Automotive Multilayer Chip Ferrite Beads

FEATURES

- 2.5 mm x 2.0 mm package
- Multilayer chip ferrite bead for high current filtering
- Wide variety of impedance values
- Extended current rating
- Silver (Ag) inner conductor with Cu / Ni / Sn electrode plating
- AEC-Q200 qualified
- 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

White Paper

MECHANICAL SPECIFICATIONS

Solderability: per J-STD-002

Resistance to Solder Heat: 255 °C, 30 s max., 3x max. through reflow

Terminal Strength: 17.7 N force for 60 s

Flex: 0.079" [2 mm] mounted on 0.063" [1.6 mm] thick PC board

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: -55 °C to +125 °C

Thermal Shock: 1000 cycles, -55 °C (for 30 min ± 3 min) to +125 °C (for 30 min ± 3 min) with 20 s max. transition interval

Biased Humidity: 85 % RH at 85 °C, 1000 h at full rated current

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	Z ± 25 % AT 100 MHz (Ω)	DCR MAX. AT 25 °C (mΩ)	RATED DC CURRENT TYP. AT 85 °C (1) (A)	Z_{pk} (2) (Ω)	F AT Z_{pk} (3) (MHz)	Z TYP. AT 100 MHz (Ω)	F AT Z_{DO} (4) (MHz)	XL / XR x OVER (5) (MHz)
ILHB1008ER301VHC1	300	30	4	554	155	309	222	117
ILHB1008ER601VHC1	600	30	4	670	122	517	138	100

Notes

- All test data is referenced to 25 °C ambient (unless otherwise indicated)
- Operating temperature range: -55 °C to +125 °C
- Storage condition: < 40 °C and < 70 % RH (in packaging)
- The part temperature (ambient + temp. rise) should not exceed the maximum rating under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application

(1) Rated current is the DC current that causes a 40 °C temperature rise at 20 °C ambient

(2) Z_{pk} = peak of impedance curve

(3) F at Z_{pk} = frequency of Z_{pk}

(4) F at Z_{DO} = frequency above 100 MHz where Z drops to nominal Z

(5) XL / XR x over = crossover point for inductive reactance and resistance impedance

GLOBAL PART NUMBER

I	L	H	B	1	0	0	8	E	R	3	0	1	V	H	C	1
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			IMPEDANCE TOLERANCE	APPLICATION		SERIES

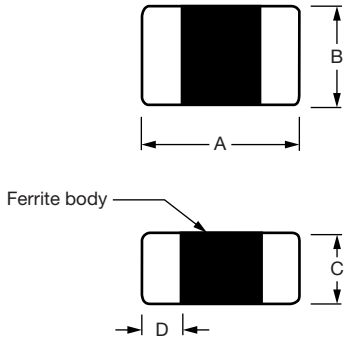
ER = tape and reel

301 = 300 Ω

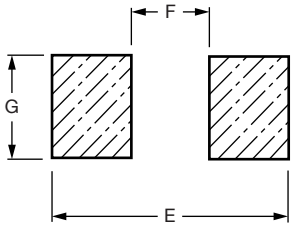
V = ± 25 %

HC = high current

DIMENSIONS in inches [millimeters]



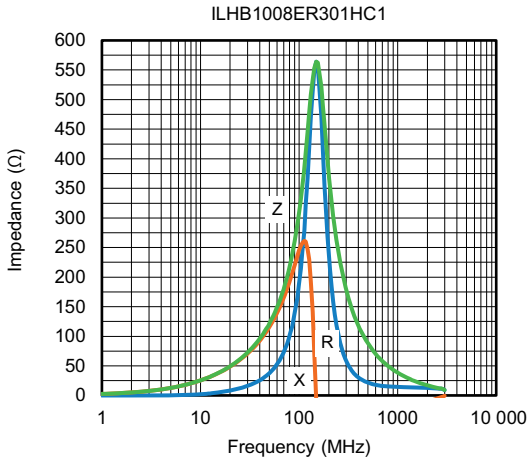
Dimensional outline

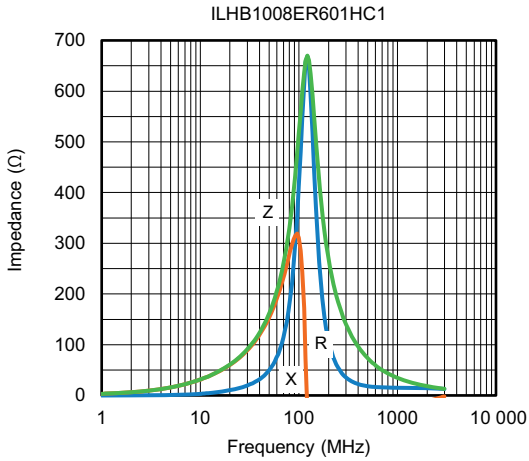


Typical pad layout

SIZE	A	B	C	D	E	F	G
1008	0.098 + 0.012 / - 0.004 [2.5 + 0.3 / - 0.1]	0.079 ± 0.008 [2.0± 0.2]	0.043 ± 0.004 [1.1 ± 0.1]	0.020 ± 0.012 [0.5 ± 0.3]	0.126 ± 0.008 [3.2 ± 0.2]	0.039 ± 0.008 [1.0 ± 0.2]	0.083 ± 0.012 [2.1 ± 0.3]

PERFORMANCE GRAPHS





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