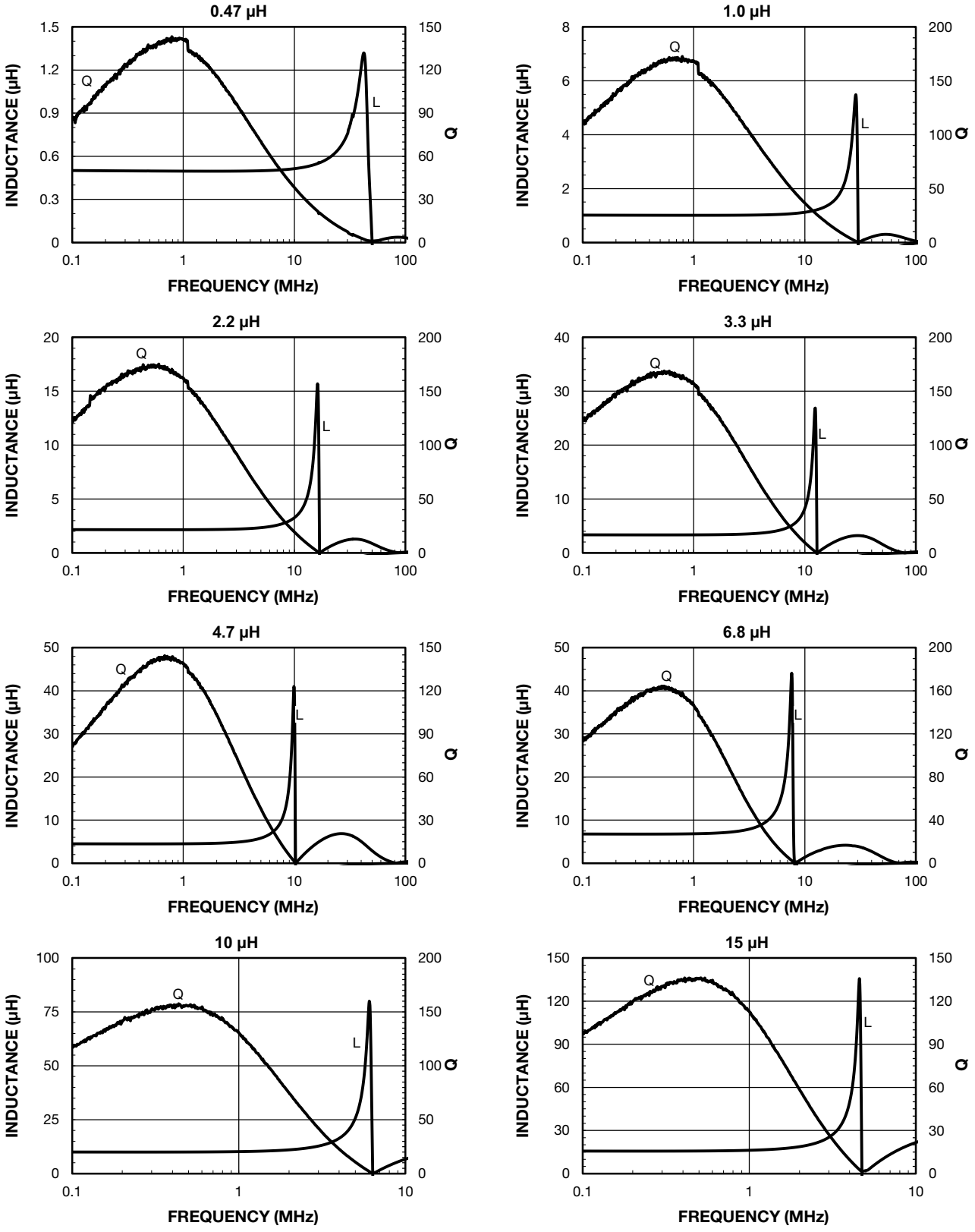








PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY



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