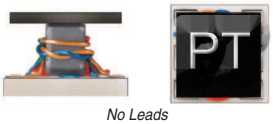
Surface Mount

Power Splitter/Combiner

2 Way-0° 50Ω 200 to 2000 MHz

SBTC-2-20X+



No Leads

CASE STYLE:AT1667
PRICE: $3.49 ea. QTY (20)
$2.69 ea. QTY (1000)

+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)	0.5W max.
Internal Dissipation	0.125W max.

Pin Connections

SUM PORT	6
PORT 1	3
PORT 2	4
GROUND	1,2
NOT USED	5

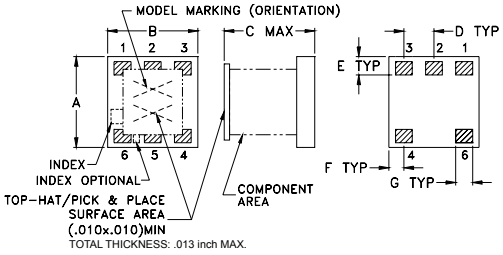
Features

- wide band frequency, 200-2000 MHz
- excellent amplitude unbalance, 0.2 dB typ.
- small size, 0.166"x0.15"x0.155"
- temperature stable LTCC base
- small size
- low cost
- aqueous washable
- protected by US patent 6,963,255

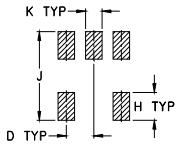
Applications

- cellular/GSM
- UHF/VHF receivers/transmitters
- PCN/PCS
- GPS
- VSAT

Outline Drawing



PCB Land Pattern



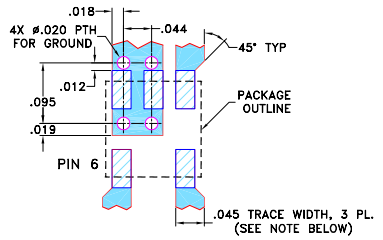
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.150	.150	.150	.050	.030	.025
3.81	3.81	3.81	1.27	0.76	0.64

G	H	J	K	wt
.028	.050	.160	.030	grams
0.71	1.27	4.06	0.76	0.10

Demo Board MCL P/N: TB-274
Suggested PCB Layout (PL-152)



NOTE: 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.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

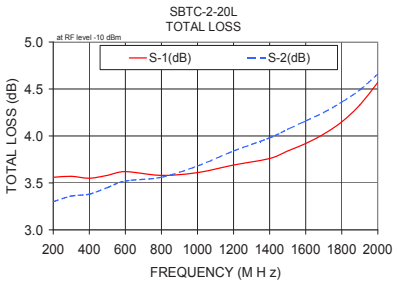
Electrical Specifications

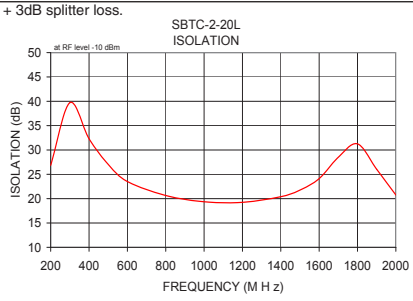
FREQ. RANGE (MHz) f_L-f_U	ISOLATION (dB) Typ.	ISOLATION (dB) Min.	INSERTION LOSS (dB) ABOVE 3.0 dB Typ.	INSERTION LOSS (dB) ABOVE 3.0 dB Max.	PHASE UNBALANCE (Degrees) Max.	AMPLITUDE UNBALANCE (dB) Max.
200-2000	**20**	**14**	**0.8**	**2.2**	**10**	**0.8**
800-1000	22	16	0.5	0.9	3	0.5
500-1500	22	15	0.5	1.5	5	0.7
1800-2000	20	15	1.2	2.2	10	0.6

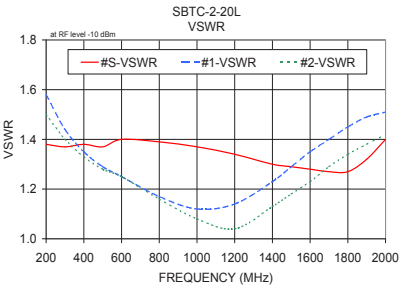
Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB) S-1	Total Loss[1] (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
200.00	3.56	3.30	0.26	26.85	1.44	1.38	1.58	1.50
300.00	3.57	3.36	0.21	39.72	0.88	1.37	1.44	1.40
400.00	3.55	3.38	0.17	32.31	0.56	1.38	1.35	1.33
500.00	3.58	3.45	0.13	27.04	0.36	1.37	1.29	1.28
600.00	3.62	3.52	0.10	23.52	0.22	1.40	1.25	1.25
800.00	3.58	3.56	0.03	20.65	0.20	1.39	1.17	1.16
1000.00	3.61	3.68	0.07	19.36	0.41	1.37	1.12	1.08
1200.00	3.69	3.84	0.15	19.24	0.93	1.34	1.14	1.04
1400.00	3.76	3.98	0.22	20.40	1.78	1.30	1.23	1.13
1500.00	3.84	4.07	0.23	21.76	2.34	1.29	1.29	1.18
1600.00	3.92	4.16	0.24	24.12	2.94	1.28	1.35	1.23
1700.00	4.02	4.25	0.24	28.51	3.61	1.27	1.40	1.29
1800.00	4.15	4.36	0.21	31.25	4.31	1.27	1.45	1.34
1900.00	4.33	4.49	0.18	26.03	4.98	1.32	1.49	1.38
2000.00	4.57	4.66	0.16	20.75	5.63	1.40	1.51	1.42

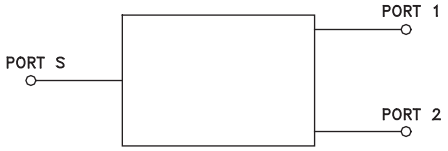
1. Total Loss = Insertion Loss + 3dB splitter loss.







electrical schematic



For detailed performance specs & shopping online see web site

REV. OR
M136167
SBTC-2-20X+
ED-8968
WZ/TD/CP/AM
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