

Features

- High rated current
- Inductance up to 47 μH
- Compact size
- High impedance over a wide frequency range
- High operating temperature up to 150 °C
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

Applications

- Automotive systems
- Noise filters
- DC power lines
- Power over Coaxial

CWP3230A Series – Chip Inductors

Electrical Specifications

Bourns® Part No.	Inductance @ 100 kHz / 0.1 V		DCR (Ω)		SRF (MHz)	Isat (mA) Typ.					I _{rms} (mA) Typ.		
	L (μH)	Tol. %	Typ.	Max.	Typ.	25 °C	85 °C	105 °C	125 °C	140 °C	25 °C	85 °C	125 °C
CWP3230A-2R2M	2.2	±20	0.10	0.13	300	2200	1900	1700	1500	1300	1900	1730	1000
CWP3230A-6R8M	6.8		0.20	0.24	120	1400	1000	930	800	700	1360	1230	800
CWP3230A-100M	10		0.29	0.34	95	1100	850	760	660	560	1130	1020	570
CWP3230A-220M	22		0.76	0.88	70	720	580	520	450	390	700	630	400
CWP3230A-470M	47		1.00	1.20	50	300	280	200	180	150	500	300	100

Notes:

Maximum part temperature +140 °C (ambient temperature plus self-generation of heat).

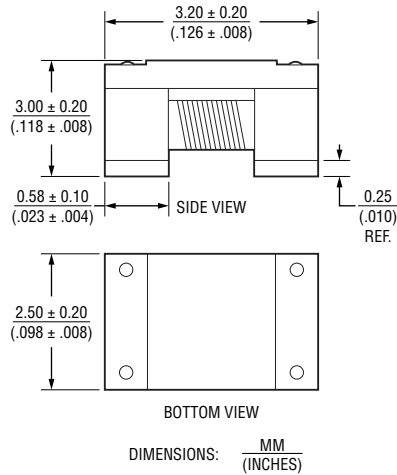
Isat: DC current that causes 30 % inductance drop from its initial value at 200 mA at specified temperature.

I_{rms}: Current that causes a 40 °C rise at 25 °C.

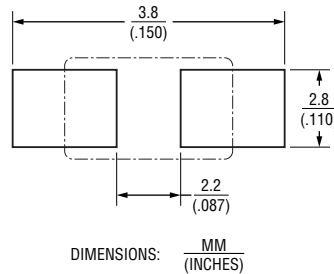
Current that causes a 40 °C rise at 85 °C.

Current that causes a 15 °C rise at 125 °C.

Product Dimensions



Recommended Layout



How to Order

CWP3230A - 2R2 M
 Model _____
 Inductance Value Code _____
 2R2 = 2.2 μH
 6R8 = 6.8 μH
 100 = 10 μH
 220 = 22 μH
 470 = 47 μH
 Tolerance Code _____
 M = ±20 %

Additional Information

Click these links for more information:



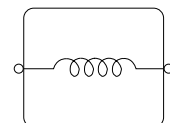
General Specifications

Operating Temperature -55 °C to +150 °C
 (Temperature rise included)
 Storage Temperature -55 °C to +150 °C
 Temperature Rise 15 °C or 40 °C typ. at rated I_{rms}
 Rated Current Inductance drops 30 % at Isat
 Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

Materials

Core Material Ferrite
 Wire Enameled copper
 Terminal Ag/Ni/Sn
 Packaging 500 pcs. per 7 " reel

Electrical Schematic



WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* 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.

