

Wire-wound Ferrite Power Inductors LSQPB/LLQPB series

■ PRECAUTIONS

1. Circuit Design

Precautions	<ul style="list-style-type: none"> ◆ Verification of operating environment, electrical rating and performance <ol style="list-style-type: none"> 1. A malfunction in medical equipment, spacecraft, nuclear reactors, etc. may cause serious harm to human life or have severe social ramifications. As such, any inductors to be used in such equipment may require higher safety and/or reliability considerations and should be clearly differentiated from components used in general purpose applications. 2. When inductors are used in places where dew condensation develops and/or where corrosive gas such as hydrogen sulfide, sulfurous acid, or chlorine exists in the air, characteristic deterioration may occur. Please do not use inductors under such environmental conditions. ◆ Operating Current (Verification of Rated current) <ol style="list-style-type: none"> 1. The operating current including inrush current for inductors must always be lower than their rated values. 2. Do not apply current in excess of the rated value because the inductance may be reduced due to the magnetic saturation effect. ◆ Temperature rise <p>Temperature rise of power choke coil depends on the installation condition in end products. Make sure that temperature rise of power choke coils in actual end products is within the specified temperature range.</p>
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2. PCB Design

Precautions	<ul style="list-style-type: none"> ◆ Land pattern design <ol style="list-style-type: none"> 1. Please refer to a recommended land pattern.
Technical considerations	<ul style="list-style-type: none"> ◆ Land pattern design <p>Surface Mounting</p> <ol style="list-style-type: none"> 1. The conditions of the picking and placing should be checked in advance. 2. The products are only for reflow soldering.

3. Considerations for automatic placement

Precautions	<ul style="list-style-type: none"> ◆ Adjustment of mounting machine <ol style="list-style-type: none"> 1. Excessive physical impact should not be imposed on the products for picking and placing onto the PC boards. 2. Mounting and soldering conditions should be checked in advance.
Technical considerations	<ul style="list-style-type: none"> ◆ Adjustment of mounting machine <p>The products might be broken if too much stress is given for the picking and placing.</p>

4. Soldering

Precautions	<ul style="list-style-type: none"> ◆ Reflow soldering <ol style="list-style-type: none"> 1. Please apply our recommended soldering conditions on the specification as much as possible. 2. The products are only for reflow soldering. 3. Please do not give any stress to a product until it returns in room temperature after reflow soldering. ◆ Recommended conditions for using a soldering iron. (Excluding 1608 type) <p>Touch a soldering iron to the land pattern not to the product directly. The temperature of a soldering iron is less than 350degC. The soldering is for 3 seconds or less.</p>
Technical considerations	<ul style="list-style-type: none"> ◆ Reflow soldering <ol style="list-style-type: none"> 1. The product might break or might make the tombstoning, if the soldering conditions are too far from our recommended conditions.

5. Cleaning

Precautions	<ul style="list-style-type: none"> ◆ Cleaning conditions <ol style="list-style-type: none"> 1. Please don't wash by the ultra-sonic waves.
Technical considerations	<ul style="list-style-type: none"> ◆ Cleaning conditions <ol style="list-style-type: none"> 1. Washing by the ultra-sonic waves might break the product.

▶ This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our Web site (<http://www.ty-top.com/>).

6. Handling

Precautions	<ul style="list-style-type: none"> ◆ Handling <ol style="list-style-type: none"> 1. Keep the product away from any magnets. ◆ Cutting the PC boards <ol style="list-style-type: none"> 1. Please don't give any stress of the bending or the twisting for the cutting process of PC boards. 2. Please don't give any shock and stress to the products in transportation. ◆ Mechanical considerations <ol style="list-style-type: none"> 1. Please don't give too much shock to the product. 2. Please don't give any shock and stress to the products in transportation. ◆ The stress for picking and placing <ol style="list-style-type: none"> 1. Please don't give any shock into an exposed ferrite core. ◆ Packing <ol style="list-style-type: none"> 1. Please don't pile the packing boxes up as much as possible.
Technical considerations	<ul style="list-style-type: none"> ◆ Handling <ol style="list-style-type: none"> 1. There is a case that a characteristic varies with magnetic influence. ◆ Cutting the PC boards <ol style="list-style-type: none"> 1. Please don't give the bending stress or the twisting stress to the products because they might break in such cases. ◆ Mechanical considerations <ol style="list-style-type: none"> 1. The mechanical shock might break the products. 2. The products might break depending on the handling in transportation. ◆ Pick-up pressure <ol style="list-style-type: none"> 1. The electrical characteristics of the products might be shifted by too much physical shock and stress. ◆ Packing <ol style="list-style-type: none"> 1. The products and the tape might break, if the packing boxes are piled up.

7. Storage conditions

Precautions	<ul style="list-style-type: none"> ◆ Storage <ol style="list-style-type: none"> 1. To maintain the solderability of terminal electrodes and to keep the packing material in good condition, temperature and humidity in the storage area should be controlled. <ul style="list-style-type: none"> ▪ Storage conditions <ul style="list-style-type: none"> Ambient temperature : 0~40°C Humidity : Below 70% RH ▪ The recommended ambient temperature is below 30°C. Even under ideal storage conditions, solderability of products electrodes may decrease as time passes. <ul style="list-style-type: none"> For this reason, product should be used within 6 months from the time of delivery. In case of storage over 6 months, solderability shall be checked before actual usage.
Technical considerations	<ul style="list-style-type: none"> ◆ Storage <ol style="list-style-type: none"> 1. The ambient of high temperature or high humidity might accelerate to make the solderability and the tape worse.