

Surface Mount RF Transformer

50Ω 10 to 2000 MHz

TRS1.5-1T-13-2+



CASE STYLE: AT577
PRICE: contact sales department

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA

Pin Connections

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

Features

- wideband, 10 to 2000 MHz
- small size
- aqueous washable

Applications

- VHF/UHF
- receivers/transmitters
- impedance matching

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

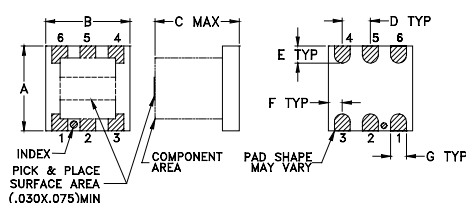
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Transformer Electrical Specifications

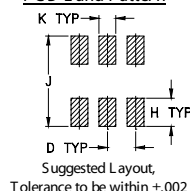
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*		
		3 dB MHz	2 dB MHz	1 dB MHz
1.5	10-2000	10-2000	10-1600	10-800

* Insertion Loss is referenced to mid-band loss, 0.32 dB typ.

Outline Drawing



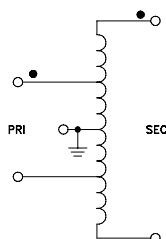
PCB Land Pattern



Outline Dimensions (inch)

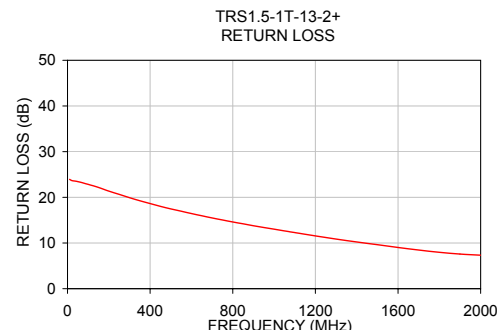
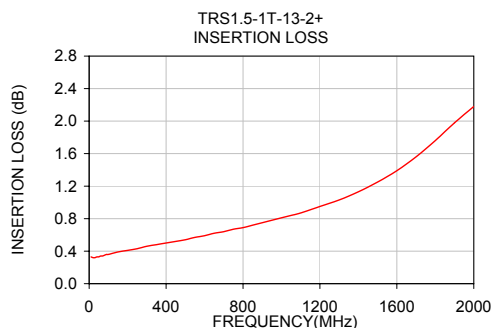
A	B	C	D	E	F
.200	.200	.200	.075	.050	.025
5.08	5.08	5.08	1.91	1.27	0.64
G	H	J	K	wt	
.026	.070	.220	.035	grams	
0.66	1.78	5.59	0.89	0.15	

Config. L



Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
10.00	0.33	23.93
50.00	0.33	23.43
100.00	0.36	22.84
200.00	0.41	21.37
500.00	0.54	17.47
800.00	0.69	14.61
1000.00	0.81	13.03
1500.00	1.25	9.63
1600.00	1.39	9.03
2000.00	2.18	7.34



