

# Surface Mount RF Transformer

75Ω

10 to 1800 MHz

TRS1-182-75-3+



Generic photo used for illustration purposes only

CASE STYLE: TT1618-2

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

## Maximum Ratings

Operating Temperature -40°C to 100°C

Storage Temperature -55°C to 125°C

RF Power 1W

DC Current 30mA

Permanent damage may occur if any of these limits are exceeded.

## Pin Connections

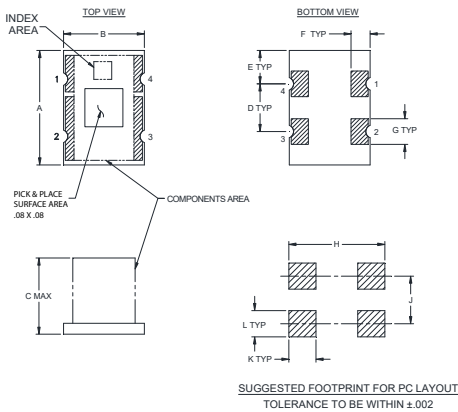
PRIMARY DOT 1

PRIMARY 2

SECONDARY DOT 3

SECONDARY 4

## Outline Drawing

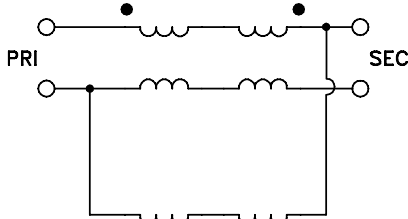


## Outline Dimensions (inch/mm)

| A    | B    | C    | D    | E    | F     |
|------|------|------|------|------|-------|
| .240 | .170 | .160 | .100 | .070 | .040  |
| 6.10 | 4.32 | 4.06 | 2.54 | 1.78 | 1.02  |
| G    | H    | J    | K    | L    | wt.   |
| .054 | .202 | .100 | .057 | .055 | grams |
| 1.37 | 5.13 | 2.54 | 1.45 | 1.40 | 2.8   |

Test board for TRS1-182-75-3+ is TB-875+

## Config. K



## Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

## Features

- suitable for tin/lead and RoHS solder systems
- wideband, 10 to 1800 MHz
- balanced transmission line
- good return loss, 20 dB typ. at 1 dB band
- excellent amplitude unbalance, 0.3 dB typ.
- aqueous washable
- excellent intermod suppression

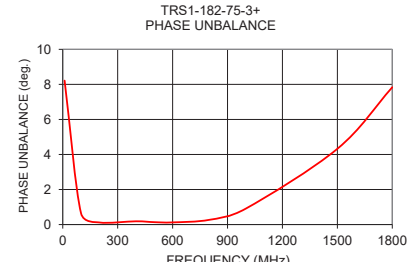
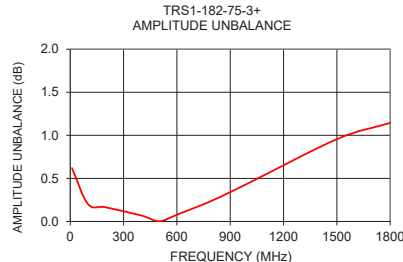
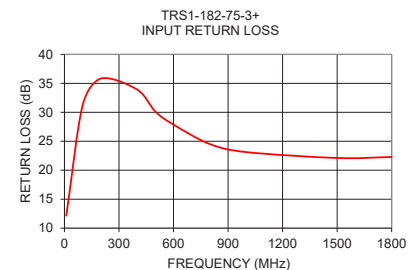
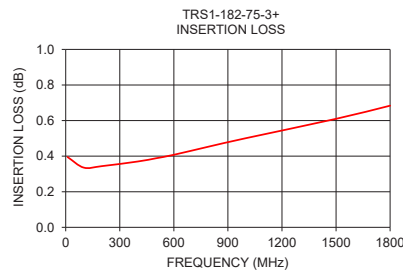
## Electrical Specifications at 25°C

| Parameter                   | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------------------------|-----------------|------|------|------|------|
| Impedance Ratio             |                 |      | 1    |      | :1   |
| Frequency Range             |                 | 10   |      | 1800 | MHz  |
| Insertion Loss <sup>1</sup> | 50 - 1200       |      | 0.6  | 1    | dB   |
|                             | 10 - 1800       |      | 0.9  | 2    |      |
| Amplitude Unbalance         | 50 - 1000       |      | 0.3  | 0.7  | dB   |
|                             | 1000 - 1200     |      | 0.5  | 1.1  |      |
|                             | 10 - 1800       |      | 0.7  | 1.5  |      |
| Phase Unbalance             | 50 - 1000       |      | 2    | 4    | Deg. |
|                             | 1000 - 1200     |      | 3    | 6    |      |
|                             | 10 - 1800       |      | 7.5  | 15   |      |
| Primary Return Loss         | 50 - 500        | 16   | 22   |      | dB   |
|                             | 500 - 1000      | 13   | 20   |      |      |
|                             | 1000 - 1200     | 12   | 20   |      |      |
|                             | 10 - 1800       | 8    | 12.5 |      |      |

1. Insertion Loss is referenced to mid-band loss, 0.25 dB typ.

## Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | INPUT R. LOSS (dB) | AMPLITUDE UNBALANCE (dB) | PHASE UNBALANCE (Deg.) |
|-----------------|---------------------|--------------------|--------------------------|------------------------|
| 10              | 0.40                | 12.17              | 0.62                     | 8.22                   |
| 50              | 0.33                | 26.38              | 0.21                     | 1.41                   |
| 100             | 0.34                | 31.22              | 0.20                     | 0.64                   |
| 200             | 0.34                | 35.82              | 0.16                     | 0.12                   |
| 400             | 0.37                | 33.92              | 0.07                     | 0.19                   |
| 500             | 0.39                | 30.13              | 0.00                     | 0.14                   |
| 600             | 0.41                | 27.88              | 0.08                     | 0.12                   |
| 1000            | 0.50                | 23.13              | 0.44                     | 0.91                   |
| 1200            | 0.55                | 22.28              | 0.66                     | 1.87                   |
| 1800            | 0.68                | 22.28              | 1.14                     | 7.84                   |



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