产品承认书
SPECIFICATION FOR APPROVAL

客户名称：
CUSTOMER

我司料号：
OUR PART NO. XRPH403025A-470T

我司品名：
OUR PART NAME HIGH CURRENT BEADS

送样日期：
DATE SAMPLES

数 量:
QUANTITY

制造确认 MANUFACTURER APPROVE		
拟制 DRAWN	审核 CHECKED	确认 APPROVED
Hu Fangting	RaoPing	LiZhengxiong

客户确认 CUSTOMER APPROVE

客户名称 CUSTOMER NAME:

客户料号 CUSTOMER P/N:

规格型号 DESCRIPTION: XRPH403025A 47Ω ±20%

检查結果： ☐ 合格 ☐不合格 签名及盖章：

INSPECT RESULT ACCEPT REJECT SIGNATURE AND STAMP

说明 REMARK:

如对本承认书内容有异议请提出或标记发送至我司，本承认书在未收到异议回复时于本承认书提供一周后生效。

If you have any objection to the contents of this acknowledgment, please raise it or send the mark to us. The acknowledgment will become effective one week after the acknowledgment is provided in the absence of any objection.

东莞市祥如电子有限公司

DONGGUAN XIANGRU ELECTRONICS CO.,LTD

Tel：0769-86346548 Fax：0769-86346358

Email：dgxiangru@126.com

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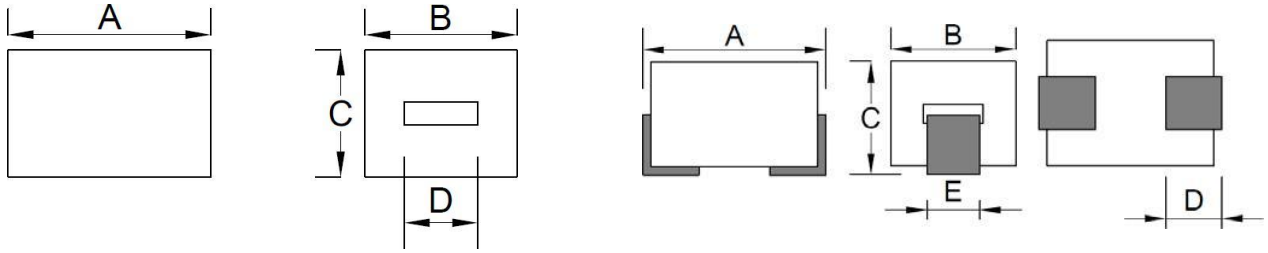
SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER		日期 DATE	2025/8/10
客户物料编号 CUSTOMER P/N		客户规格型号 DESCRIPTION	XRPH403025A 47Ω ±20%
我司物料编号 OUR PART NO	XRPH403025A-470T	我司品名 OUR PART NAME	HIGH CURRENT BEADS

1. Features：1. 100% Lead(Pb) & Halogen-Free and RoHS compliant.

2. Dimension：



CORE SIZE			
A（mm)	B（mm)	C（mm)	D（mm)
4.00 ±0.25	3.10 ±0.15	2.50 ±0.15	1.50 ±0.15

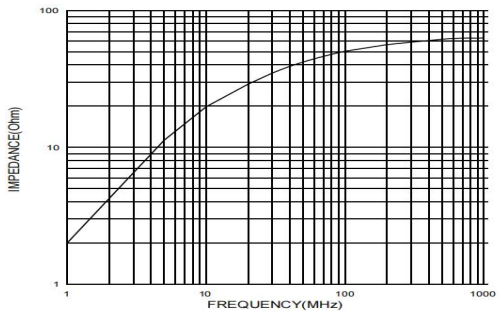
PRODUCT SIZE				
A（mm)	B（mm)	C（mm)	D（mm)	E(mm)
4.30～5.10	3.1 ±0.15	2.70～3.1	1.35±0.20	1.35±0.15

3.Specification：

XLT Part Number	ELECTRICAL REQUIREMENTS 1			ELECTRICAL REQUIREMENTS 2			DCR (mΩ) Max.	Rated Current	
	Impedance (Ω)	Tolerance	Test Frequency (MHz)	Impedance (Ω)	Tolerance	TestFrequency(MHz)		△T=40℃ TYP.	Test Frequency (MHz)
XRPH403025A-470T	25	min	25	47	±20	100	0.6	15	1

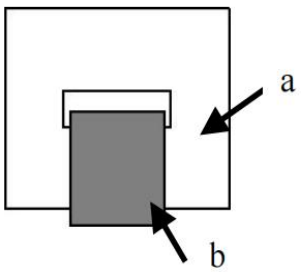
Note:COIL SPEC：FLAT.TCW(1.25W X 0.20T)m/m

