

Surface Mount Power Splitter/Combiner

2 Way-90° 50Ω 120 to 180 MHz

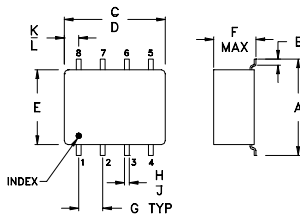
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Permanent damage may occur if any of these limits are exceeded.	

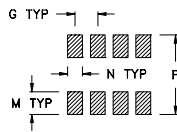
Pin Connections

SUM PORT	1
PORT 1 (+90°)	8
PORT 2 (0°)	4
GROUND	2,3,6,7
50 OHM TERM EXTERNAL	5

Outline Drawing



PCB Land Pattern

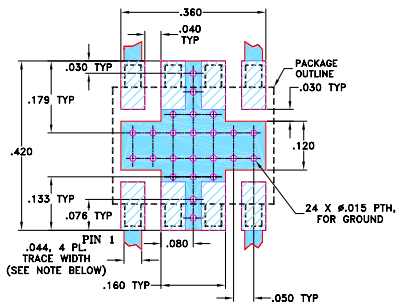


Suggested Layout,
Tolerance to be within ±0.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
.397	.032	.385	.435	.310	.215	.100	.015	.025	.035	.075	.120	.060	.420	grams
10.08	0.81	9.78	11.05	7.87	5.46	2.54	0.38	0.64	0.89	1.91	3.05	1.52	10.67	0.45

Demo Board MCL P/N: TB-83 Suggested PCB Layout (PL-063)



Features

- excellent amplitude unbalance, 0.6 dB typ. and phase unbalance, 0.7 deg. typ.
- very low insertion loss, 0.2 dB typ.
- small surface mount package
- protected under U.S. Patent 6,133,525

Applications

- VHF TV

ADQ-180+
ADQ-180



CASE STYLE: CJ725

+RoHS Compliant

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

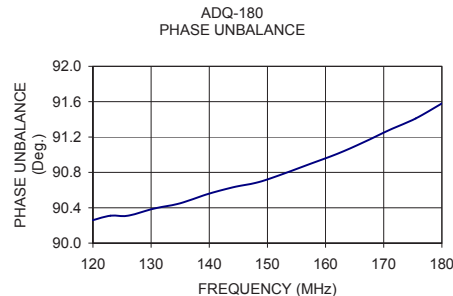
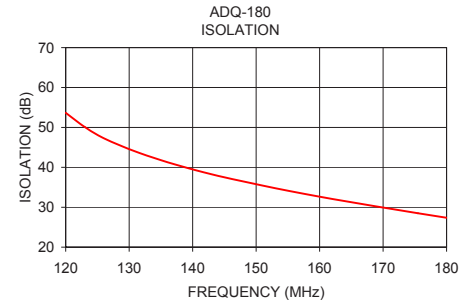
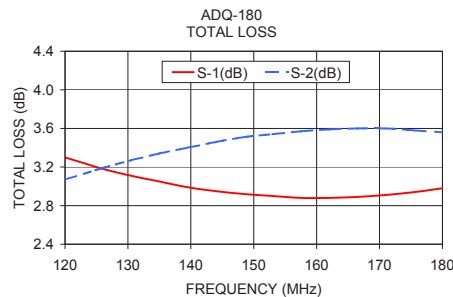
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L - f_U	Typ. Min.	Typ. Max.	Max.	Max.
120-180	35 20	0.2 0.7	6	1.5

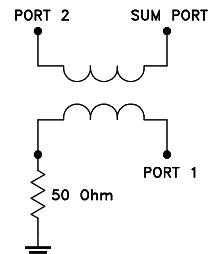
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1 S-2						
120.00	3.30 3.07	0.23	53.66	90.26	1.04	1.03	1.05
123.00	3.24 3.13	0.11	50.12	90.31	1.04	1.03	1.05
126.00	3.18 3.19	0.01	47.30	90.31	1.04	1.03	1.05
130.50	3.11 3.27	0.16	44.27	90.39	1.03	1.03	1.05
135.00	3.05 3.34	0.30	41.81	90.45	1.03	1.03	1.06
139.50	2.99 3.40	0.41	39.71	90.55	1.03	1.03	1.06
144.00	2.95 3.46	0.51	37.87	90.63	1.03	1.03	1.06
148.50	2.92 3.51	0.59	36.28	90.69	1.03	1.03	1.06
153.00	2.90 3.54	0.65	34.78	90.79	1.03	1.03	1.06
157.50	2.88 3.57	0.69	33.39	90.90	1.03	1.03	1.06
162.00	2.88 3.59	0.71	32.08	91.01	1.04	1.04	1.07
166.50	2.89 3.60	0.71	30.85	91.14	1.04	1.04	1.07
171.00	2.91 3.60	0.69	29.66	91.28	1.05	1.05	1.08
175.50	2.94 3.58	0.64	28.50	91.41	1.05	1.06	1.08
180.00	2.98 3.56	0.57	27.36	91.58	1.06	1.06	1.09

1. Total Loss = Insertion Loss + 3dB splitter loss.



electrical schematic



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

A. 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.

B. 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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