

Automotive Power Inductor, High Voltage 1.5 kV, SMD, High Temperature 180 °C



FEATURES

- Isolation voltage rating 1.5 kV_{DC}
- High impedance for differential filtering applications (1 kΩ at 80 MHz peak frequency)
- Soft saturation provides stable inductance for regulating ripple and handling high load transients 5 x higher than heat rating current
- Third header pin for added mechanical mounting stability when soldered
- AEC-Q200 qualified
- High temperature continuous operation up to 180 °C
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(S-2008)

LINKS TO ADDITIONAL RESOURCES


[Product Page](#)

[Calculators](#)

MATERIAL SPECIFICATIONS

- Core: powdered iron alloy
- Wire: 200 °C polyamide insulated copper
- Coilform insulator material: black polyamide plastic
- Plating: terminals solder dipped in tin alloy (Sn99.3Cu0.7), mounting pin electroplated with 100 % matte tin
- Weight: 19.2 g

APPLICATIONS

- Automotive on-board chargers (OBC)
- High voltage inverters and systems
- Power factor correction (PFC)
- High voltage DC battery filter

STANDARD ELECTRICAL SPECIFICATIONS

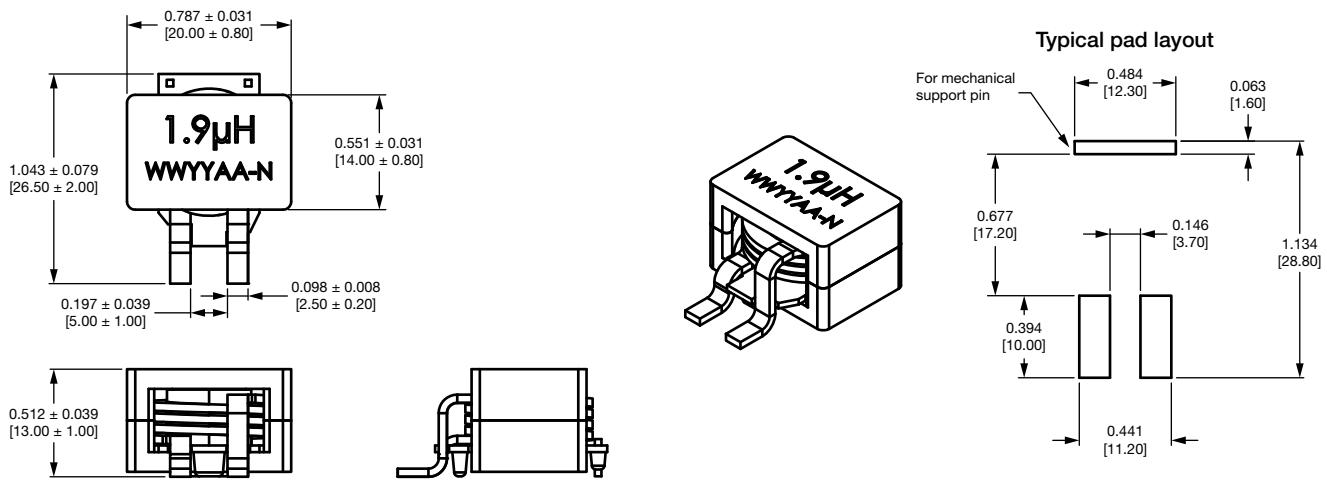
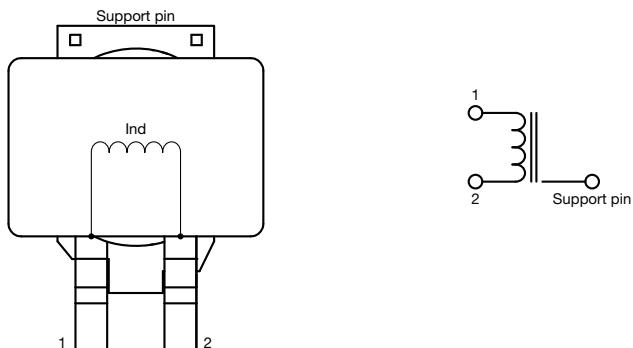
PART NUMBER	L ₀ INDUCTANCE ± 20 % AT 0.25 V, 100 kHz, 0 A (μH)	DCR AT 25 °C (mΩ)	DCR AT 25 °C (mΩ)	HEAT RATING CURRENT DC (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾		SRF TYP. (MHz)
		TYP.	MAX.	TYP.	20 % DROP	30 % DROP	
IHDV0808ACFS1R9M3A	1.9	1.3	1.5	30.0	80.0	110.0	83

