RF transformers

17 dB directional coupler

Series/Type: **B78408A1901A003**

Date: March 2008

SMD

Technical data

- Double-aperture transformer
- Recommended frequency range: 5 MHz to 1500 MHz
- Operating temperature: –40 °C to +85 °C
- Weight: approx. 80 mg

Feature

- RoHS-compatible

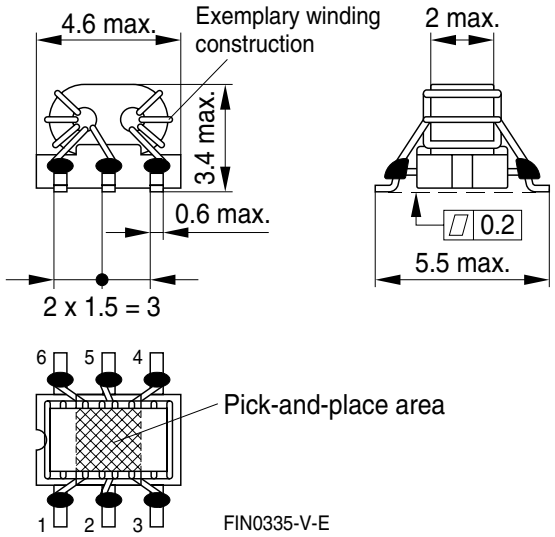
Marking

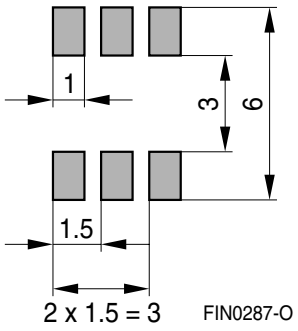
- No marking on components
- Minimum data on reel: Manufacturer, ordering code, quantity, date code

Delivery mode and packing unit

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

Dimensional drawing

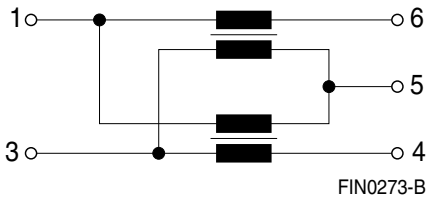


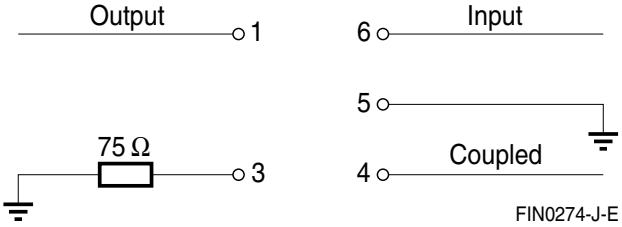


Layout recommendation

Dimensions in mm

Circuit diagram and test arrangement





Insertion loss

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

Frequency (MHz)	5	47	862	1500
Mainline loss Input/Output (dB)	0.7 ±0.4	0.5 ±0.4	0.6 ±0.5	1.0 ±0.6
Coupling Input/Coupled (dB)	17.2 ±0.4	17.2 ±0.4	17.5 ±1.6	16.7 ±1.8

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.
- 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.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.**

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2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

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