

# Power Splitter/Combiner

## SCP-5-1+

5 Way-0° 50Ω

2 to 200 MHz



Generic photo used for illustration purposes only  
CASE STYLE: YY161

**+RoHS Compliant**

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

### Maximum Ratings

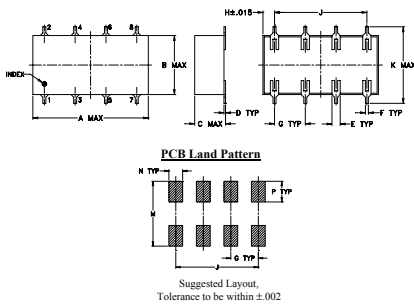
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.625W max.

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

### Pin Connections

SUM PORT	1
PORT 1	6
PORT 2	8
PORT 3	7
PORT 4	5
PORT 5	3
GROUND	2,4

### Outline Drawing



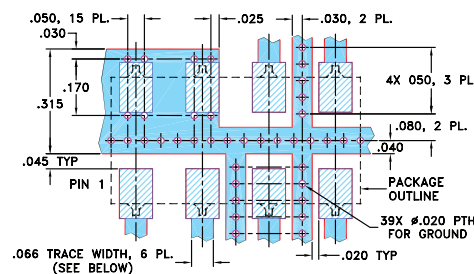
### Outline Dimensions (inch)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08

H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

### Demo Board MCL P/N: TB-213 Suggested PCB Layout (PL-104)



- DENOTES PCB COPPER LAYOUT
- 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.
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### Features

- low insertion loss, 0.3 dB typ.
- high isolation 29 dB typ.
- excellent amplitude unbalance, 0.3 dB typ.

### Applications

- VHF
- instrumentation
- receivers/transmitters

### Electrical Specifications

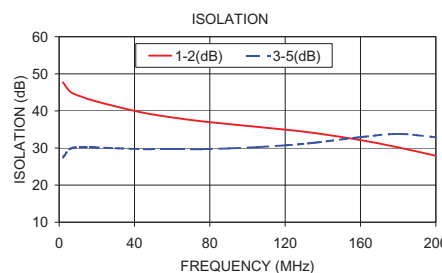
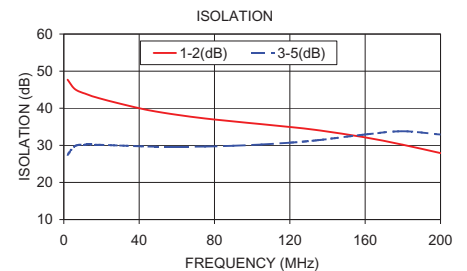
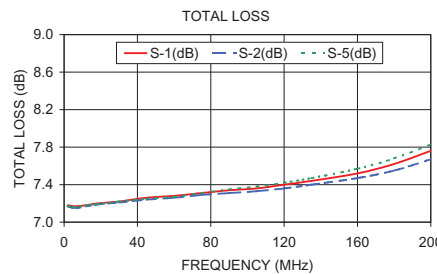
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 7.0 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
$f_L$ - $f_U$	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
2-200	30	20	29	20	30	20	0.2	0.5	0.3	0.75	0.6	1.5	1	3	5	0.2	0.3	0.6

L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)					Amp. Unbal. (dB)	Isolation (dB)				Phase Unbal. (deg.)	VSWR S	VSWR OUTPUTS
	S-1	S-2	S-3	S-4	S-5		1-2	2-3	2-4	3-5			
2.00	7.18	7.17	7.17	7.17	7.17	0.01	47.70	45.82	27.74	27.47	0.04	1.10	1.18
6.00	7.17	7.15	7.16	7.16	7.16	0.02	45.13	44.43	30.00	29.83	0.09	1.09	1.12
12.00	7.18	7.17	7.18	7.17	7.18	0.01	43.80	43.17	30.31	30.22	0.19	1.08	1.10
18.00	7.20	7.19	7.19	7.19	7.19	0.01	42.81	42.17	30.23	30.17	0.27	1.08	1.10
30.00	7.22	7.21	7.21	7.21	7.22	0.01	41.21	40.49	29.90	29.95	0.46	1.07	1.10
45.00	7.26	7.24	7.23	7.24	7.25	0.02	39.48	38.73	29.59	29.68	0.60	1.06	1.10
60.00	7.28	7.26	7.26	7.26	7.27	0.02	38.25	37.46	29.48	29.63	0.88	1.06	1.11
75.00	7.31	7.29	7.28	7.30	7.31	0.03	37.24	36.46	29.46	29.68	1.03	1.06	1.11
90.00	7.34	7.31	7.31	7.32	7.35	0.04	36.45	35.56	29.57	29.88	1.23	1.06	1.11
105.00	7.36	7.33	7.33	7.34	7.38	0.05	35.72	34.77	29.72	30.22	1.45	1.07	1.11
120.00	7.40	7.36	7.37	7.37	7.42	0.05	34.94	33.93	30.03	30.72	1.58	1.09	1.11
135.00	7.44	7.40	7.40	7.41	7.47	0.07	34.07	32.98	30.42	31.40	1.76	1.12	1.12
160.00	7.52	7.47	7.46	7.48	7.57	0.11	32.14	31.04	31.11	32.92	2.04	1.19	1.12
180.00	7.62	7.55	7.55	7.58	7.68	0.13	30.17	29.10	31.10	33.81	2.35	1.28	1.13
200.00	7.76	7.67	7.67	7.70	7.83	0.16	27.91	26.91	29.96	32.90	2.63	1.40	1.14

1. Total Loss = Insertion Loss + 7dB splitter loss.



### electrical schematic



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