



RF transformers

15 dB directional coupler

Series/Type: B78408A1231A003

Date: October 2012

SMD

Technical data

- Double-aperture transformer
- Recommended frequency range:
4 ... 862 MHz
- Operating temperature: -40 °C to +85 °C
- Weight: approx. 105 mg

Feature

- RoHS-compatible

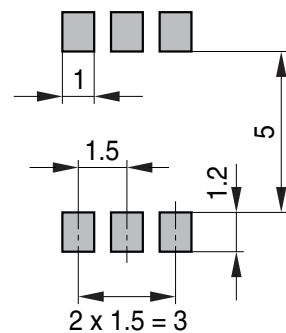
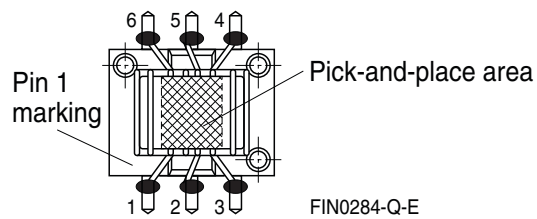
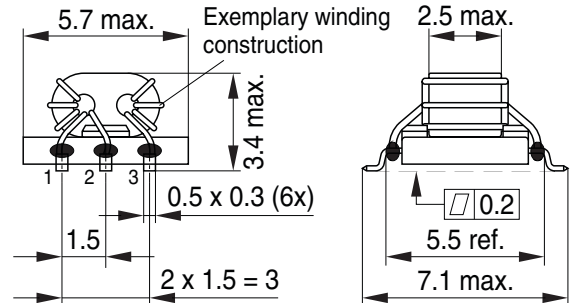
Marking

- No marking on components
- Minimum data on reel:
Manufacturer, ordering code,
quantity, date code

Delivery mode and packing unit

- 12-mm blister tape to IEC 60286-3,
wound on 330-mm Ø reel
- Packing unit: 2100 pcs./reel

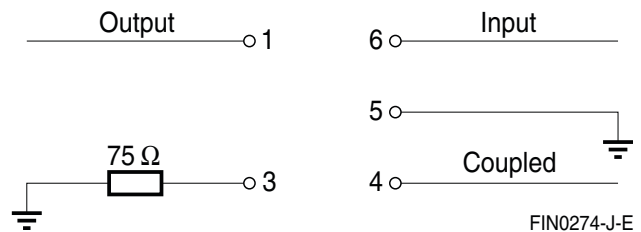
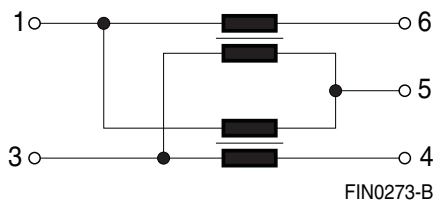
Dimensional drawing



Layout recommendation

Dimensions in mm

Circuit diagram and test arrangement



Insertion loss

Measurement instrument: Network analyzer
Impedance: 75 Ω
Values specified at +25 °C

Frequency (MHz)	4	47	862
Mainline loss Input/Output (dB)	< 1.0	< 1.0	< 1.5
Coupling Input/Coupled (dB)	15.3 (typ.)	15.2 (typ.)	14.9 (typ.)

Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition) and in the data sheets.
 - Particular attention should be paid to the derating curves given there.
 - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.
Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g. ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.
- The following points must be observed if the components are potted in customer applications:
 - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
 - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
 - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

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