

Surface Mount

# Power Splitter/Combiner

## SCRP-2-682W+

2 Way-0° 50Ω High Isolation Resistive Splitter DC to 6800 MHz

### Maximum Ratings

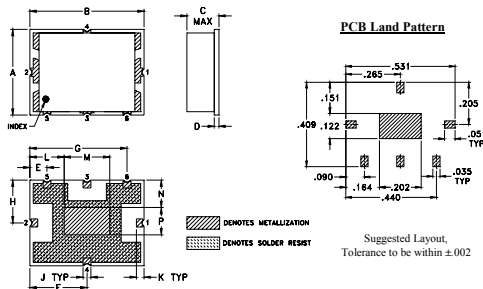
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.5W max.

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

### Coaxial Connections

SUM PORT	3
PORT 1	1
PORT 2	2
GROUND	ALL OTHERS

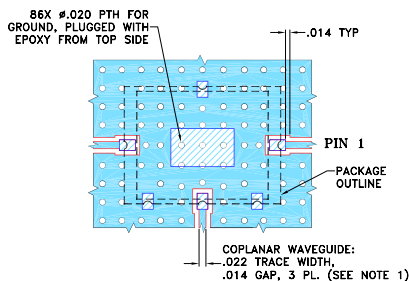
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
.38	.50	.15	.020	.075	.250	.425	.187
9.65	12.70	3.81	0.51	1.91	6.35	10.80	4.75
J	K	L	M	N	P	wt.	
.035	.034	.150	.200	.120	.120	grams	
0.89	0.86	3.81	5.08	3.05	3.05	0.8	

### Demo Board MCL P/N: TB-658+ Suggested PCB Layout (PL-376)



- NOTES:**
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .010" ± .001", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### 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-Circuit's 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](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- very wideband, DC to 6800 MHz
- very good phase unbalance, 1 deg. typ.
- excellent amplitude unbalance, 0.1 dB typ.
- rugged shielded case

### Applications

- laboratory
- test set-ups
- PCS
- UNII
- WiMAX
- WiFi
- blue tooth

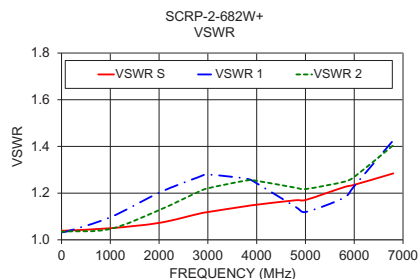
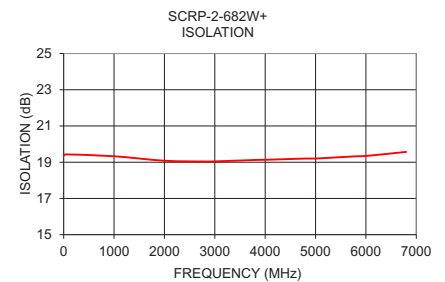
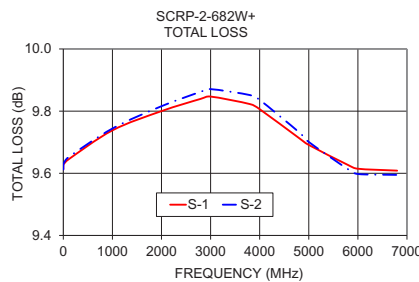
### Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		DC		6800	MHz
<b>Insertion Loss Above 9.5 dB</b>	DC-5000 DC-6800		0.5 0.8	0.9 1.6	dB
<b>Isolation</b>	DC-6800	17	19	—	dB
<b>Phase Unbalance</b>	DC-5000 DC-6800	— —	1.0 3.0	4.0 6.0	Degree
<b>Amplitude Unbalance</b>	DC-5000 DC-6800	— —	0.1 0.3	0.4 0.7	dB
<b>VSWR (Port S)</b>	DC-5000 DC-6800	— —	1.2 1.3	1.5 1.6	:1
<b>VSWR (Port 1-2)</b>	DC-5000 DC-6800	— —	1.3 1.5	1.5 2.2	:1

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
0.30	9.61	9.61	0.00	19.35	0.03	1.04	1.03	1.04
1.00	9.63	9.63	0.00	19.41	0.02	1.04	1.03	1.03
10.00	9.63	9.63	0.00	19.42	0.01	1.04	1.03	1.03
100.00	9.64	9.65	0.01	19.43	0.03	1.04	1.04	1.04
1000.00	9.74	9.74	0.01	19.33	0.24	1.05	1.10	1.05
2000.00	9.80	9.82	0.02	19.08	0.49	1.07	1.20	1.13
2800.00	9.84	9.86	0.02	19.04	0.72	1.11	1.27	1.21
3000.00	9.85	9.87	0.02	19.05	0.80	1.12	1.28	1.22
3800.00	9.82	9.85	0.03	19.12	1.05	1.14	1.26	1.25
4000.00	9.81	9.84	0.03	19.13	1.14	1.15	1.24	1.25
4800.00	9.71	9.73	0.02	19.20	1.43	1.17	1.14	1.22
5000.00	9.69	9.70	0.01	19.20	1.49	1.17	1.12	1.22
5800.00	9.63	9.61	0.01	19.33	1.60	1.23	1.18	1.25
6000.00	9.61	9.60	0.02	19.35	1.59	1.24	1.23	1.27
6800.00	9.61	9.59	0.01	19.57	1.42	1.28	1.43	1.40

1. Total Loss = Insertion Loss + 9.5 dB splitter theoretical loss.



### Electrical Schematic



Generic photo used for illustration purposes only

CASE STYLE: TTT1732

### +RoHS Compliant

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

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