

## Commercial Inductors, Ultra Low DCR, 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 ± 5 % AT 25 °C (mΩ)		HEAT RATING CURRENT DC (A) <sup>(1)</sup>	SATURATION CURRENT DC (A)		SRF TYP. (MHz)
	TYP.	MAX.	TYP.	TYP. <sup>(2)</sup>	TYP. <sup>(3)</sup>	
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<sub>0</sub> to drop approximately 20 %  
(3) DC current (A) that will cause L<sub>0</sub> to drop approximately 30 %

### 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
- Patent pending
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

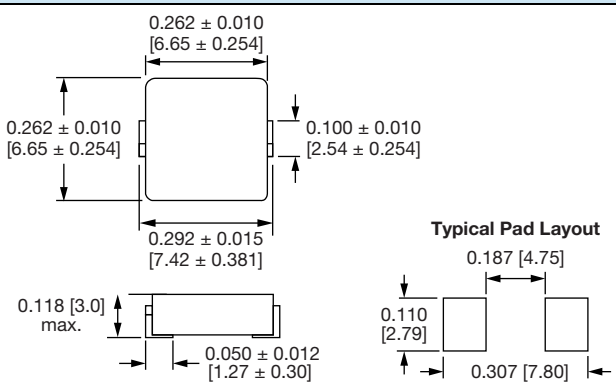


**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### APPLICATIONS

- Notebook / desktop / server applications
- High current POL converters
- Low profile, high current power supplies
- Multiphase DC/DC converter for server microprocessor power
- Low voltage input / output filters
- DC/DC converters in distributed power systems
- DC/DC converter for field programmable gate array (FPGA)

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

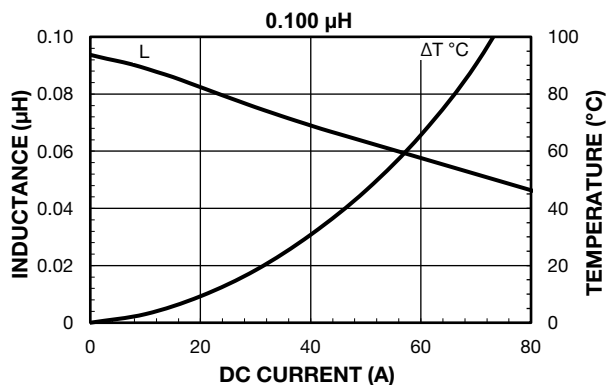
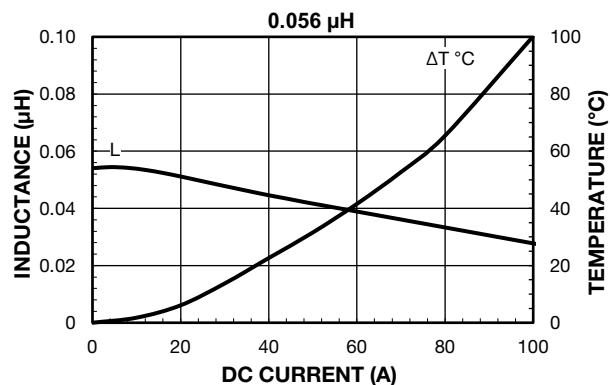
<b>IHSR-2525CZ-51</b>	<b>0.056 μH</b>	<b>± 20 %</b>	<b>ER</b>	<b>e3</b>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

### GLOBAL PART NUMBER

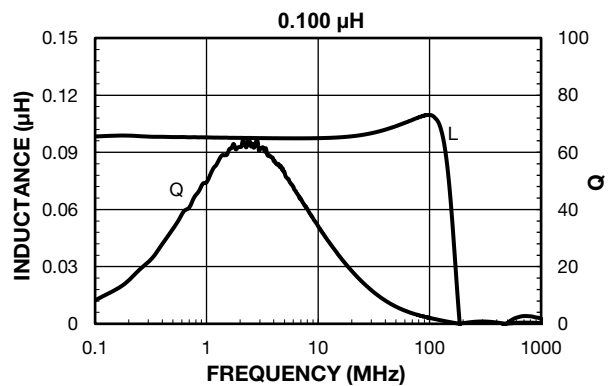
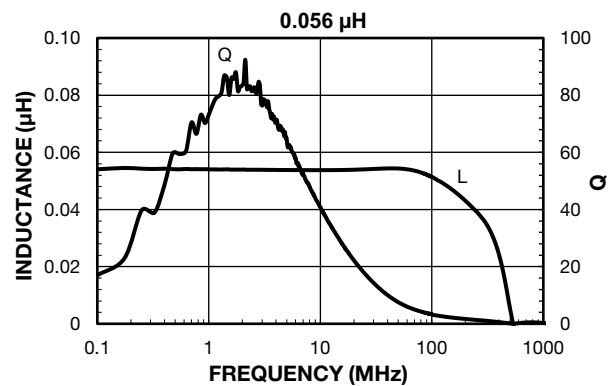
I	H	S	R	2	5	2	5	C	Z	E	R	5	6	N	M	5	1
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE		TOL.		SERIES			



## PERFORMANCE GRAPHS



## PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





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