Typical Impedance v.s. Frequency Curve



4.Material List：

No.	a	b
Description	Core	Wire
Specification	Ferrite Core	Electroplated nickel-tin flat copper wire



Application Notice：

· Storage Conditions(component level)：

To maintain the solderability of terminal electrodes:

1. Our products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.

2. Temperature and humidity conditions: Less than 40℃ and 60% RH.

3. Recommended products should be used within 12 months form the time of delivery.

4. The packaging material should be kept where no chlorine or sulfur exists in the air.

· Transportation：

1. Products should be handled with care to avoid damage or contamination from perspiration and skinoils.

2. The use of tweezers or vacuum pick up is strongly recommended for individual components.

3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

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5.Reliability and Test Condition：

Item	Performance	Test Condition
Operating temperature	（-40~+125℃ (Including self - temperature rise)	
Storage temperature	（-40~+125℃ (on board)	
Electrical Performance Test：		
Z(Impedance)	Refer to standard electrical characteristics list.	CH3302,CH1320,CHA113009,Agilent E4991A,Agilent 16197A LCR Meter.
DCR		CH16502,Agilent33420A Micro-Ohm Meter.
Heat Rated Current (Irms)	Approximately △T≦40℃	Heat Rated Current (Irms) will cause the coil temperature rise △T (℃) without core loss. 1.Applied the allowed DC current(keep 1 min.). 2.Temperature measured by digital surface thermometer
Reliability Test：		
Life Test	Appearance：No damage. Inductance：within±10% of initial value Q：Shall not exceed the specification value. RDC：within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD 020DClassification Reflow Profiles). Temperature： 125±2℃(Inductor). Applied current：rated current. Duration：1000±12hrs. Measured at room temperature after placing for 24±2 hrs.
Load Humidity		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles. Humidity：85±2％R.H, Temperature：85℃±2℃ Duration：1000hrs Min. with 100% rated current Measured at room temperature after placing for 24±2 hrs
Moisture Resistance		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles. 1. Baked at50℃ for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65±2℃ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25℃ in 2.5hrs. 3. Raise temperature to 65±2℃ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25℃ in 2.5hrs,keep at 25℃ for 2 hrs then keep at -10℃ for 3 hrs. 4. Keep at 25℃ 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.
Thermal shock		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles Condition for 1 cycle. Step1：-40±2℃ 30±5min. Step2：25±2℃ ≦0.5min. Step3：125±2℃ 30±5min. Number of cycles： 500. Measured at room temperature after placing for 24±2 hrs
Vibration		Oscillation Frequency: 10～2K～10Hz for 20 minutes Equipment：Vibration checker Total Amplitude:1.52mm±10% Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations)。

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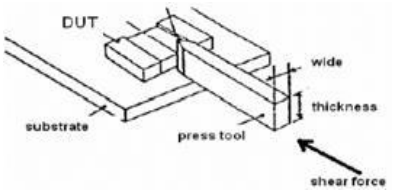
<table>
<tr><th>Item</th><th>Performance</th><th colspan="5">Test Condition</th></tr>
<tr><td rowspan="4">Shock</td><td rowspan="3">Appearance：No damage. Inductance：within±10% of initial value Q：Shall not exceed the specification value. RDC：within ±15% of initial value and shall not exceed the specification value</td><td>Type</td><td>Peakvalue (g′s)</td><td>Normal duration (D) (ms)</td><td>Wave form</td><td>Velocity change (Vi)ft/sec</td></tr>
<tr><td>SMD</td><td>50</td><td>11</td><td>Half-sine</td><td>11.3</td></tr>
<tr><td>Lead</td><td>50</td><td>11</td><td>Half-sine</td><td>11.3</td></tr>
<tr><td colspan="5">shocks in each direction along 3 perpendicular axes.</td></tr>
<tr><td>Bending</td><td colspan="5">Shall be mounted on a FR4 substrate of the following dimensions:
>=0805:40x100x1.2mm <0805:40x100x0.8mm
Bending depth:>=0805inch(2012mm):1.2mm <0805 inch(2012mm):0.8mm
duration of 10 sec.</td></tr>
<tr><td>Soderability</td><td>More than 95% of the terminal electrode should be covered with solder。</td><td colspan="5">Preheat: 150℃,60sec.。Solder: Sn96.5% Ag3% Cu0.5%
Temperature: 245±5℃。
Flux for lead free: Rosin. 9.5%。
Dip time: 4±1sec。
Depth: completely cover the termination</td></tr>
<tr><td rowspan="3">Resistance to Soldering Heat</td><td rowspan="3"></td><td colspan="5">Number of heat cycles: 1</td></tr>
<tr><td colspan="2">Temperature (°C)</td><td>Time(s)</td><td colspan="2">Temperature ramp/immersion and emersion rate</td></tr>
<tr><td colspan="2">260 ±5(soldertemp)</td><td>10 ±1</td><td colspan="2">25mm/s ±6 mm/s</td></tr>
<tr><td>Terminal Strength</td><td>Appearance：No damage. Inductance：within ±10% of initial value Q：Shall not exceed the specification value. RDC：within ±15% of initial value and shall not exceed the specification value</td><td colspan="5">Preconditioning:Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force (>0805 inch(2012mm):1kg , <=0805 inch(2012mm):0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested.
 