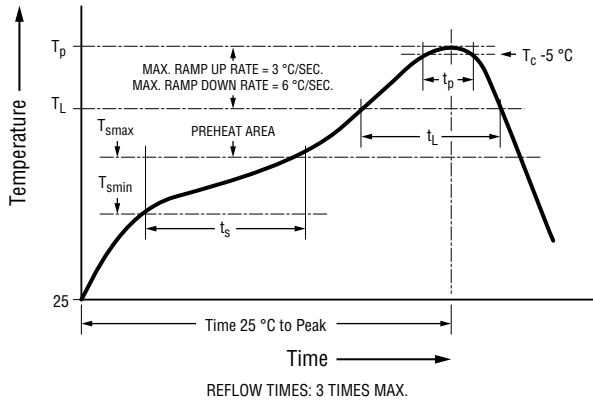
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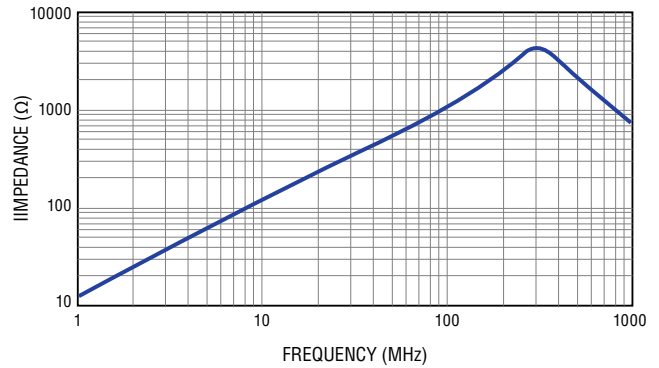
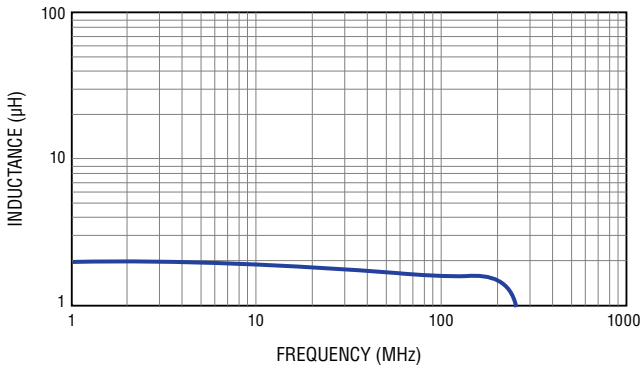
Soldering Profile



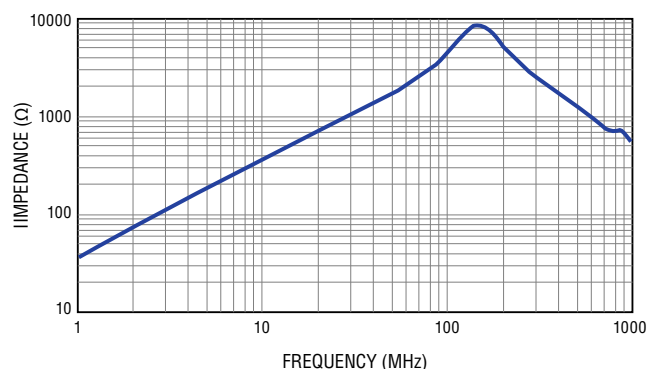
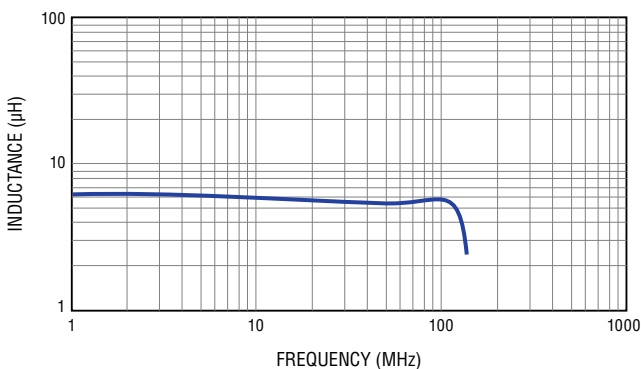
Profile Feature	Pb Free Assembly
Preheat <ul style="list-style-type: none"> - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax} 	150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Reflow temperature	250 °C
Time (t_p) at $T_c - 5\text{ }^\circ\text{C}$ (T_p should be equal to or less than T_c)	< 30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