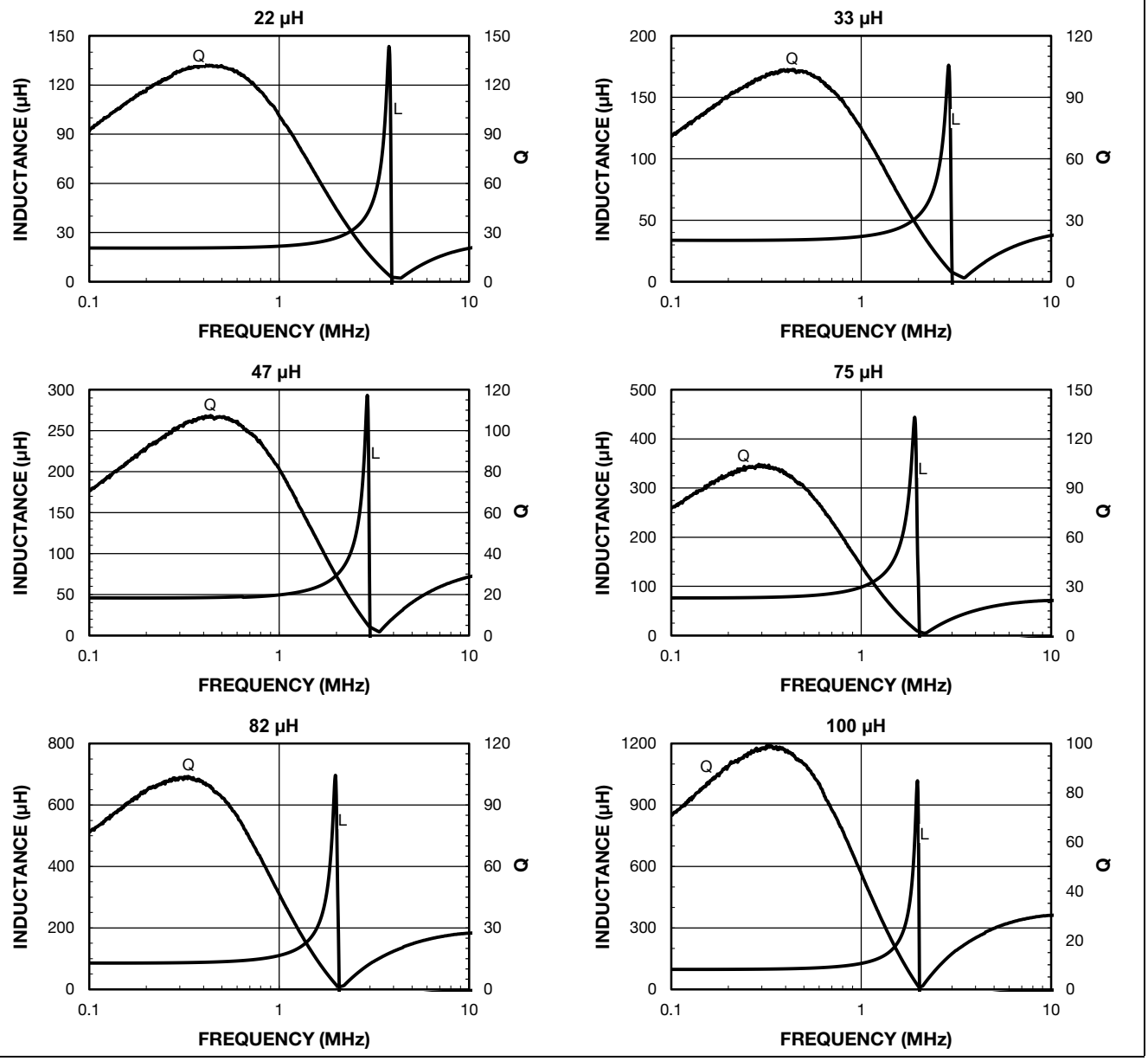

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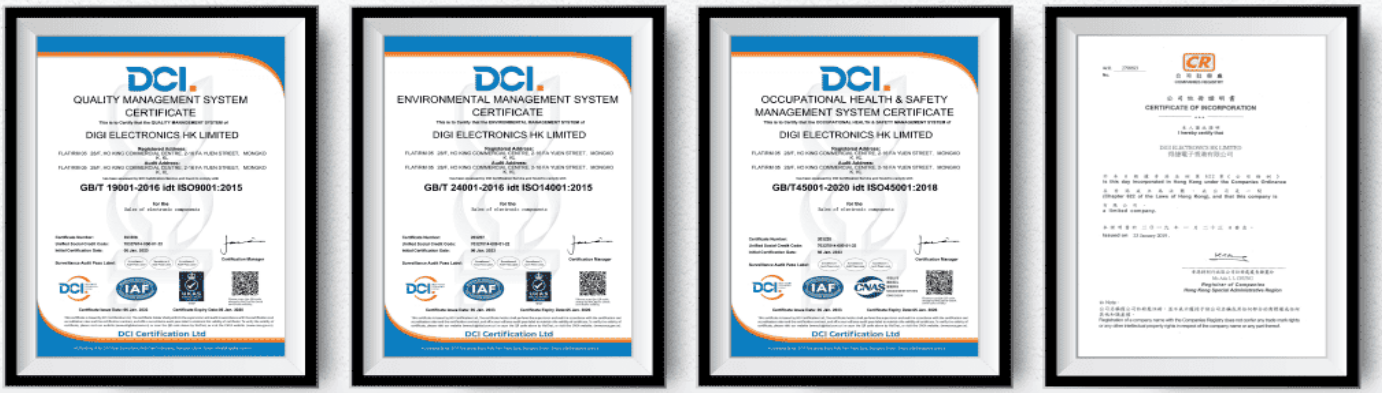

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