

Engineering Development Model

Resistive Power Splitter/Combiner 2 Way-0°

SCRP-ED14676/3

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.



CASE STYLE : TTT1732

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

Parameter		Min.	Typ.	Max.	Units
Frequency		DC		6800	MHz
Isolation	DC-6800 MHz		19		dB
Insertion Loss Above 9.5 dB	DC-6800 MHz		0.8		dB
Phase Unbalance	DC-6800 MHz		1.6		deg.
Amplitude Unbalance	DC-6800 MHz		0.05		dB
VSWR	SUM Port		1.2		(:1)
	OUT Ports		1.3		(:1)

MAXIMUM RATINGS

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS

SUM PORT	3
PORT 1	1
PORT 2	2
GROUND	4,5,6

Functional Diagram



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

IF/RF MICROWAVE COMPONENTS



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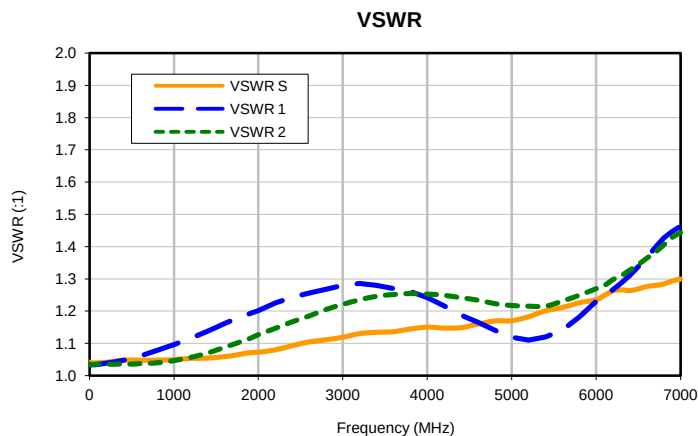
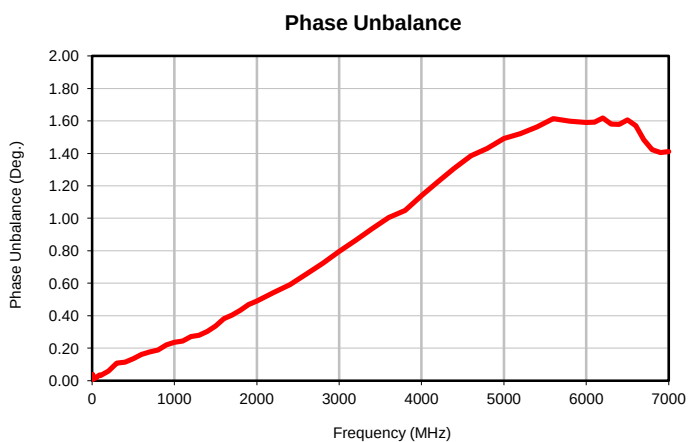
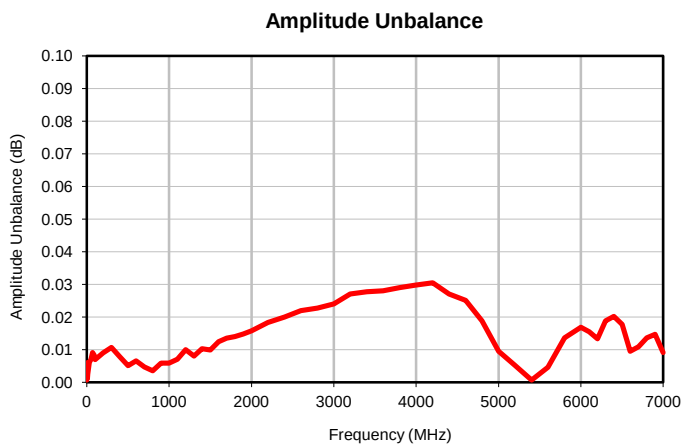
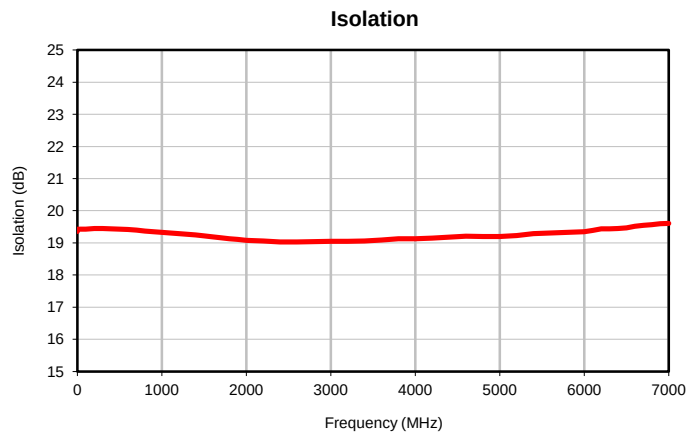
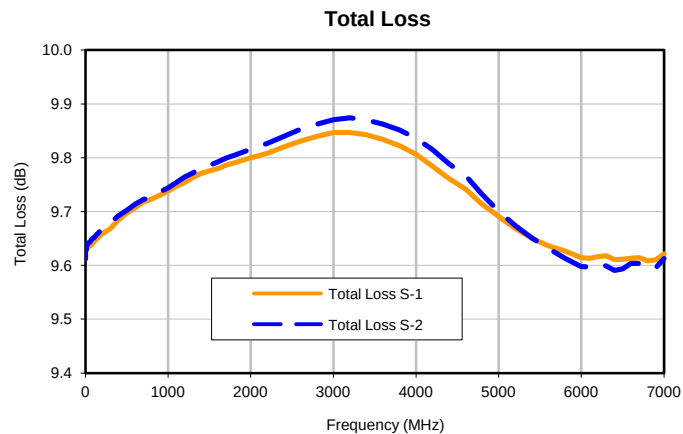
Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB) 1-2	PHASE UNBAL. (Deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
0.3	9.61	9.61	0.00	19.35	0.03	0.3	1.04	1.03	1.04
0.6	9.61	9.62	0.01	19.38	0.02	0.6	1.04	1.03	1.03
0.9	9.62	9.63	0.01	19.40	0.04	0.9	1.04	1.03	1.03
1.0	9.63	9.63	0.00	19.41	0.02	1.0	1.04	1.03	1.03
3.0	9.63	9.63	0.00	19.43	0.02	3.0	1.04	1.03	1.03
5.0	9.63	9.63	0.00	19.43	0.03	5.0	1.04	1.03	1.03
7.0	9.63	9.63	0.00	19.42	0.03	7.0	1.04	1.03	1.03
9.0	9.63	9.63	0.00	19.42	0.04	9.0	1.04	1.03	1.03