</td></tr>
<tr><td></td><td></td><td colspan="5"></td></tr>
<tr><td></td><td></td><td colspan="5"></td></tr>
</table>

7. Soldering and Mounting

7-1. Soldering

Mildly activated rosin fluxes are preferred.XLT terminations are suitable for all wave and re-flow soldering systems.If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

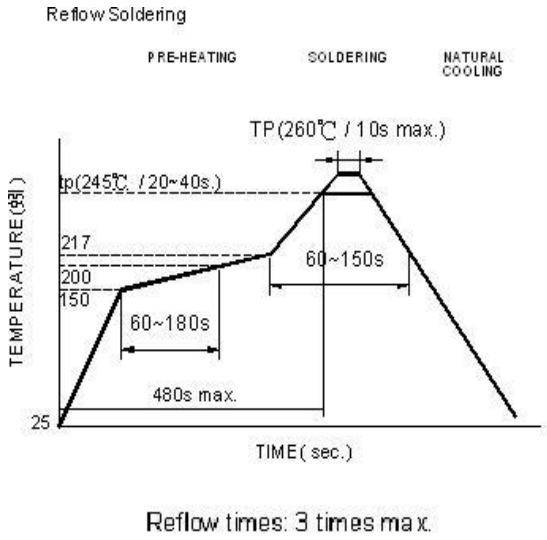
7-1.1 Solder re-flow:

Recommended temperature profiles for re-flow soldering in Figure 1.

7-1.2 Soldering Iron(Figure 2):

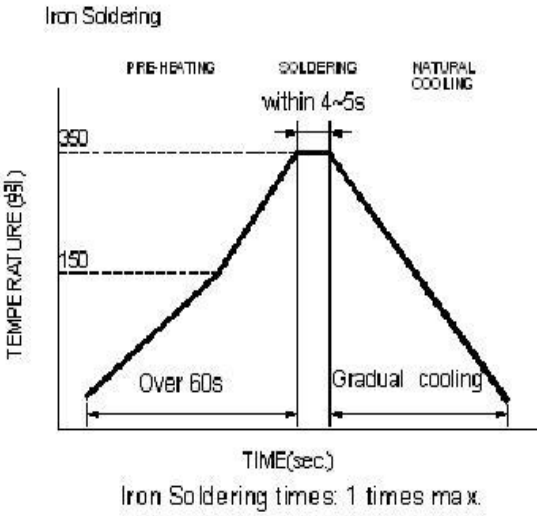
Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.

- **Preheat circuit and products to 150℃**
- **355℃ tip temperature (max)**
- **Never contact the ceramic with the iron tip**
- **1.0mm tip diameter (max)**
- **Use a 20 watt soldering iron with tip diameter of 1.0mm**
- **Limit soldering time to 4~5 sec.**



Reflow times: 3 times max.

Fig.1

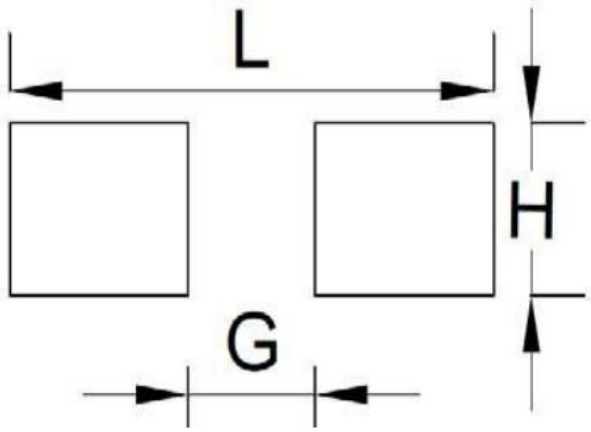


Iron Soldering times: 1 times max.

Fig.2

7-2. Recommended PC Board Pattern：

Fig.1



L(mm)	G(mm)	H(mm)
4.8	1.4	1.5