Automotive Inductors, Ultra Low DCR, High Temperature (155 °C) Series



FEATURES

- High temperature rating, up to 155 °C
- Shielded construction
- Excellent DC/DC energy storage up to 10 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
- **Patent pending**
- 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

Design Tools

APPLICATIONS

- Engine and transmission control units
- Multiphase DC/DC converters for ADAS microprocessors
- DC/DC converters for entertainment / navigation systems
- Noise suppression for motors
  - Windshield wipers, power seats, power mirrors, heating and ventation blowers, HID lighting

STANDARD ELECTRICAL SPECIFICATIONS

L_0 INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH)	DCR ± 5 % AT 25 °C (mΩ)		HEAT RATING CURRENT DC (A) (1)	SATURATION CURRENT DC (A)		SRF TYP. (MHz)
	TYP.	MAX.	TYP.	TYP. (2)	TYP. (3)	
0.056	0.38	0.40	58	45	64	535
0.100	0.97	1.02	46	31	46	186

Notes

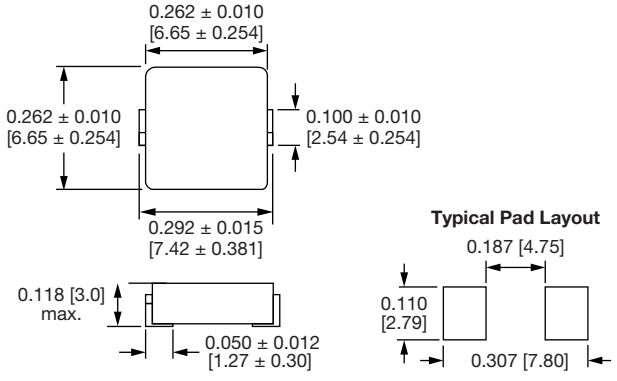
- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +155 °C
- The part temperature (ambient + temp. rise) should not exceed 155 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions 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 %

DIMENSIONS in inches [millimeters]



DESCRIPTION

IHSR-2525CZ-5A	0.056 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

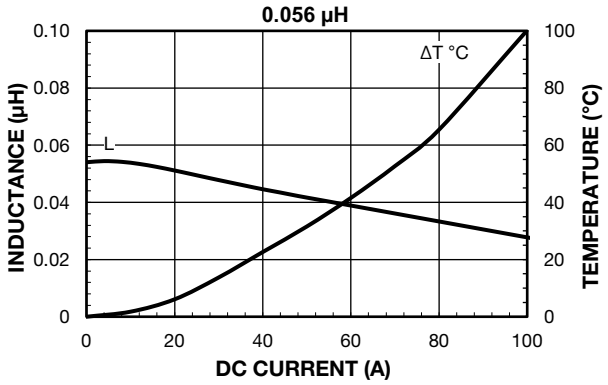
GLOBAL PART NUMBER

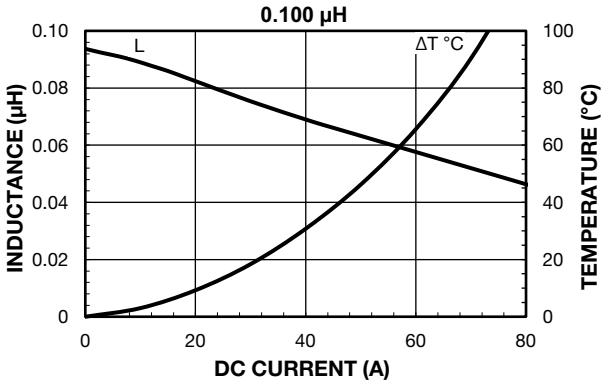
I	H	S	R	2	5	2	5	C	Z	E	R	5	6	N	M	5	A
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			TOL.	SERIES	

For technical questions, contact: magnetics@vishay.com

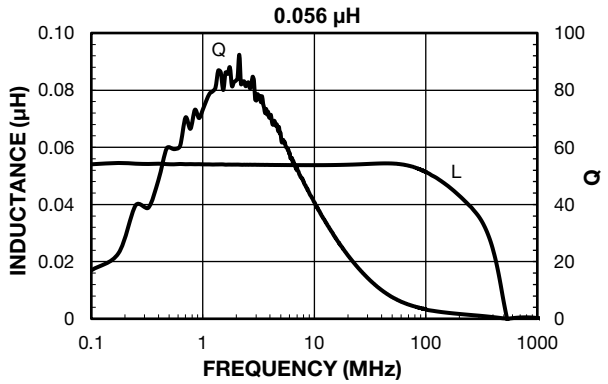
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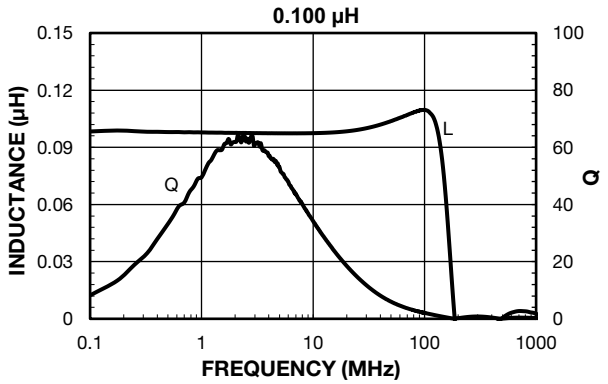
PERFORMANCE GRAPHS





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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