10.0	9.63	9.63	0.00	19.42	0.01	10.0	1.04	1.03	1.03
30.0	9.63	9.64	0.01	19.42	0.01	30.0	1.04	1.03	1.03
50.0	9.64	9.64	0.01	19.42	0.02	50.0	1.04	1.03	1.04
70.0	9.64	9.65	0.01	19.43	0.03	70.0	1.04	1.03	1.04
90.0	9.64	9.65	0.01	19.43	0.04	90.0	1.04	1.03	1.04
100.0	9.64	9.65	0.01	19.43	0.03	100.0	1.04	1.04	1.04
200.0	9.66	9.67	0.01	19.45	0.06	200.0	1.04	1.04	1.04
300.0	9.67	9.68	0.01	19.44	0.11	300.0	1.04	1.04	1.04
400.0	9.68	9.69	0.01	19.44	0.11	400.0	1.05	1.05	1.04
500.0	9.70	9.70	0.01	19.43	0.14	500.0	1.05	1.05	1.04
600.0	9.71	9.71	0.01	19.41	0.16	600.0	1.05	1.06	1.04
700.0	9.72	9.72	0.00	19.39	0.18	700.0	1.05	1.07	1.04
800.0	9.72	9.73	0.00	19.37	0.19	800.0	1.05	1.08	1.04
900.0	9.73	9.74	0.01	19.35	0.22	900.0	1.05	1.09	1.04
1000.0	9.74	9.74	0.01	19.33	0.24	1000.0	1.05	1.10	1.05
1100.0	9.75	9.75	0.01	19.31	0.24	1100.0	1.05	1.11	1.05
1200.0	9.75	9.76	0.01	19.29	0.27	1200.0	1.05	1.12	1.06
1300.0	9.76	9.77	0.01	19.27	0.28	1300.0	1.05	1.13	1.06
1400.0	9.77	9.78	0.01	19.24	0.30	1400.0	1.05	1.14	1.07
1500.0	9.78	9.79	0.01	19.21	0.34	1500.0	1.06	1.15	1.08
1600.0	9.78	9.79	0.01	19.18	0.38	1600.0	1.06	1.16	1.09
1700.0	9.79	9.80	0.01	19.16	0.40	1700.0	1.06	1.17	1.10
1800.0	9.79	9.80	0.01	19.12	0.43	1800.0	1.07	1.18	1.11
1900.0	9.80	9.81	0.01	19.10	0.47	1900.0	1.07	1.19	1.12
2000.0	9.80	9.82	0.02	19.08	0.49	2000.0	1.07	1.20	1.13
2200.0	9.81	9.83	0.02	19.06	0.54	2200.0	1.08	1.23	1.15
2400.0	9.82	9.84	0.02	19.03	0.59	2400.0	1.09	1.24	1.17
2600.0	9.83	9.85	0.02	19.03	0.66	2600.0	1.10	1.26	1.18
