

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

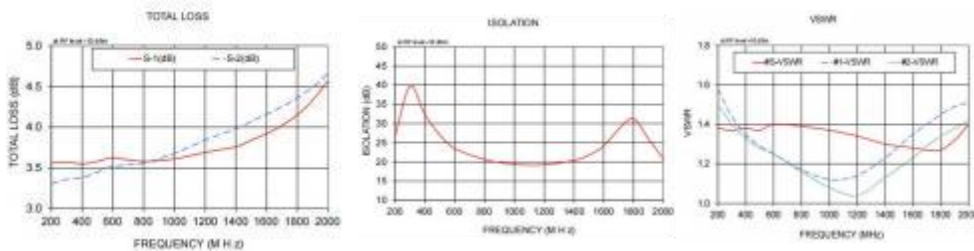
Electrical Specifications at 25°C

| 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 | |

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 | | | | | | |
| 200.00 | 3.56 | 3.30 | 0.26 | 28.85 | 1.44 | 1.38 | 1.56 | 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.



YT-SBTC-2-20+



2 Way-0°50Ω 200 to 2000 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 |

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

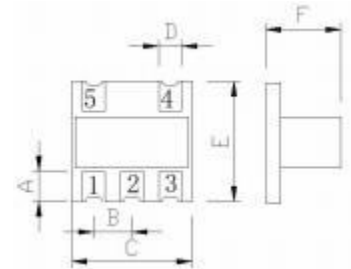
Pin Connections

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

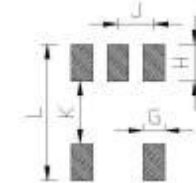
Functional Schematic



Outline Drawing



PCB Land Pattern



Suggested Layout,
Tolerance to be within ± 0.15

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 |

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For detailed performance specs & shopping online see Yantel web site : www.yantel-corp.com