

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 CO₂
- 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.	I _{rms} (mA) Typ.	I _{sat} (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 I_{rms}
 Inductance Droop.....30 % at I_{sat}
 Moisture Sensitivity Level.....1
 ESD Classification (HBM).....N/A

Materials

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

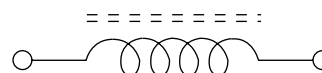
Contact Information

www.bourns.com	Phone	Email
Asia-Pacific	+886-2 2562-4117	asiacus@bourns.com
Europe	+36 88 885 877	eurocus@bourns.com
Mexico	+52 614 478 0400	mexicus@bourns.com
The Americas	+1-951 781-5500	americus@bourns.com

How to Order

Model CVH160808H - R47 M
 Value Code _____
 Tolerance _____

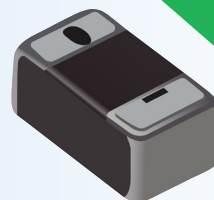
Electrical Schematic



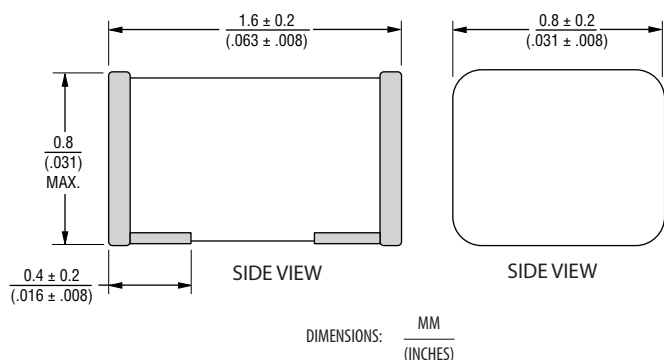
* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** 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.

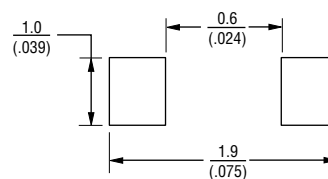
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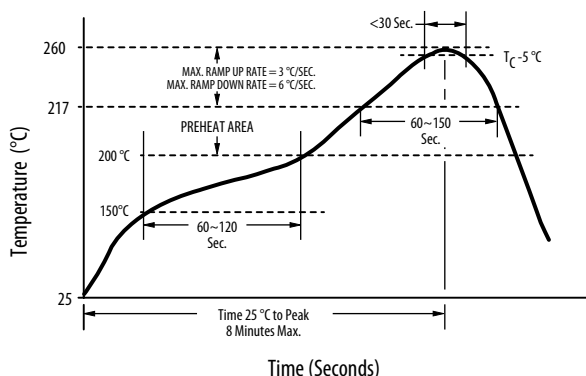
Product Dimensions



Recommended Layout



Solder Reflow Recommendations



Profile Feature	Pb Free Assembly
Preheat	
- Temperature Min. (T_{smin})	150 °C
- Temperature Max. (T_{smax})	200 °C
- Time(t_s) from T_{smin} to T_{smax}	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.

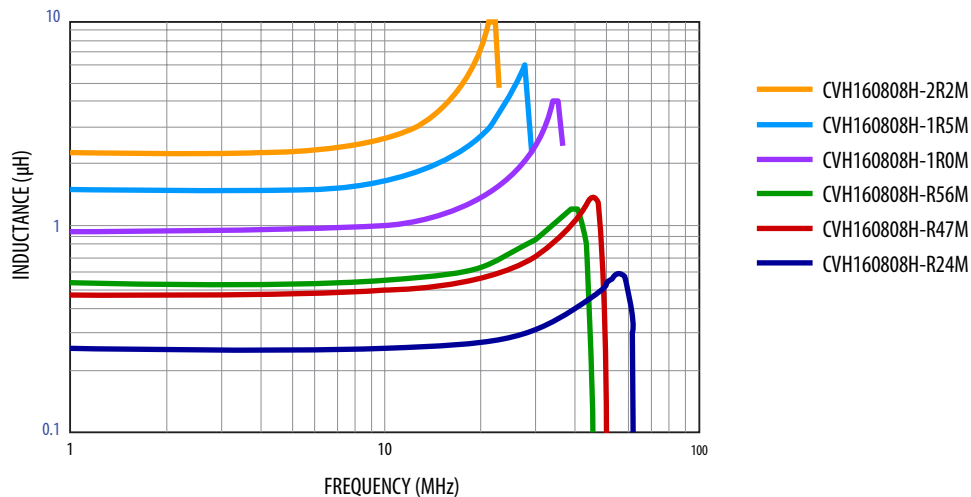
T_P = Maximum peak package body temperature
 T_C = The classification temperature
 T_P should be equal to or less than T_C
Refer to IPC/JEDEC J-STD-020E

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.

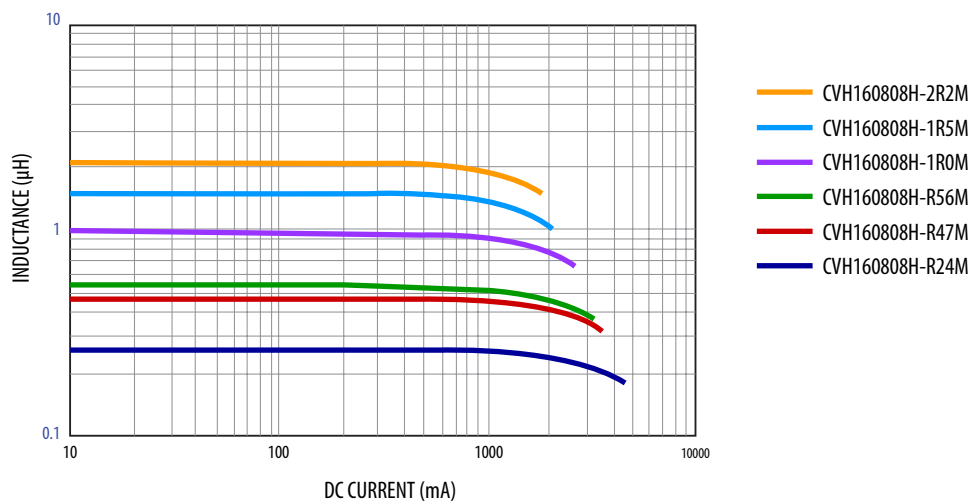
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Inductance vs. Frequency



Inductance vs. DC Bias



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