Inductance vs. IDC

CWP3230A-2R2M



CWP3230A-6R8M



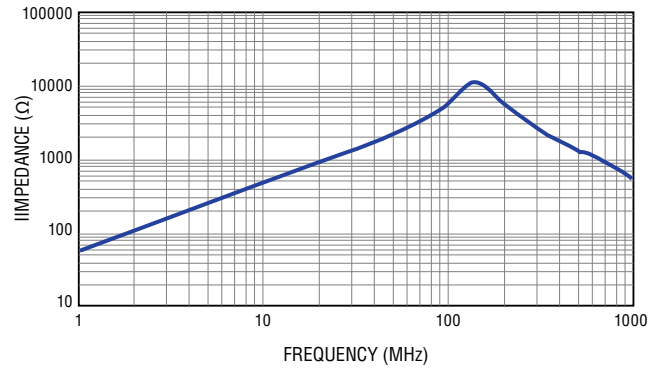
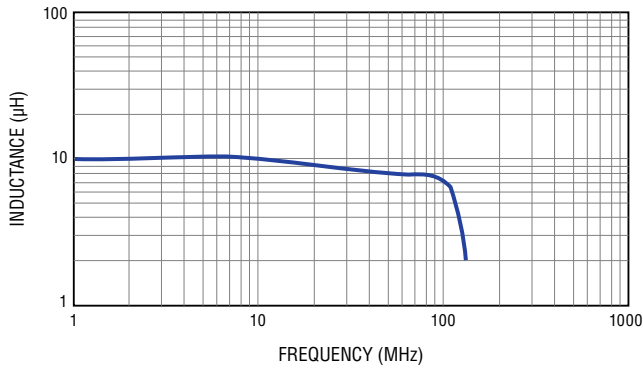
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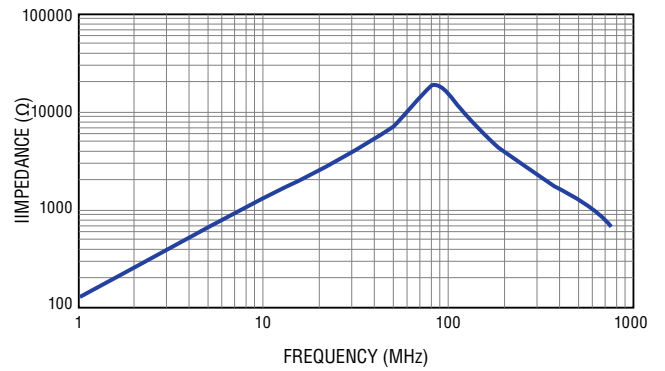
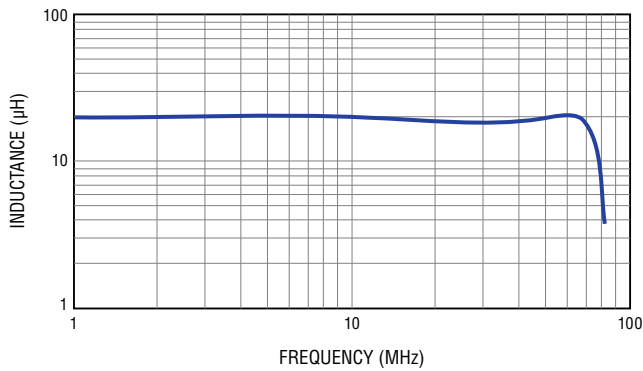


Inductance vs. IDC (continued)

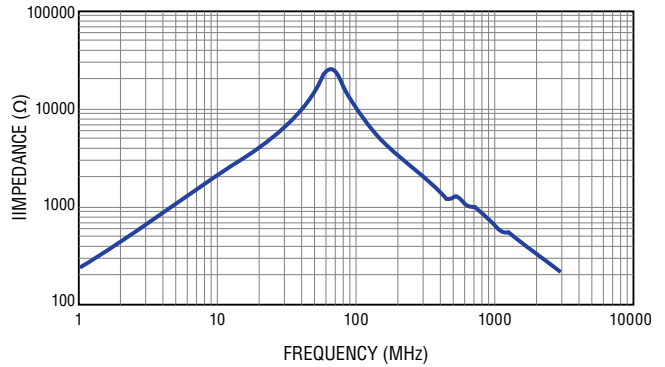
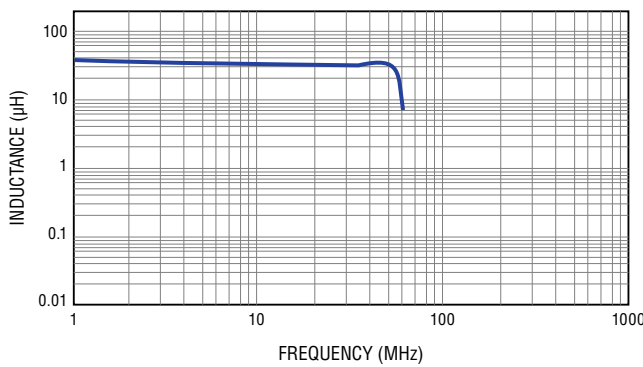
CWP3230A-100M



