Surface Mount

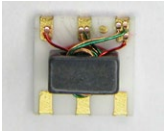
RF Transformer

TRS2-252+

100 to 50Ω 4 to 2500 MHz

The Big Deal

- Very wide bandwidth, 4 to 2500 MHz
- Low, flat insertion loss, 0.98-1.71 dB
- Good return loss, 20 dB typ. at 1 dB



CASE STYLE: AT577

Product Overview

The TRS2-252+ is a mini unbalanced-to-unbalanced, very wide bandwidth transformer measuring only 0.2” on all sides, with a flat top for pick and place compatibility. The rugged, wire-welded, rectangular-core design is RoHS-compliant, with an open style, aqueous washable, ceramic case and gold-plated terminals.

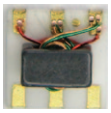
Feature	Advantages
Very wide bandwidth	4-2500 MHz frequency range for use in cable or broadcast TV & radio, GPS, cellular communications, avionics, and radar implementations
Very good, flat insertion loss	Insertion loss flatness ±0.35 across operating range maintains gain flatness when used as a step-up or step-down transformer in amplifier or filter circuitry
Good, flat return loss	22 ±4.7 dB return loss at 1 dB provides excellent matching for 50/100 Ω circuits

Unbalanced to Unbalanced

RF Transformer

TRS2-252+

100 to 50Ω 4 to 2500 MHz



CASE STYLE: AT577
PRICE: $2.75 ea. QTY. (100)

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

Maximum Ratings

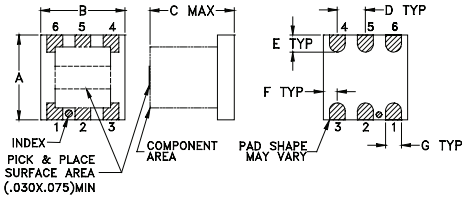
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.35W
DC Current	30mA

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

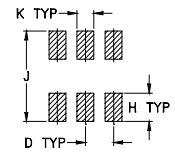
Pin Connections

PRIMARY DOT	1
SECONDARY DOT	3
NOT USED	6
NOT USED	4
COMMON	2
NOT USED	5

Outline Drawing



PCB Land Pattern



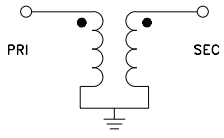
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.200	.200	.200	.075	.050	.025
5.08	5.08	5.08	1.91	1.27	0.64

G	H	J	K	wt
.026	.070	.220	.035	grams
0.66	1.78	5.59	0.89	0.15

Config. D



Features

- wideband, 4 to 2500 MHz
- good return loss, 20 dB typ. at 1dB band
- high IP2, 105 dBm typ.
- high IP3, 53 dBm typ.
- small size
- aqueous washable

Applications

- VHF/UHF
- receivers/transmitters
- impedance matching
- push-pull amplifiers

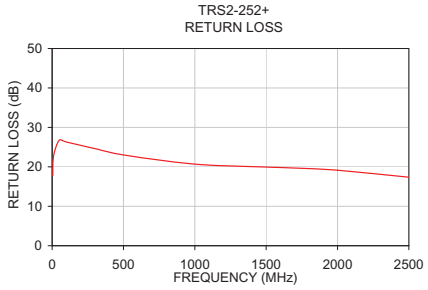
Electrical Specifications

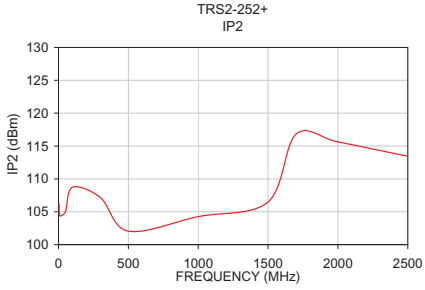
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*		
		3 dB MHz	2 dB MHz	1 dB MHz
2	4-2500	4-2500	8-2000	30-1500

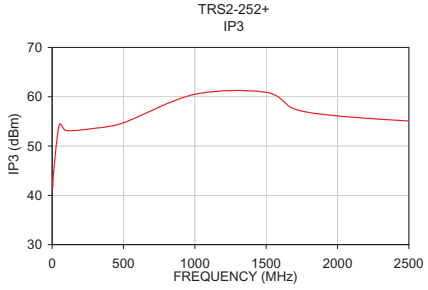
* Insertion Loss is referenced to mid-band loss, 0.9 dB typ.

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	IP2 (dBm)	IP3 (dBm)
4.00	1.36	17.77	106.28	41.45
10.00	1.06	22.78	104.39	44.58
50.00	0.98	26.76	105.04	54.29
100.00	1.01	26.30	108.74	53.12
300.00	1.03	24.62	107.16	53.60
500.00	1.05	23.01	102.05	54.72
1000.00	1.15	20.69	104.26	60.50
1500.00	1.29	19.95	106.48	60.89
1700.00	1.35	19.70	116.81	57.50
2000.00	1.47	19.13	115.63	56.11
2500.00	1.71	17.37	113.45	55.08







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

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