BOURNS®

CVH160808H SERIES

Multilayer Power Chip Inductors

*RoHS COMPLIANT & **HALOGEN FREE

Features

- Monolithic construction offering high reliability
- Low DC resistance
- High current
- RoHS compliant* and halogen free**

Applications

- Mobile devices
- Wearable devices
- Notebooks/tablets
- Communication devices

Sustainability

- Small size reduces material use
- High pallet density for lower CO_2
- Eco-logistics-friendly packing
- Recyclable ESD-safe packaging
- Corrosion-resistant for longevity
- ISO 14001, low impact energy

Product Overview

The CVH160808H Series features a metal alloy-based core and monolithic construction, offering high reliability, low DC resistance, and high current capability in a compact form factor. These Multilayer Power Chip Inductors are well-suited for mobile devices, wearables, tablets, laptops, and various communication devices.

Electrical Specifications (@ 25 °C Unless Otherwise Noted)

Bourns Part No.	Inductance @ 1 MHz / 0.1 V L (µH)	Tolerance (%)	DCR (Ω) Typ.	DCR (Ω) Max.	Irms (mA) Typ.	Isat (mA) Typ.
CVH160808H-R24M	0.24	20	0.020	0.024	4000	4800
CVH160808H-R47M	0.47	20	0.038	0.043	3000	3800
CVH160808H-R56M	0.56	20	0.045	0.055	2900	3100
CVH160808H-1R0M	1.00	20	0.089	0.110	1900	2500
CVH160808H-1R5M	1.50	20	0.160	0.200	1400	2000
CVH160808H-2R2M	2.20	20	0.237	0.292	1300	1800

General Specifications

Operating Temperature ..... -40 °C to +125 °C
Storage Temperature ..... -40 °C to +125 °C
Temperature Rise ..... 40 °C at rated Irms
Inductance Droop ..... 30 % at Isat
Moisture Sensitivity Level 1
ESD Classification (HBM) ..... N/A

Materials

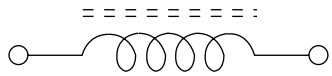
Core ..... Metal alloy
Terminal finish ..... SnAgCu
Packaging ..... 4,000 pcs. per 7-inch reel

How to Order

CVH160808H - R47 M

Model
Value Code
Tolerance

Electrical Schematic



Contact Information

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* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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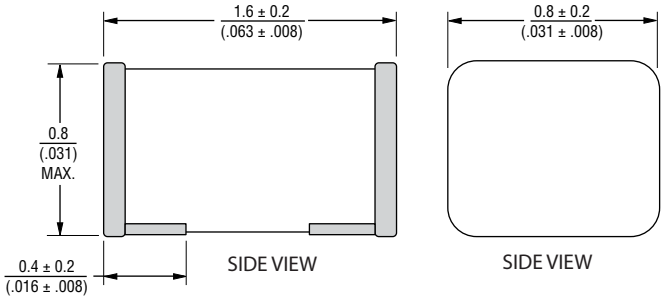
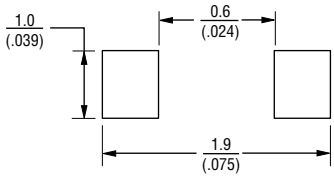
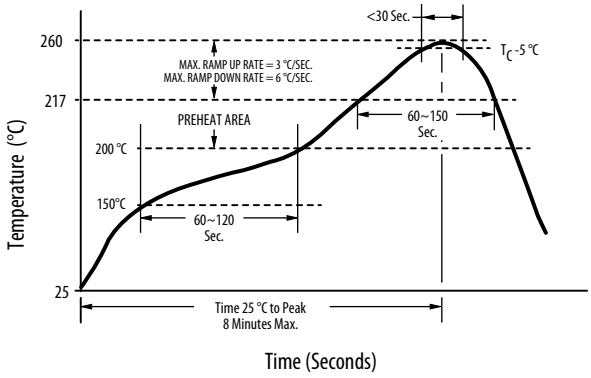
Product Dimensions



Recommended Layout



Solder Reflow Recommendations



Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax}	 150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L)	217 °C
Time (t_L) maintained above T_L	60-150 seconds
Peak package body temperature (T_p)	260 °C
Time within 5 °C of Actual Peak Temperature (t_p)	<30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

T_p = Maximum peak package body temperature
T_c = The classification temperature
T_p should be equal to or less than T_c
Refer to IPC/JEDEC J-STD-020E

