

IHLP-8787MZ-5A

Vishay Dale

# IHLP<sup>®</sup> Automotive Inductors, High Temperature (155 °C) 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. (A) <sup>(2)</sup>	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
- <sup>(1)</sup> DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- $^{(2)}$  DC current (A) that will cause  $L_0$  to drop approximately 20 %

### FEATURES

saturation

- 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

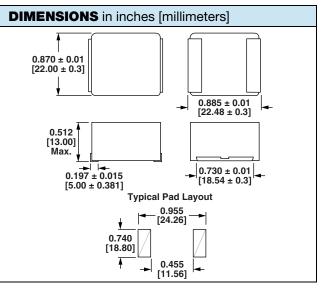
· Handles high transient current spikes without



- RoHS COMPLIANT HALOGEN FREE <u>GREEN</u> (5-2008)
- Ultra low buzz noise, due to composite construction
- AEC-Q200 qualified
- IHLP design; PATENT(S): <u>www.vishay.com/patents</u>
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

#### **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



DESCRIPTION								
IHLP-8787MZ-5A	100 µH	± 20 %	ER	e3				
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC <sup>®</sup> LEAD (Pb)-FREE STANDARD				
GLOBAL PART NUMBER								
	P 8 7	8 7 M Z	E R 1	0 1 M	5 A			
PRODUCT FAM	11LY	SIZE	PACKAGE IN CODE	DUCTANCE TOL. VALUE	SERIES			
PATENT(S): www.v	vishay.com/patents							

Revision: 16-Oct-2020

1 For technical questions, contact: <u>magnetics@vishay.com</u> Document Number: 34350

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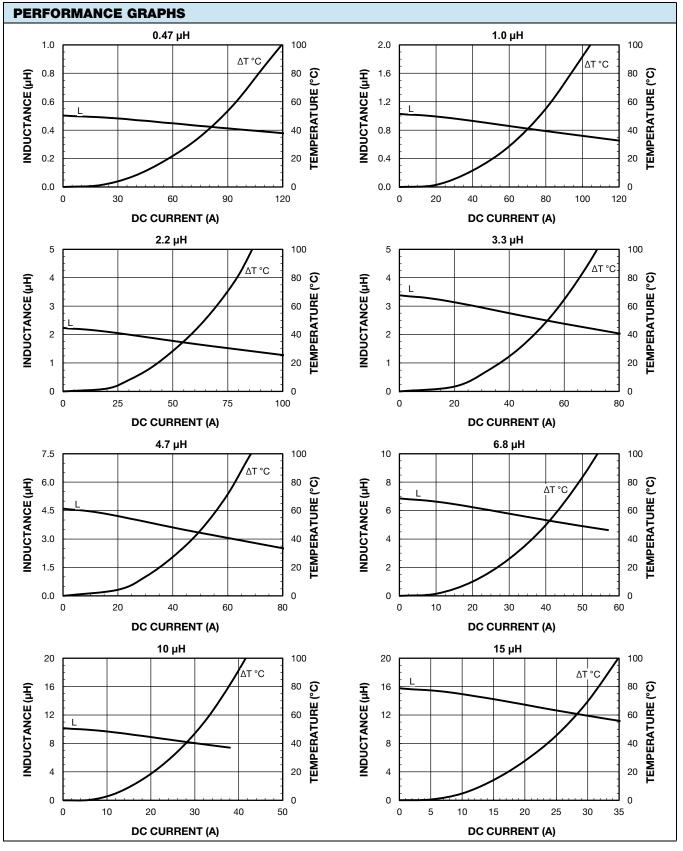


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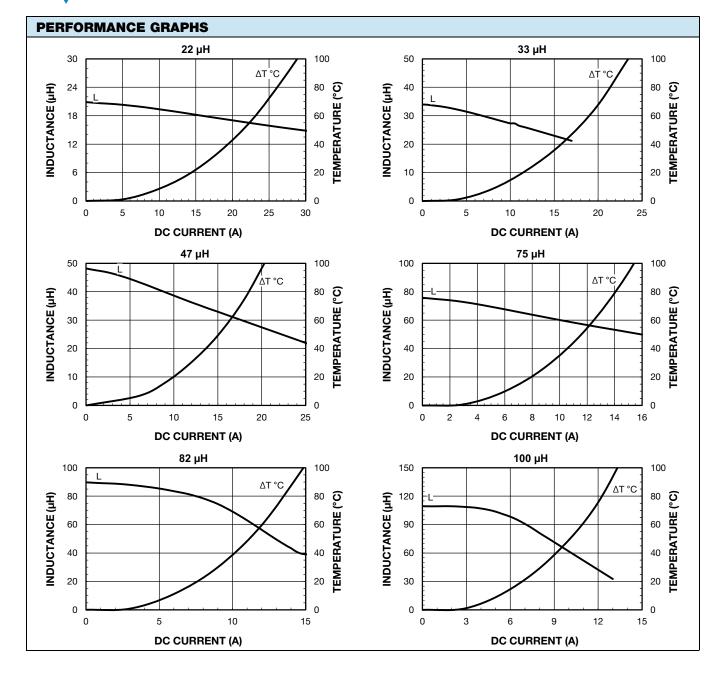
## For Higher Current Upgrade to IHDM-1008BC-3A



