

Mini-Circuits

UNBALANCED TO UNBALANCED

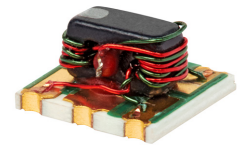
RF Transformer

TRS2-252+

100 Ω to 50 Ω 4 to 2500 MHz

THE BIG DEAL

- Wideband, 4 to 2500 MHz
- Low Insertion Loss, 0.98 - 1.71 dB
- Good Return Loss, 20 dB typ. at 1 dB band
- High IP2, +105 dBm typ.
- High IP3, +53 dBm typ.
- Small Size
- Aqueous Washable



Generic photo used for illustration purposes only

CASE STYLE: AT577-1

+RoHS Compliant

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

APPLICATIONS

- VHF/UHF
- Receivers / Transmitters
- Impedance Matching
- Push-pull Amplifiers

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.

KEY FEATURES

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 \pm 4.7 dB return loss at 1 dB provides excellent matching for 50/100 Ω circuits

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ELECTRICAL SPECIFICATIONS AT +25°C

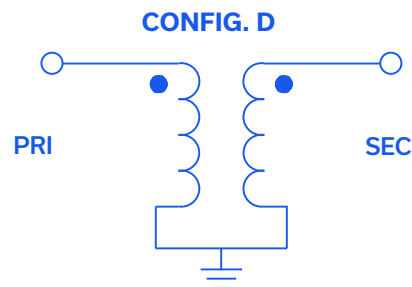
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			2		Ohm
Frequency Range		4		2500	MHz
Insertion Loss ¹	4 - 2500		3.0		dB
	8 - 2000		2.0		
	30 - 1500		1.0		

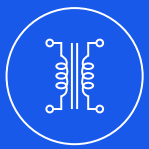
1. Insertion Loss is referenced to mid-band loss, 0.9 dB typ.

ABSOLUTE MAXIMUM RATINGS

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

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





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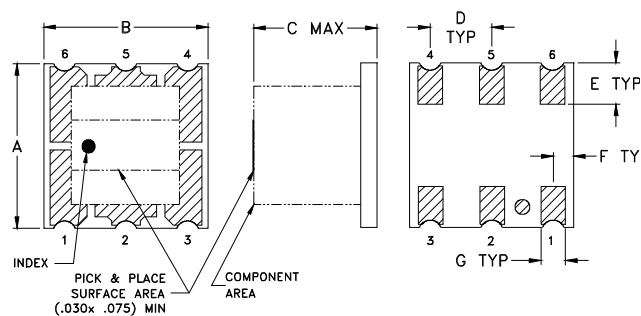
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PIN CONNECTIONS

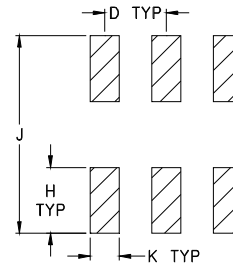
Function	Pin Number
PRIMARY DOT	1
SECONDARY DOT	3
NOT USED	6
NOT USED	4
COMMON	2
NOT USED	5

PRODUCT MARKING: N/A

OUTLINE DRAWING



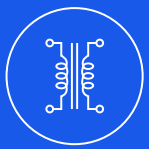
PCB Land Pattern



OUTLINE DIMENSIONS (Inch mm)

A	B	C	D	E	F
.200	.200	.15	.075	.050	.025
5.08	5.08	3.81	1.91	1.27	0.64
G	H	J	K		wt
.030	.080	.240	.035		grams
0.76	2.03	6.10	0.89		0.15

TAPE & REEL INFORMATION: F73



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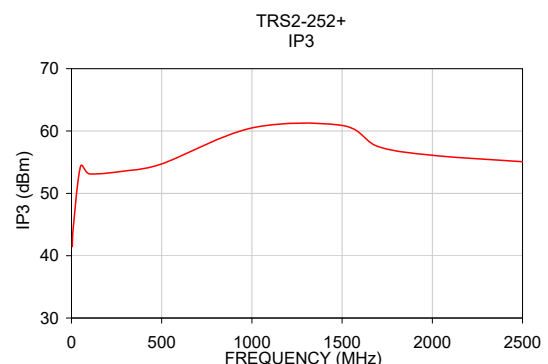
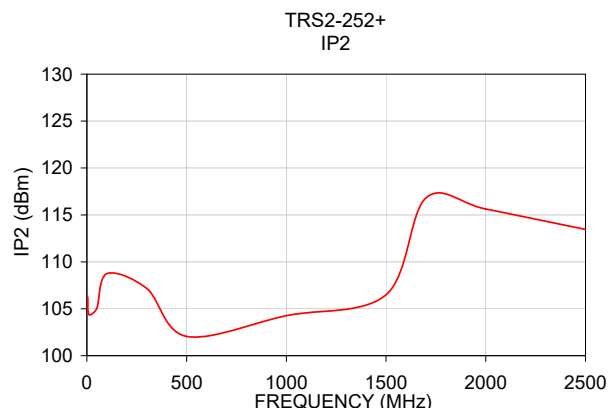
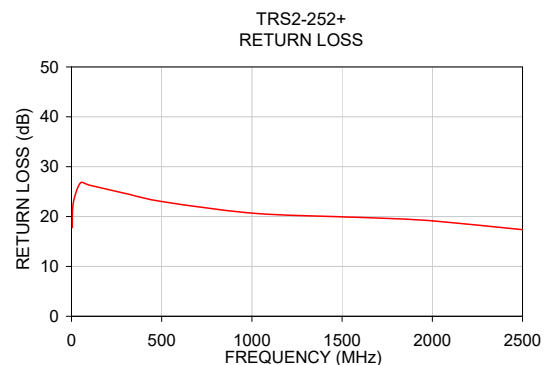
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TYPICAL PERFORMANCE DATA

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

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