2800.0	9.84	9.86	0.02	19.04	0.72	2800.0	1.11	1.27	1.21
3000.0	9.85	9.87	0.02	19.05	0.80	3000.0	1.12	1.28	1.22
3200.0	9.85	9.87	0.03	19.05	0.86	3200.0	1.13	1.29	1.24
3400.0	9.84	9.87	0.03	19.06	0.94	3400.0	1.13	1.28	1.25
3600.0	9.83	9.86	0.03	19.09	1.00	3600.0	1.14	1.27	1.25
3800.0	9.82	9.85	0.03	19.12	1.05	3800.0	1.14	1.26	1.25
4000.0	9.81	9.84	0.03	19.13	1.14	4000.0	1.15	1.24	1.25
4200.0	9.78	9.81	0.03	19.15	1.23	4200.0	1.15	1.22	1.25
4400.0	9.76	9.79	0.03	19.18	1.31	4400.0	1.15	1.19	1.24
4600.0	9.74	9.77	0.03	19.21	1.38	4600.0	1.16	1.17	1.23
4800.0	9.71	9.73	0.02	19.20	1.43	4800.0	1.17	1.14	1.22
5000.0	9.69	9.70	0.01	19.20	1.49	5000.0	1.17	1.12	1.22
5200.0	9.67	9.67	0.01	19.23	1.52	5200.0	1.18	1.11	1.22
5400.0	9.65	9.65	0.00	19.29	1.56	5400.0	1.20	1.12	1.22
5600.0	9.64	9.63	0.00	19.30	1.61	5600.0	1.21	1.14	1.23
5800.0	9.63	9.61	0.01	19.33	1.60	5800.0	1.23	1.18	1.25
6000.0	9.61	9.60	0.02	19.35	1.59	6000.0	1.24	1.23	1.27
6100.0	9.61	9.60	0.02	19.39	1.59	6100.0	1.25	1.25	1.28
6200.0	9.62	9.60	0.01	19.43	1.62	6200.0	1.26	1.27	1.30
6300.0	9.62	9.60	0.02	19.44	1.58	6300.0	1.27	1.29	1.31
6400.0	9.61	9.59	0.02	19.44	1.58	6400.0	1.26	1.31	1.33
6500.0	9.61	9.59	0.02	19.47	1.61	6500.0	1.27	1.34	1.34
6600.0	9.61	9.60	0.01	19.51	1.57	6600.0	1.28	1.37	1.36
6700.0	9.61	9.60	0.01	19.55	1.48	6700.0	1.28	1.40	1.38
6800.0	9.61	9.59	0.01	19.57	1.42	6800.0	1.28	1.43	1.40
6900.0	9.61	9.60	0.01	19.60	1.40	6900.0	1.29	1.45	1.43
7000.0	9.62	9.61	0.01	19.61	1.41	7000.0	1.30	1.46	1.44