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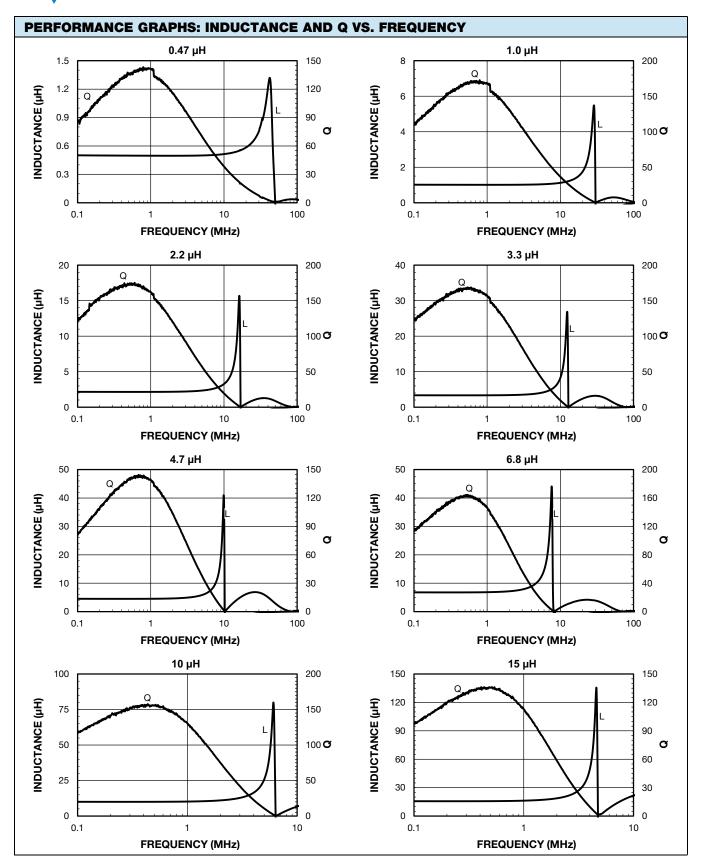
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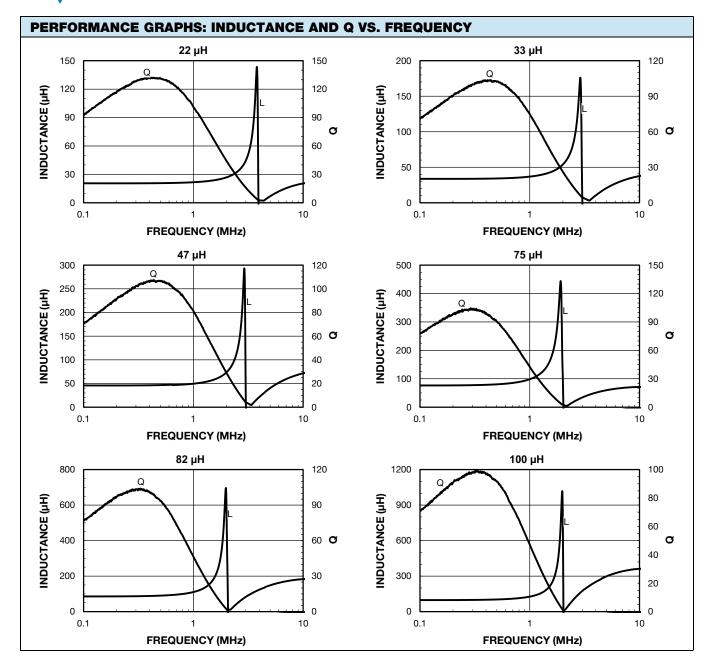
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