CWP3230A-220M



CWP3230A-470M

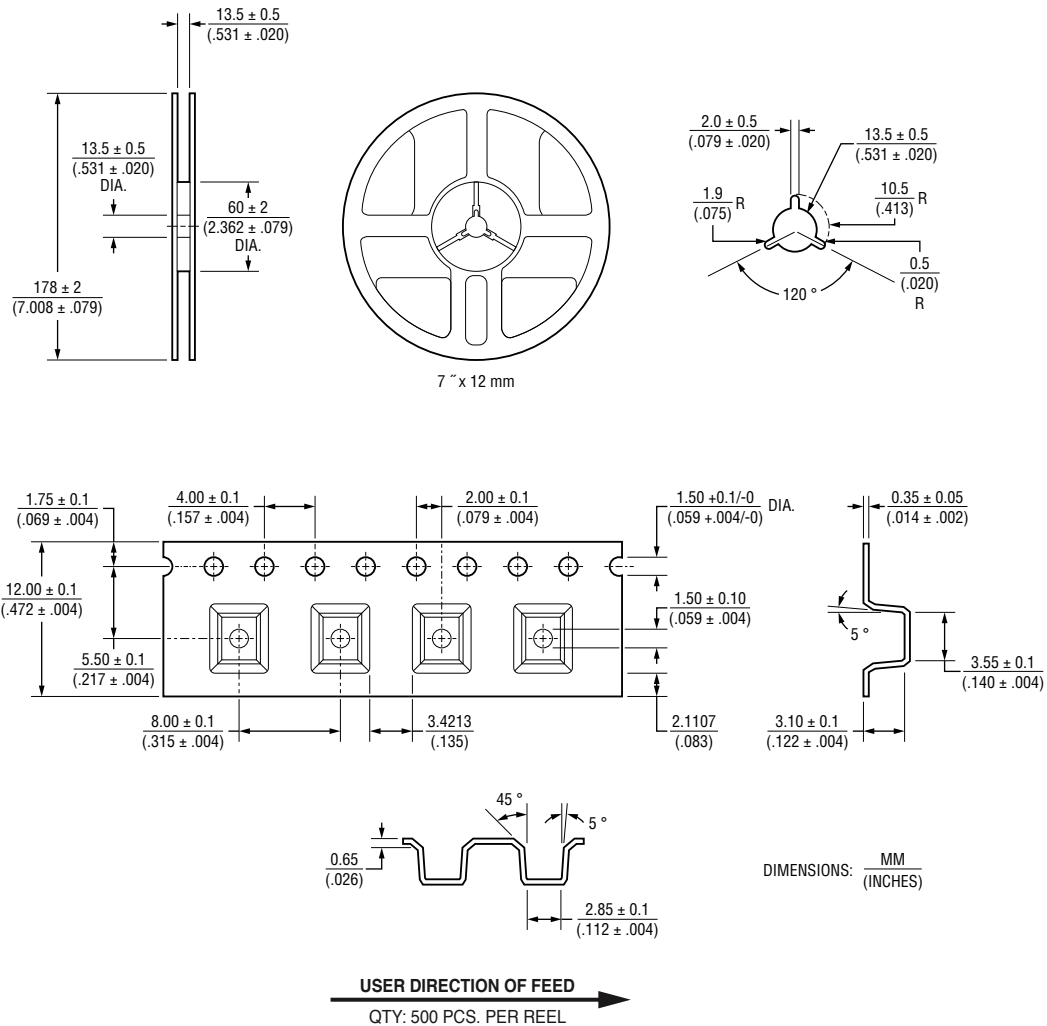


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BOURNS®

Packaging Specifications



BOURNS®

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REV. 04/24

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