¹Total Loss = Insertion Loss + 9.5dB Splitter Loss

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Typical Performance Curves



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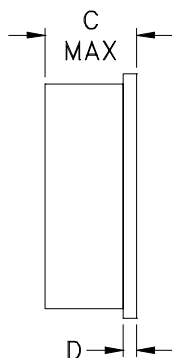
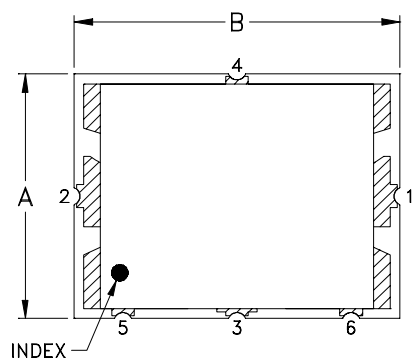


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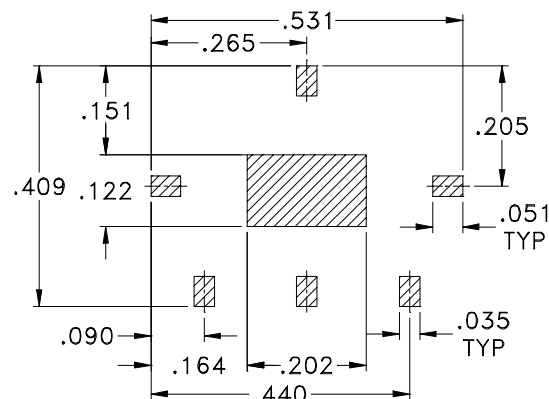
IF/RF MICROWAVE COMPONENTS

Outline Dimensions

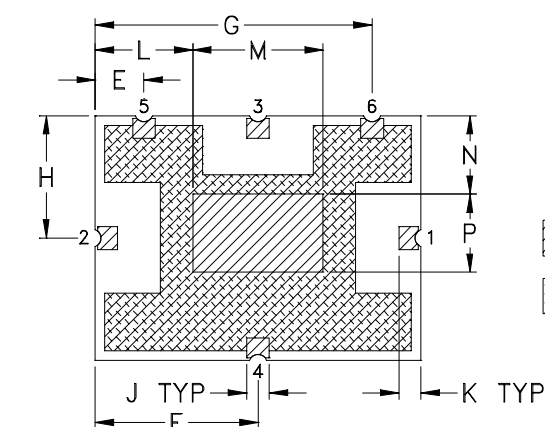
TTT1732



PCB Land Pattern



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



 DENOTES METALLIZATION
 DENOTES SOLDER RESIST

CASE #	A	B	C	D	E	F	G	H	J	K	L	M	N
TTT1732	.38 (9.65)	.50 (12.70)	.15 (3.81)	.020 (0.51)	.075 (1.91)	.250 (6.35)	.425 (10.80)	.187 (4.75)	.035 (.89)	.034 (.86)	.150 (3.81)	.200 (5.08)	.120 (3.05)

CASE #	P	WT. GRAM
TTT1732	.120 (3.05)	.8

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

Note:

- Case material: Nickel-Silver alloy.
- Open style, Base material: Printed wiring laminate.
- Termination finish: 3-5 μ inch (.08-.13 microns) Gold over 120-240 μ inch (3.05-6.10 microns) Nickel plate.
All models, (+) suffix.



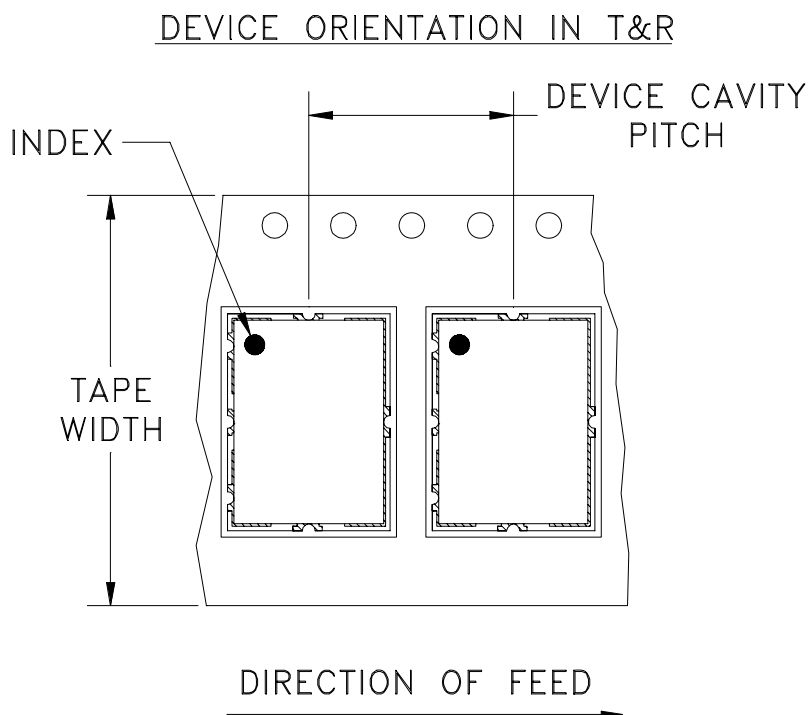
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Tape & Reel Packaging TR-F12



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
24	12	7	Small quantity standards (see note)	10
				20
				50
				100
				200
		13	Standard	500

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.

