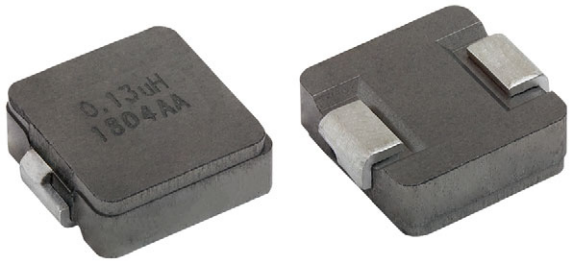
Automotive Inductors, High Temperature (155 °C) Series



FEATURES

- High temperature rating, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 5 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
- IHSR design; PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

LINKS TO ADDITIONAL RESOURCES

3D Models

Calculators

APPLICATIONS

- Engine and transmission control units
- Diesel injection drivers
- DC/DC converters for entertainment / navigation systems
- High current, high frequency multi-phase DC/DC converters
- Noise suppression for motors

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	L_0 INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH)	DCR AT 25 °C (mΩ)		HEAT RATING CURRENT DC (A) (1)	SATURATION CURRENT DC (A)		SRF TYP. (MHz)
		TYP.	MAX.	TYP.	TYP. (2)	TYP. (3)	
IHSR4040DZERR13M5A	0.13	0.54	0.58	72.0	63.0	92.0	151

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

(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 %

(3) DC current (A) that will cause L_0 to drop approximately 30 %

DESCRIPTION

IHSR-4040DZ-5A	0.13 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

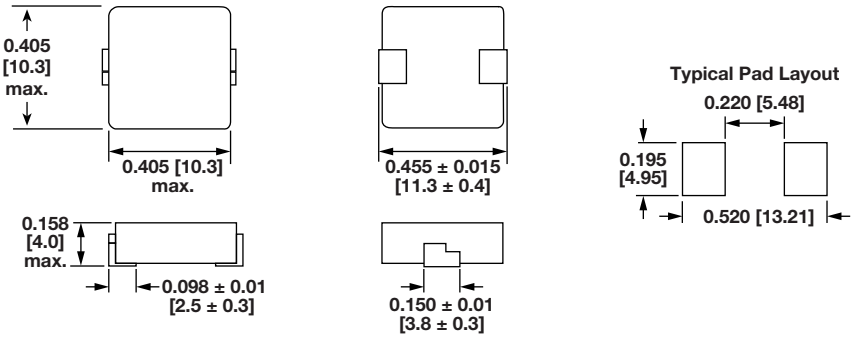
GLOBAL PART NUMBER

I	H	S	R	4	0	4	0	D	Z	E	R	R	1	3	M	5	A
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES	

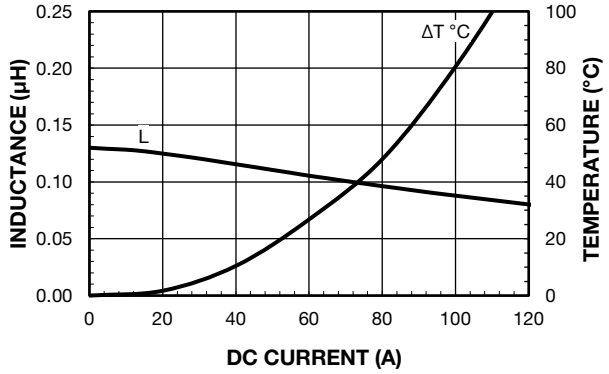
PATENT(S): www.vishay.com/patents

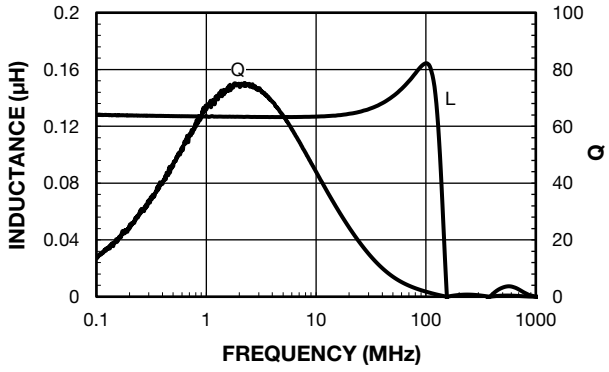
This Vishay product is protected by one or more United States and international patents.

DIMENSIONS in inches [millimeters]



PERFORMANCE GRAPHS





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