

# Surface Mount Power Splitter/Combiner

## AMT-2

2 Way-0°/180° 50Ω 50 to 200 MHz

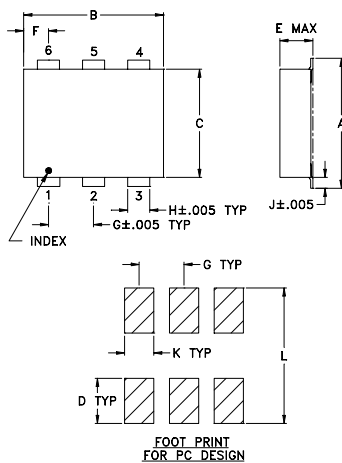
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.125W max.

### Pin Connections

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

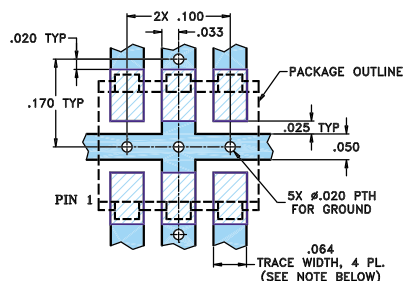
### Outline Drawing



### Outline Dimensions (inch)

A	B	C	D	E	F	G
.280	.310	.220	.100	.162	.055	.100
7.11	7.87	5.59	2.54	4.11	1.40	2.54
H	J	K	L			wt
.030	.030	.065	.300			grams
0.76	0.76	1.65	7.62			0.25

### Demo Board MCL P/N: TB-211 Suggested PCB Layout (PL-097)



- NOTE:**
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .030" ± .002". 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
    - DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

### Features

- low insertion loss S-1 and S-2, 0.25 dB typ; J-1 and J-2, 0.8 dB typ
- very good input VSWR, 1.10 typ. and
- good output VSWR, 1.12 typ.
- excellent amplitude unbalance, 0.1 dB typ
- excellent phase unbalance, 1 deg. typ
- high isolation S-J ports and 1-2 ports, 35 dB typ.

### Applications

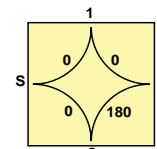
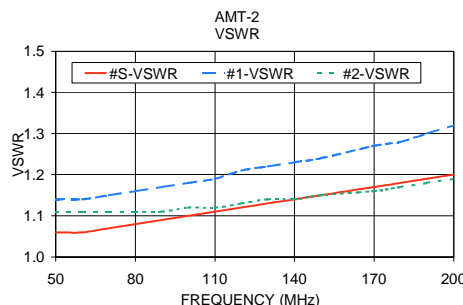
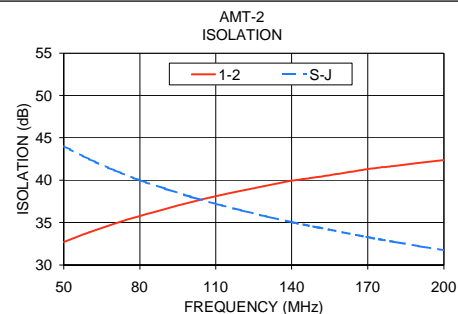
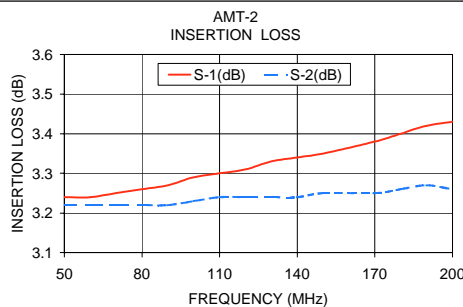
- satellite
- IF receiver

### Splitter Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 3 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.
50-200	35	20		0.8	1.2		2			0.3		

### Typical Performance Data

Freq. (MHz)	Insertion Loss (dB)		Amplitude Unbal. (dB) (S-1)-(S-2)	Insertion Loss (dB)		Amplitude Unbal. (dB) (J-1)-(J-2)	Isolation (dB)		Phase Unbal. (Deg) (S-1)-(S-2) (J-1)-(J-2)	VSWR S	VSWR 1	VSWR 2	
	S-1	S-2		J-1	J-2		1-2	S-J					
50.00	3.24	3.22	0.02	3.76	3.77	0.00	32.71	44.00	0.05	179.87	1.06	1.14	1.11
60.00	3.24	3.22	0.02	3.76	3.77	0.00	33.84	42.49	0.06	179.87	1.06	1.14	1.11
70.00	3.25	3.22	0.03	3.77	3.77	0.01	34.86	41.16	0.02	179.81	1.07	1.15	1.11
80.00	3.26	3.22	0.04	3.77	3.77	0.01	35.78	40.00	0.05	179.80	1.08	1.16	1.11
90.00	3.27	3.22	0.05	3.77	3.78	0.02	36.61	38.99	0.04	179.79	1.09	1.17	1.11
100.00	3.29	3.23	0.05	3.78	3.79	0.01	37.39	38.05	0.02	179.79	1.10	1.18	1.12
110.00	3.30	3.24	0.06	3.78	3.81	0.02	38.10	37.21	0.05	179.79	1.11	1.19	1.12
120.00	3.31	3.24	0.07	3.80	3.82	0.02	38.74	36.45	0.02	179.75	1.12	1.21	1.13
130.00	3.33	3.24	0.09	3.80	3.82	0.02	39.36	35.71	0.00	179.73	1.13	1.22	1.14
140.00	3.34	3.24	0.10	3.81	3.84	0.03	39.94	35.04	0.02	179.69	1.14	1.23	1.14
150.00	3.35	3.25	0.11	3.81	3.85	0.03	40.36	34.44	0.02	179.68	1.15	1.24	1.15
170.00	3.38	3.25	0.13	3.82	3.87	0.05	41.30	33.27	0.09	179.72	1.17	1.27	1.16
180.00	3.40	3.26	0.14	3.83	3.88	0.05	41.67	32.75	0.06	179.68	1.18	1.28	1.17
190.00	3.42	3.27	0.16	3.84	3.90	0.06	42.03	32.22	0.10	179.68	1.19	1.30	1.18
200.00	3.43	3.26	0.17	3.85	3.91	0.06	42.39	31.74	0.15	179.68	1.20	1.32	1.19



- S-J ports, isolation 40 dB typical
- Inphase ports, S-1 and S-2, insertion loss 0.2 dB typical
- Amplitude unbalance defined by input S or J ports to output 1 and 2

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