

CTX17-18913-R

Multi-phase power inductor



Product features

- High current multi-phase inductor
- 100 nH per phase coupled inductor
- Ferrite core material
- Patents pending
- Halogen free, lead free, RoHS compliant

Applications

- For exclusive use with Volterra® or Maxim® VPR-Devices

Environmental Data

- Storage temperature range (Component):
-40 °C to +125 °C
- Operating temperature range: -40 °C to +125 °C
(ambient plus self-temperature rise)
- Solder reflow temperature:
J-STD-020 (latest revision) compliant



Volterra® is a registered trademark of Volterra Semiconductor, LLC.
Maxim® is a registered trademark of Maxim Integrated Devices, Inc.



Powering Business Worldwide

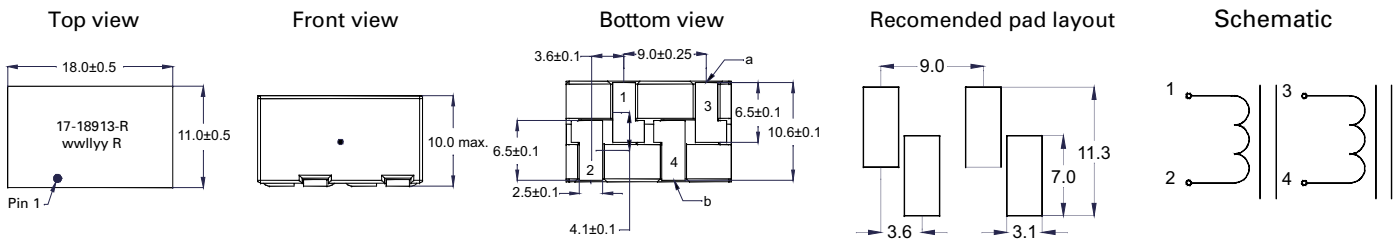
Product Specifications

Part Number ⁵	Inductor phases	OCL min ¹ @ 0.0 Adc (nH)	OCL min ¹ @ I _{sat} 1 ³ (nH)	I _{sat} 1 ³ (A)	OCL min ² @ I _{sat} 2 ³ (nH)	I _{sat} 2 ³ (A)	SCL ⁴ (nH)	I _{sat} 3 ³ (A)	DCR ±10% @ +20 °C (mΩ)
CTX17-18913-R	2	380	200	30	200	23	100	90	0.3

1. Open Circuit Inductance (OCL) Test parameters: 1 MHz, 0.1 Vrms, +25 °C
2. Open Circuit Inductance (OCL) Test parameters: 1 MHz, 0.1 Vrms, +105 °C
3. Isat1: Peak current at which OCL drops to 200 nH min @ +25 °C
Isat2: Peak current at which OCL drops to 200 nH min @ +105 °C
Isat3: Peak current at which SCL drops approximately 20% @ +105 °C
4. Short Circuit Inductance (SCL) Test parameters: 1 MHz, 0.1 Vrms, 0.0 Adc @ +25 °C ±20% short pins 1 and 4, measure pins 2 and 3 and divide by 2.

5. This device is licensed for use only when incorporated within a voltage regulator employing power regulating devices manufactured by Volterra Semiconductor, LLC or Maxim Integrated Devices, Inc. No license is granted expressly or by implication to use this device with power regulating devices manufactured by any company other than Volterra or Maxim.

Dimensions (mm)



DCR measured from point "a" to point "b"

