Surface Mount **RF Transformer** 10 to 2200 MHz

75Ω

The Big Deal

- Very wide band balun, with excellent performance from 10 MHz to 2.2 GHz
- Excellent amplitude unbalance, 0.3 dB typ
- Good return loss, 20 dB typ



CASE STYLE: AT577-1

Product Overview

The TRS1-23-75+ is a balanced-to-unbalanced 75Ω transmission line transformer, 0.2" x 0.2" x 0.2" in size. This rugged, wire welded, rectangular core design is rated for up to 0.5W maximum power, in an aqueous washable case suitable for both RoHS and tin/lead solder systems.

Feature	Advantages
Very wide bandwidth	10-2200 MHz bandwidth covers CATV (forward & return), medical wireless and D2A/A2D, and other communications applications
Excellent amplitude and phase unbalance	0.4 dB amplitude and 3° phase unbalance aid rejection of even harmonics (in push-pull amplifiers) and common mode signals (when used as a balun)
Good return loss	Provides excellent matching for 75 Ω circuitry
Low and flat insertion loss	Consistently low signal loss, ± 0.2 dB across all 50-1000 MHz CATV bands

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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



Balanced **RF Transformer**

75Ω

10 to 2200 MHz

Maximum Ratings

Operating Temperature	-40°C to 85°C			
Storage Temperature	-55°C to 100°C			
RF Power	0.5W			
DC Current	300mA			
Permanent damage may occur if any of these limits are exceeded.				

Pin Connections

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

Outline Drawing



PCB Land Pattern κ τγρ

Suggested Layout, Tolerance to be within ±.002

Outline Dimensions (inch

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



Features

- suitable for tin/lead and RoHS solder systems
- wideband, 10 to 2200 MHz
- · balanced transmission line
- good return loss, 20 dB typ. at 1 dB band
- excellent amplitude unbalance, 0.3 dB typ.
- aqueous washable

Applications

- · balanced to unbalanced transformation
- push-pull amplifiers
- PCS/DCS
- cable TV cellular

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Transformer Electrical Specifications at 25°C

RATIO	FREQUENCY (MHz)	INSERTION LOSS*		PH/ UNBAI (De Ty	ASE LANCE èg.) /p.	AMPL UNBAI (d Ty	ITUDE LANCE B) /p.	
		3 dB MHz	2 dB MHz	1 dB MHz	1 dB bandwidth	2 dB bandwidth	1 dB bandwidth	2 dB bandwidth
1	10-2200	10-2200	30-1500	50-1000	3	5	0.4	0.6
	10-2200	10-2200	30-1500	50-1000	3	5	0.4	

*Insertion Loss is referenced to mid-band loss. 0.2 dB tvp.

Typical Performance Data INSERTION FREQUENCY INPUT AMPLITUDE PHASE LOSS R. LOSS UNBALANCE UNBALANCE (MHz) (dB) (dB) (dB) (Deg.) 10.00 0 27 0.58 30.06 6 13 30.00 0.29 34.11 0.58 2.24 50.00 0.29 34.32 0.55 1.33 100.00 0.30 32.46 0.51 0.30 500.00 0.45 27.73 0.33 2.61 1000.00 0.74 20.49 0.10 2.40 1500.00 1.27 13.21 0.27 1.23 1800.00 1.61 11.64 0.18 3.21 2000.00 1.84 10.99 0.05 4.05 2200.00 2.06 10.63 0.14 4.39

TRS1-23-75+ INSERTION LOSS 4.0 (qB) 3.5 3.0 0) 3.0 2.5 2.0 1.5 1.0 0.5 (qB) 0.0 0 220 440 660 880 1100 1320 1540 1760 1980 2200 FREQUENCY (MHz)



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Generic photo used for illustration purposes only

CASE STYLE: AT577-1

+RoHS Compliant

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

	Available Tape and Reel at no extra cost
Reel Size	Devices/Reel
7"	500
13"	2000

/ ini-Cire	cuits

Mouser Electronics

Authorized Distributor

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