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

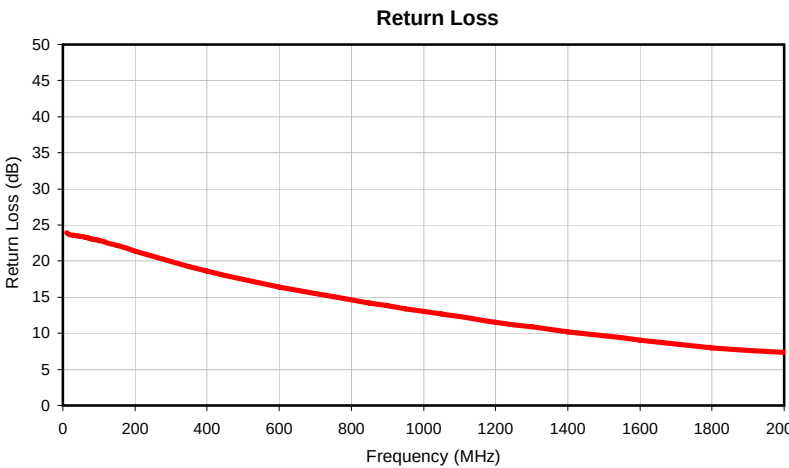
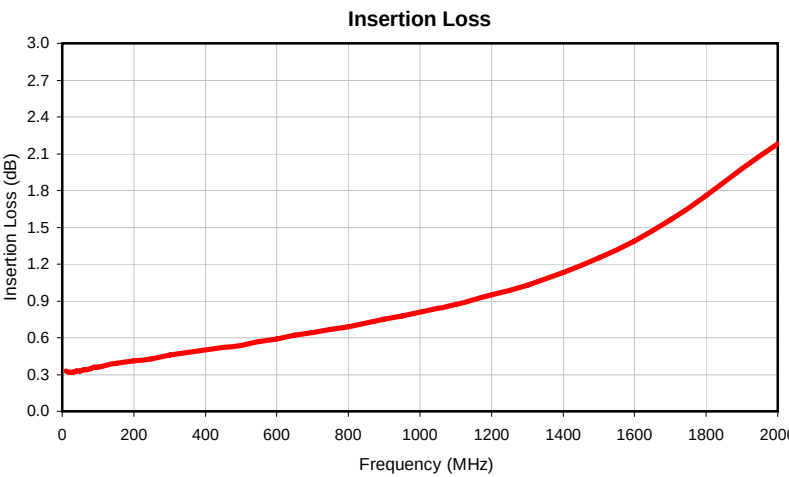
REV. OR
M122805
ED-13382/2
TRS1.5-1T-13-2+
IG/CP/AM
090520

RF Transformer

TRS1.5-1T-13-2+

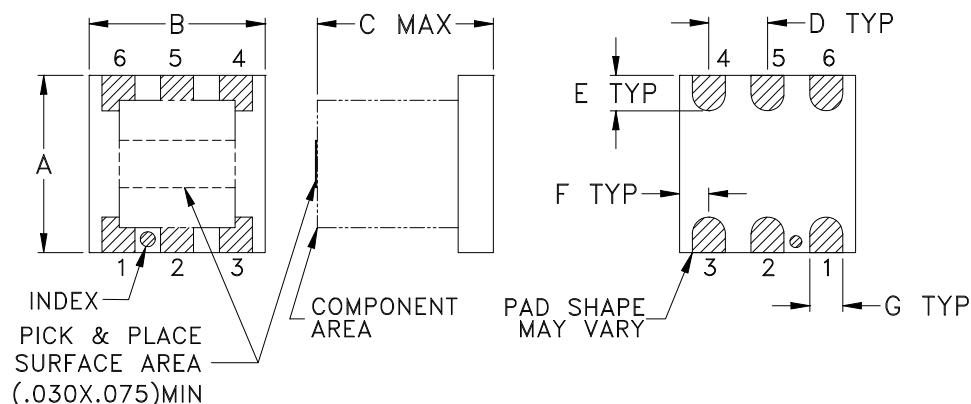
Typical Performance Data

FREQUENCY MHz	INSERTION LOSS (dB)	RETURN LOSS (dB)
10.00	0.33	23.93
20.00	0.32	23.69
30.00	0.32	23.59
40.00	0.33	23.53
50.00	0.33	23.43
60.00	0.34	23.34
70.00	0.34	23.23
80.00	0.35	23.09
90.00	0.36	22.95
100.00	0.36	22.84
150.00	0.39	22.16
200.00	0.41	21.37
250.00	0.43	20.66
300.00	0.46	19.92
350.00	0.48	19.25
400.00	0.50	18.64
450.00	0.52	18.02
500.00	0.54	17.47
550.00	0.57	16.96
600.00	0.59	16.44
650.00	0.62	15.96
700.00	0.64	15.48
750.00	0.67	15.04
800.00	0.69	14.61
850.00	0.72	14.20
900.00	0.75	13.79
950.00	0.78	13.40
1000.00	0.81	13.03
1050.00	0.84	12.65
1100.00	0.87	12.28
1200.00	0.95	11.56
1300.00	1.03	10.87
1400.00	1.13	10.23
1500.00	1.25	9.63
1600.00	1.39	9.03
1700.00	1.56	8.47
1800.00	1.76	7.97
1900.00	1.98	7.59
2000.00	2.18	7.34

