

Surface Mount Power Splitter/Combiner

SBD-4-25+ SBD-4-25

4 Way-0° 50Ω 1800 to 2600 MHz



CASE STYLE: SM34

Maximum Ratings

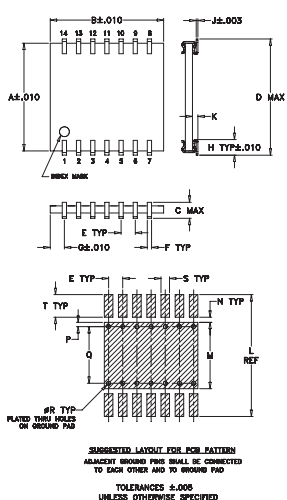
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.375W max.

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

Pin Connections

SUM PORT	4
PORT 1	8
PORT 2	10
PORT 3	12
PORT 4	14
GROUND	2,3,5,6,9,13
NOT USED	1,7,11

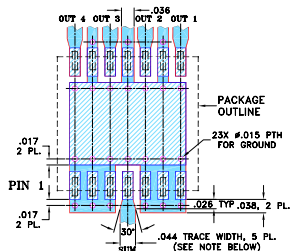
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.380	.400	.070	.420	.050	.015	.050	.060	.006
9.65	10.16	1.78	10.67	1.27	0.38	1.27	1.52	0.15
K	L	M	N	P	Q	R	S	T
.020	.430	.234	.018	.015	.200	.014	.030	.080
0.51	10.92	5.94	0.46	0.38	5.08	0.36	0.76	2.03
								grams
								0.3

Demo Board MCL P/N: TB-85 Suggested PCB Layout (PL-142)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020 ± .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.

■ DENOTES PCB COPPER LAYOUT
■ DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

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.
C. 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/WCLStore/terms.jsp

Features

- wideband frequency, 1800 to 2600 MHz
- high isolation, 20 dB typ.
- good input port matching VSWR, 1.26 typ.
- good output port matching VSWR, 1.26 typ.
- high power handling
- aqueous washable
- protected by U.S Patent 6,819,202

Applications

- PCS
- ISM
- WLAN
- VMTS

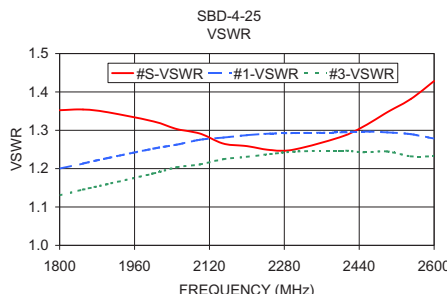
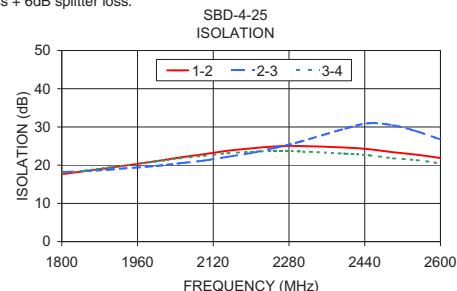
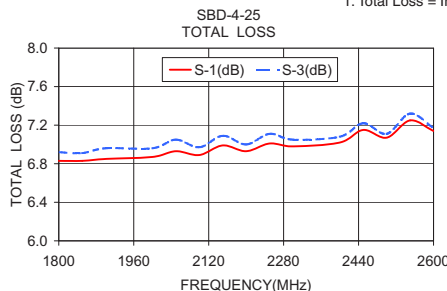
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	
	Typ.	Min.	Typ.	Max.	Max.	Typ.	Max.
$f_c - f_u$							
1800-2600	20	12	1.0	1.9	8	0.2	0.7
1800-2000	18	12	0.9	1.4	6	0.15	0.4
2100-2200	21	15	0.9	1.4	6	0.15	0.4
2200-2400	22	15	1.0	1.6	7	0.15	0.6
2400-2500	22	16	1.0	1.8	7	0.25	0.7

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
1800.00	6.83	6.80	6.92	6.82	0.13	17.65	18.21	17.86	2.17	1.35	1.20	1.10	1.13	1.20
1850.00	6.83	6.80	6.91	6.84	0.12	18.45	18.48	18.58	2.43	1.35	1.21	1.11	1.15	1.21
1900.00	6.85	6.83	6.96	6.86	0.13	19.29	18.86	19.40	2.26	1.35	1.23	1.12	1.16	1.22
2000.00	6.87	6.83	6.96	6.86	0.13	21.08	19.81	20.98	2.35	1.32	1.25	1.14	1.19	1.23
2050.00	6.93	6.89	7.05	6.96	0.16	22.04	20.51	21.82	2.09	1.30	1.26	1.15	1.20	1.24
2100.00	6.89	6.83	6.97	6.88	0.14	22.87	21.19	22.42	2.52	1.29	1.28	1.15	1.21	1.24
2150.00	6.99	6.92	7.09	7.02	0.17	23.76	22.17	23.15	2.09	1.27	1.28	1.16	1.22	1.25
2200.00	6.93	6.87	7.00	6.92	0.13	24.39	23.19	23.45	2.58	1.26	1.29	1.17	1.23	1.25
2250.00	7.01	6.94	7.11	7.03	0.17	24.89	24.52	23.75	2.19	1.25	1.29	1.17	1.24	1.25
2300.00	6.98	6.90	7.05	6.99	0.15	25.03	26.03	23.63	2.49	1.25	1.29	1.18	1.24	1.25
2400.00	7.02	6.93	7.08	7.07	0.15	24.61	29.63	22.99	2.67	1.28	1.29	1.19	1.25	1.24
2450.00	7.15	7.04	7.22	7.15	0.18	24.16	30.97	22.58	2.43	1.31	1.30	1.19	1.24	1.23
2500.00	7.07	6.96	7.11	7.13	0.17	23.40	30.43	21.81	2.90	1.35	1.29	1.20	1.24	1.23
2550.00	7.25	7.12	7.32	7.28	0.20	22.75	28.84	21.33	2.43	1.38	1.29	1.20	1.23	1.21
2600.00	7.14	7.02	7.17	7.20	0.18	21.87	26.73	20.46	3.20	1.43	1.28	1.21	1.23	1.21

1. Total Loss = Insertion Loss + 6dB splitter loss.



electrical schematic

