

Power Splitter/Combiner

JSPQW-100A

2 Way-90° 50Ω 30 to 100 MHz



CASE STYLE: BK276

Maximum Ratings

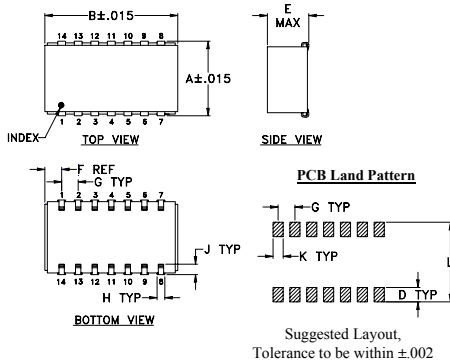
| | |
|-----------------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 1W max. |
| Internal Dissipation | 0.125W max. |

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

Pin Connections

| | |
|---------------|----------------------------|
| SUMPORT | 1 |
| PORT 1 (0°) | 7 |
| PORT 2 (+90°) | 8 |
| GROUND | 2,3,4,5,6,9,10,11,12,13,14 |

Outline Drawing

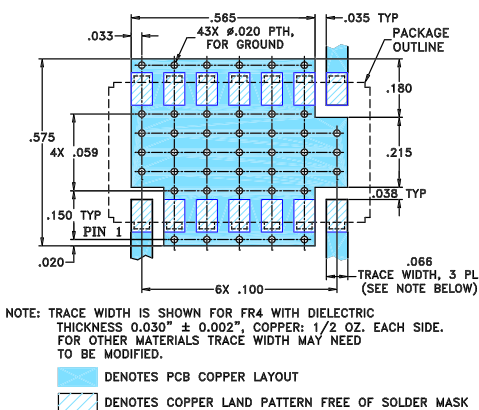


Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G |
|-------|-------|----|------|------|------|------|
| .450 | .803 | -- | .100 | .250 | .102 | .100 |
| 11.43 | 20.40 | -- | 2.54 | 6.35 | 2.59 | 2.54 |

| H | J | K | L | wt |
|------|------|------|-------|-------|
| .047 | .065 | .065 | .470 | grams |
| 1.19 | 1.65 | 1.65 | 11.94 | 3.0 |

Demo Board MCL P/N: TB-217 Suggested PCB Layout (PL-099)



Features

- low insertion loss, 0.5 dB typ.
- excellent isolation, 41 dB typ.
- aqueous washable

Applications

- VHF
- signal processing
- modulators
- instrumentation
- balanced amplifiers

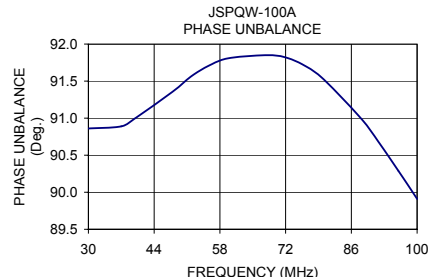
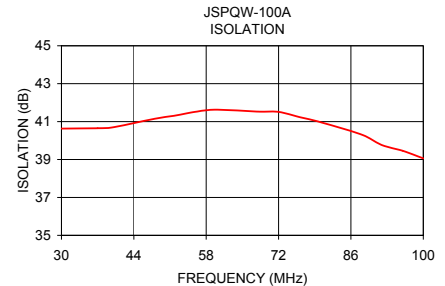
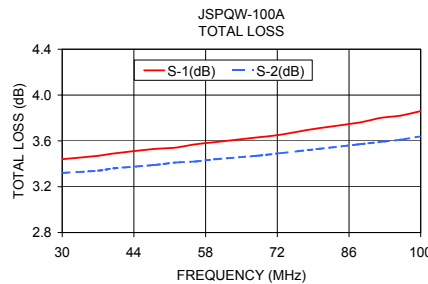
Electrical Specifications

| FREQ. RANGE (MHz) | ISOLATION (dB) | | INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB | | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) |
|--------------------------------|----------------|------|--|------|---------------------------|--------------------------|
| | Typ. | Min. | Typ. | Max. | | |
| f _L -f _U | | | | | Max. | Max. |
| 30-100 | 41 | 30 | 0.5 | 1.1 | 4 | 0.6 |

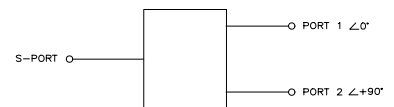
Typical Performance Data

| Frequency (MHz) | Total Loss ¹ (dB) | | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|------------------------------|------|--------------------------|----------------|------------------------|--------|--------|--------|
| | S-1 | S-2 | | | | | | |
| 30.00 | 3.44 | 3.32 | 0.12 | 40.63 | 90.86 | 1.07 | 1.23 | 1.18 |
| 37.00 | 3.47 | 3.34 | 0.13 | 40.65 | 90.89 | 1.06 | 1.22 | 1.19 |
| 40.00 | 3.49 | 3.36 | 0.13 | 40.70 | 91.00 | 1.06 | 1.21 | 1.20 |
| 48.00 | 3.53 | 3.39 | 0.14 | 41.15 | 91.36 | 1.06 | 1.19 | 1.21 |
| 52.00 | 3.54 | 3.41 | 0.13 | 41.32 | 91.57 | 1.06 | 1.18 | 1.22 |
| 56.00 | 3.57 | 3.42 | 0.15 | 41.52 | 91.72 | 1.07 | 1.17 | 1.22 |
| 60.00 | 3.59 | 3.44 | 0.15 | 41.63 | 91.81 | 1.09 | 1.17 | 1.23 |
| 68.00 | 3.63 | 3.47 | 0.16 | 41.53 | 91.85 | 1.13 | 1.18 | 1.24 |
| 72.00 | 3.65 | 3.49 | 0.17 | 41.51 | 91.82 | 1.15 | 1.19 | 1.25 |
| 76.00 | 3.68 | 3.51 | 0.18 | 41.24 | 91.71 | 1.17 | 1.21 | 1.26 |
| 80.00 | 3.71 | 3.53 | 0.18 | 40.98 | 91.53 | 1.20 | 1.23 | 1.27 |
| 88.00 | 3.76 | 3.57 | 0.20 | 40.32 | 91.00 | 1.25 | 1.28 | 1.29 |
| 92.00 | 3.80 | 3.59 | 0.21 | 39.76 | 90.66 | 1.28 | 1.30 | 1.30 |
| 96.00 | 3.82 | 3.61 | 0.21 | 39.46 | 90.29 | 1.30 | 1.33 | 1.32 |
| 100.00 | 3.86 | 3.64 | 0.22 | 39.06 | 89.91 | 1.33 | 1.36 | 1.33 |

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



electrical schematic



Notes

- 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.
- 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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