Part marking: Pin 1 dot, 17-18913-R, wwlllyy = date code, R = revision level

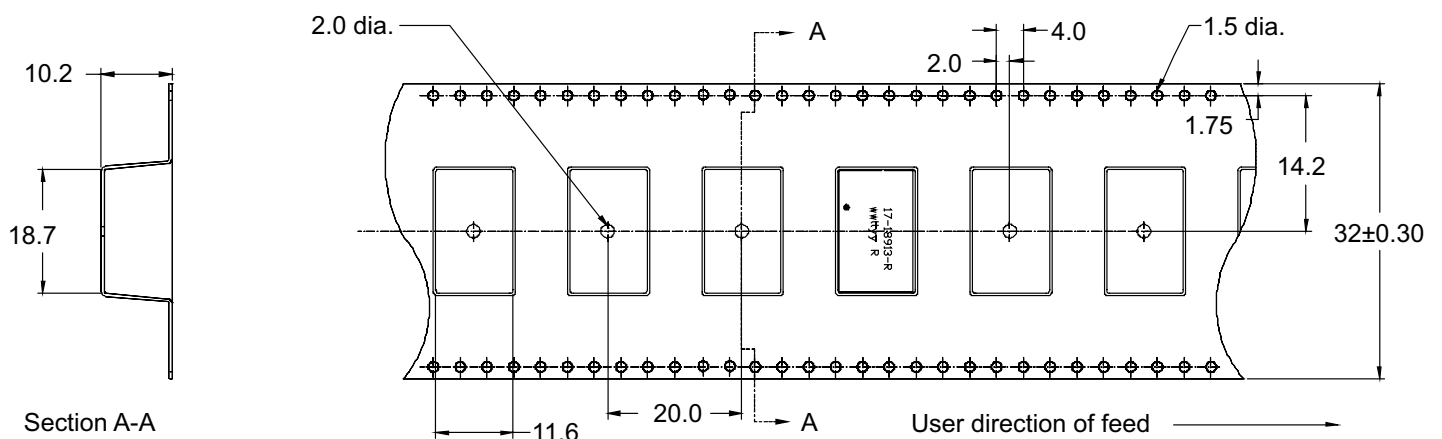
Tolerances are ±0.25 millimeters unless stated otherwise.

All soldering surfaces to be coplanar within 0.13 millimeters.

Do not route traces or vias underneath the inductor

Packaging information (mm)

Supplied in tape and reel packaging, 200 parts per 13" diameter reel.



Solder reflow profile

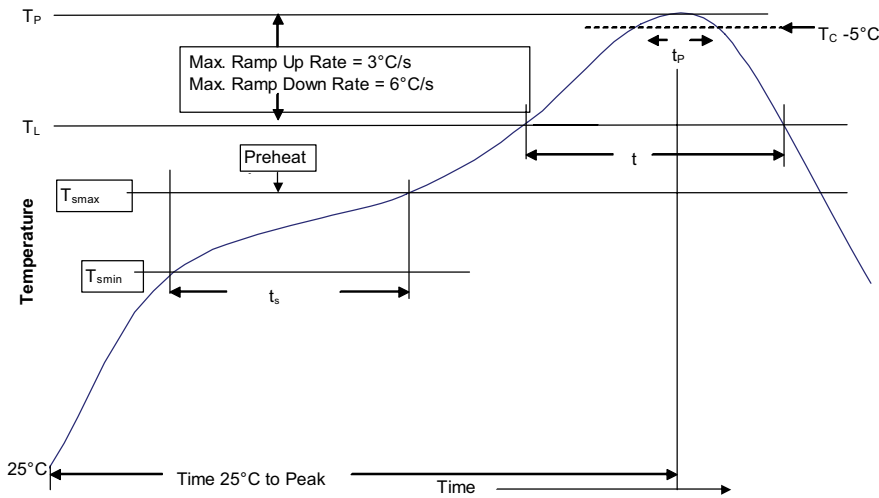


Table 1 - Standard SnPb Solder (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5mm)	235°C	220°C
≥2.5mm	220°C	220°C

Table 2 - Lead (Pb) Free Solder (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350 - 2000	Volume mm ³ >2000
<1.6mm	260°C	260°C	260°C
1.6 – 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Reference JDEC J-STD-020

Profile Feature	Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak	<ul style="list-style-type: none"> Temperature min. (T_{smin}) Temperature max. (T_{smax}) Time (T_{smin} to T_{smax}) (t_s) 	<ul style="list-style-type: none"> 100°C 150°C 60-120 Seconds
Average ramp up rate T_{smax} to T_p	3°C/ Second Max.	3°C/ Second Max.
Liquidous temperature (T_L) Time at liquidous (t_L)	<ul style="list-style-type: none"> 183°C 60-150 Seconds 	<ul style="list-style-type: none"> 217°C 60-150 Seconds
Peak package body temperature (T_p)*	Table 1	Table 2
Time (t_p)** within 5 °C of the specified classification temperature (T_c)	20 Seconds**	30 Seconds**
Average ramp-down rate (T_p to T_{smax})	6°C/ Second Max.	6°C/ Second Max.
Time 25°C to Peak Temperature	6 Minutes Max.	8 Minutes Max.

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.
** Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

Life Support Policy: Eaton does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
www.eaton.com/electronics

© 2015 Eaton
All Rights Reserved
Printed in USA
Publication No. 10272—BU-MC15056
November 2015

Eaton is a registered trademark.
All other trademarks are property of their respective owners.