Notes

- All test data is referenced to 25 °C ambient
- Operating temperature range -40 °C to +180 °C
- The part temperature (ambient + temperature 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
- Isolation voltage rating (coil to core or coil to mounting pin) = 1.5 kV_{DC} max.

⁽¹⁾ DC current (A) that will cause an approximate ΔT of 40 °C

⁽²⁾ DC current (A) that will cause L₀ to drop approximately 20 % and 30 %, respectively

DIMENSIONS in inches [millimeters]

SCHEMATIC

DESCRIPTION

IHDV-0808AC-3A	1.9 μ H	$\pm 20\%$	F	e2
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

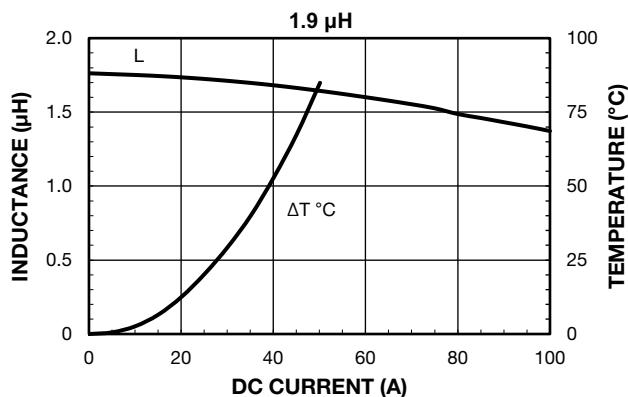
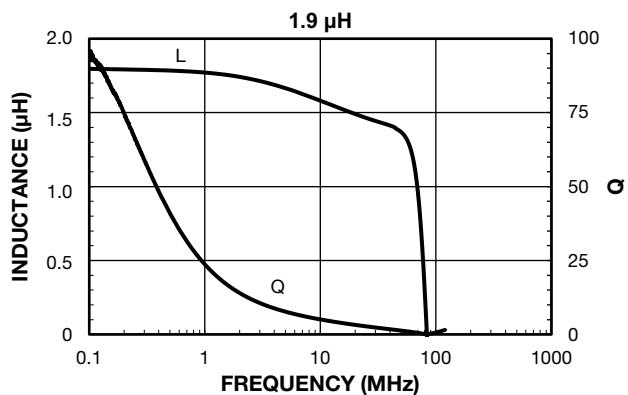
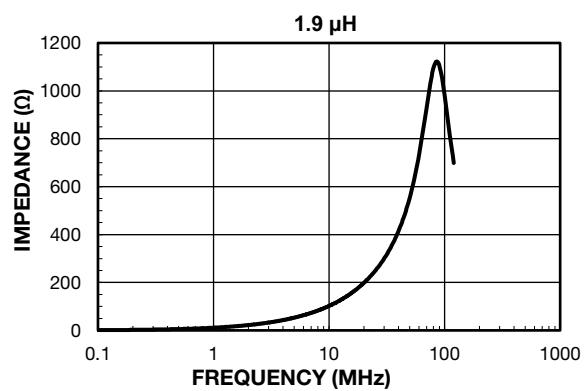
GLOBAL PART NUMBER

I	H	D	V	0	8	0	8	A	C	F	S	1	R	9	M	3	A
PRODUCT FAMILY				SIZE				PACKAGE CODE		MOUNTING STYLE		INDUCTANCE VALUE		INDUCTANCE TOLERANCE		SERIES	

F = tape (100 pcs/reel)
 E = tray pack (150 pcs/box)
 S = SMD
 1R9 = 1.9 μ H
 M = $\pm 20\%$

Note

- For additional details see: <https://www.vishay.com/doc?34150>

PERFORMANCE GRAPHS

PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY

PERFORMANCE GRAPHS: IMPEDANCE VS. FREQUENCY


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