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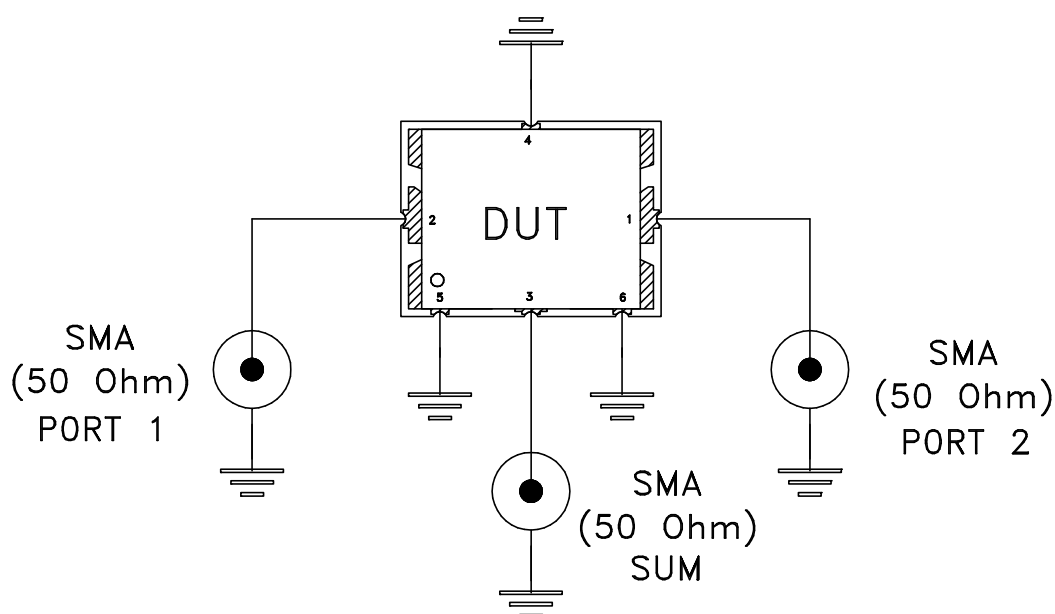
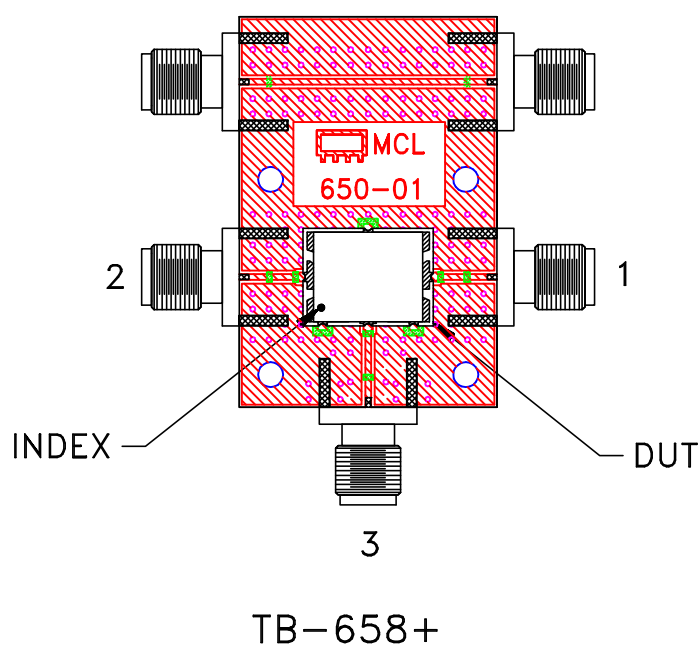
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Evaluation Board and Circuit



Schematic Diagram

Notes:

1. 50 Ohm SMA Female connectors.
2. PCB Material: R04350 or equivalent,
Dielectric Constant=3.5, Thickness=.010 inch.

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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