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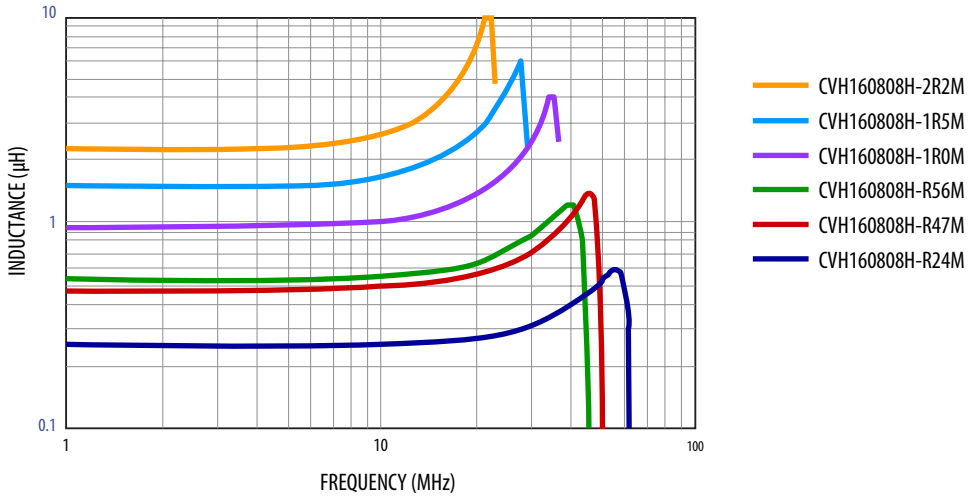
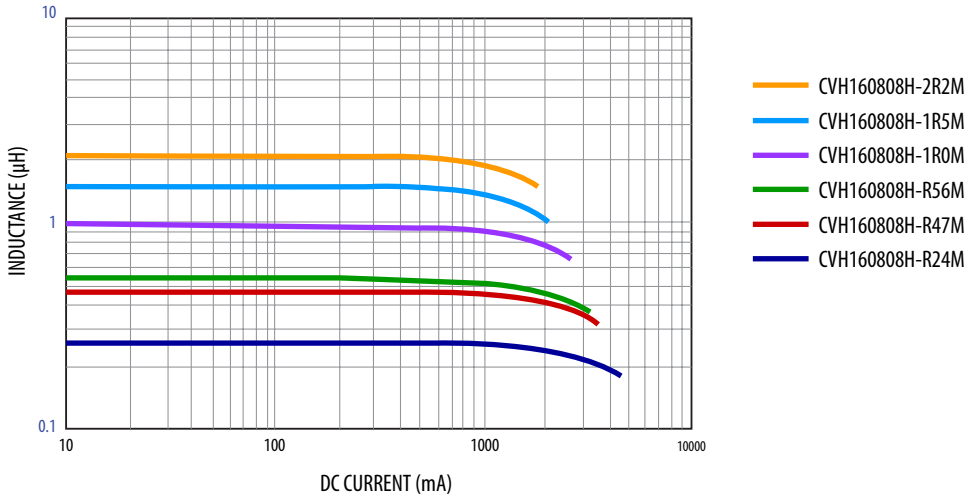
Inductance vs. Frequency



Inductance vs. DC Bias



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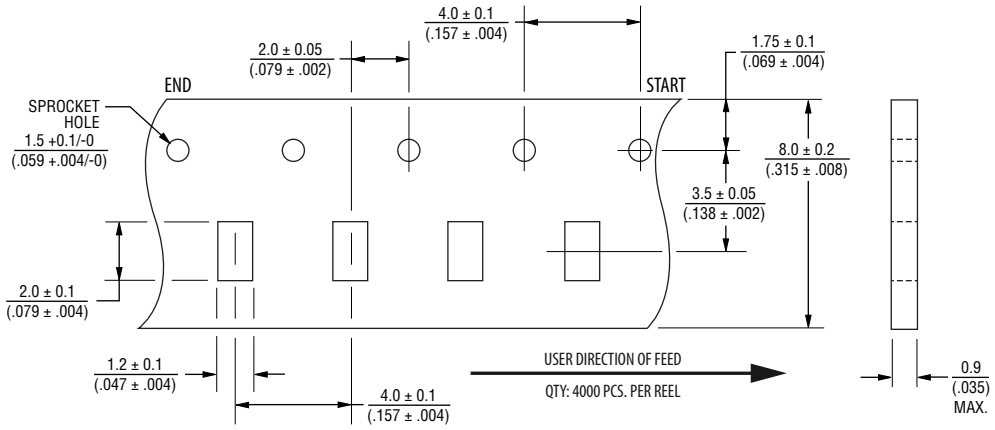
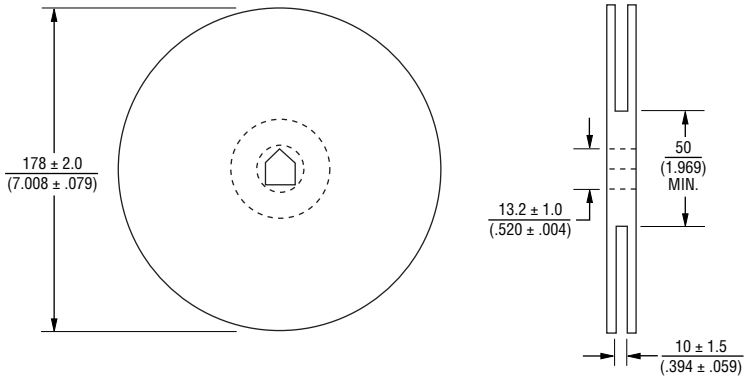
Packaging Specifications





DIMENSIONS: MM / (INCHES)

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