

# Power Splitter/Combiner

## Features

- low insertion loss, 0.3 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- very good phase unbalance, 1.0 deg. typ.
- temperature stable LTCC base
- small size
- low cost
- aqueous washable

## Applications

- UHF/VHF receivers/transmitters
- cellular

## HT-SBTC-2-20+



2 Way-0° 50Ω 200 to 2000 MHz

## Electrical Specifications at 25°C

Parameter	Frequency(MHz)	Min.	Typ.	Max.	Unit
Frequency Range	-	200		2000	MHz
Insertion Loss Above 3.0 dB	200-2000	-	0.8	2.2	dB
	800-1000		0.5	0.9	
	500-1500		0.5	1.5	
	1800-2000		1.2	2.2	
Isolation	200-2000	14	20	-	dB
	800-1000	16	22		
	500-1500	15	22		
	1800-2000	15	20		
Phase Unbalance	200-2000	-	-	10	Degree
	800-1000			3	
	500-1500			5	
	1800-2000			10	
Amplitude Unbalance	200-2000	-	-	0.8	dB
	800-1000			0.5	
	500-1500			0.7	
	1800-2000			0.6	

## 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

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

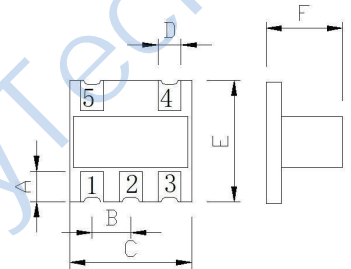
## Pin Connections

SUM PORT	4 (input)
PORT 1	5 (output1)
PORT 2	1 (output2)
GND	2, 3

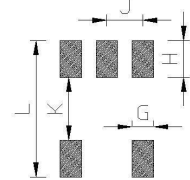
## Functional Schematic



## Outline Drawing



## PCB Land Pattern



Suggested Layout,  
Tolerance to be within ± 0.2

## Outline Dimensions: Unit (mm)

A	1.00	B	1.27	C	4.20
D	0.76	E	4.08	F	2.90
G	0.76	H	1.30	J	1.27
K	2.21	L	4.81	wt	0.06g

## Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-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.