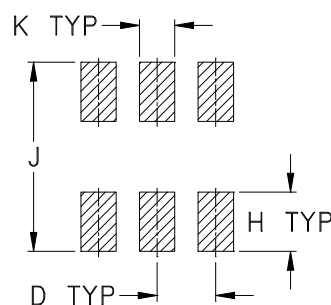


Outline Dimensions

AT577



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAMS
AT577	.200 (5.08)	.200 (5.08)	.200 (5.08)	.075 (1.91)	.050 (1.27)	.025 (0.64)	.026 (0.66)	.070 (1.78)	.220 (5.59)	.035 (0.89)	-- --	.15

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .01$; 3 Pl. $\pm .005$

Notes:

- Open style, ceramic base.
- Termination finish:
For RoHS Case Style: 2-10 μ inch (.05-.25 microns) Gold over 100-300 μ inch (2.54-7.62 microns) Nickel plate.
For RoHS-5 Case Style: Tin-Lead plate



P.O. Box 350186, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

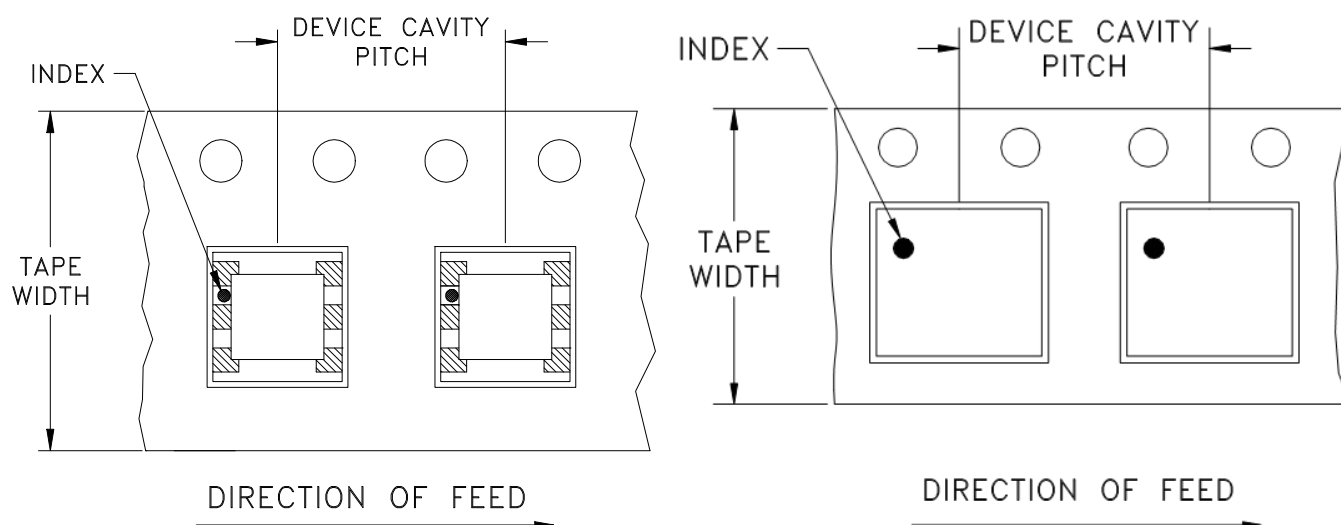


The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F73

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
12	8	7	Small quantity standards (see note)	20
				50
				100
				200
				500
		13	Standard	1000
				2000

Note: Please Consult individual model data sheet to determine device per reel availability.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, 95% Coverage
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215