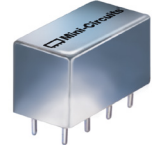


Plug-In

# Power Splitter/Combiner

2 Way-90° 50Ω 12 to 14 MHz

PSCQ-2-13+



CASE STYLE: A01

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

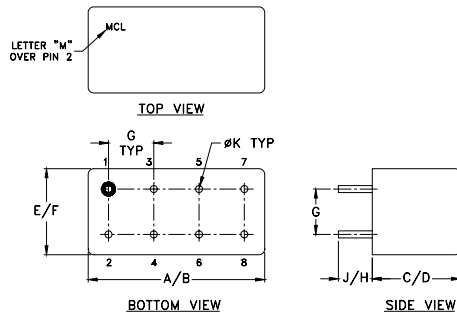
## Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -55°C to 100°C |
| Storage Temperature                                             | -55°C to 100°C |
| Power Input (as a splitter)                                     | 1W max.        |
| Permanent damage may occur if any of these limits are exceeded. |                |

## Pin Connections

|                      |         |
|----------------------|---------|
| SUM PORT             | 1       |
| PORT 1 (+90°)        | 2       |
| PORT 2 (0°)          | 5       |
| GROUND               | 3,4,7,8 |
| CASE GROUND          | 3,4,7,8 |
| 50 OHM TERM EXTERNAL | 6       |

## Outline Drawing



## Outline Dimensions (inch)

| A     | B     | C    | D     | E    | F     |
|-------|-------|------|-------|------|-------|
| .770  | .800  | .385 | .400  | .370 | .400  |
| 19.56 | 20.32 | 9.78 | 10.16 | 9.40 | 10.16 |
| G     | H     | J    | K     | wt   |       |
| .200  | .20   | .14  | .031  |      | grams |
| 5.08  | 5.08  | 3.56 | 0.79  |      | 5.2   |

## Features

- low insertion loss, 0.4 dB typ.
- excellent isolation, 29 dB typ.
- excellent phase unbalance, 1 deg. typ.
- excellent VSWR, 1.10:1 typ.
- rugged shielded case

## Applications

- modulators
- balanced amplifiers

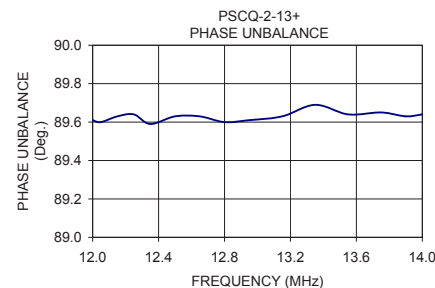
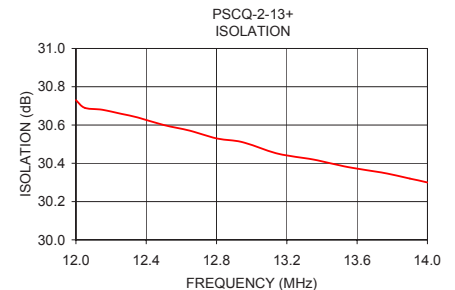
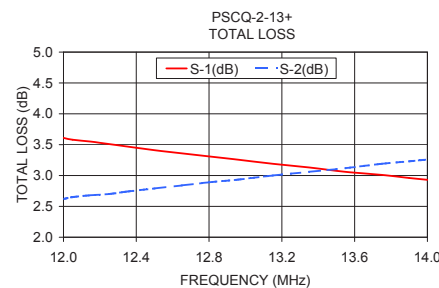
## Electrical Specifications

| FREQ. RANGE (MHz) | ISOLATION (dB) | INSERTION LOSS (dB)<br>Avg. of Coupled Outputs<br>ABOVE 3 dB | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) |
|-------------------|----------------|--------------------------------------------------------------|---------------------------|--------------------------|
| $f_L$ - $f_U$     | Typ. Min.      | Typ. Max.                                                    | Max.                      | Max.                     |
| 12-14             | 29 25          | 0.4 0.7                                                      | 3                         | 1.2                      |

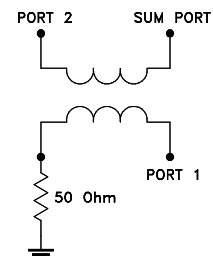
## Typical Performance Data

| 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  |                          |                |                        |        |        |        |
| 12.00           | 3.61                         | 2.62 | 0.98                     | 30.73          | 89.61                  | 1.07   | 1.08   | 1.08   |
| 12.05           | 3.58                         | 2.65 | 0.94                     | 30.69          | 89.60                  | 1.07   | 1.08   | 1.08   |
| 12.15           | 3.55                         | 2.68 | 0.87                     | 30.68          | 89.63                  | 1.07   | 1.08   | 1.08   |
| 12.25           | 3.51                         | 2.70 | 0.80                     | 30.66          | 89.64                  | 1.07   | 1.08   | 1.08   |
| 12.35           | 3.47                         | 2.74 | 0.73                     | 30.64          | 89.59                  | 1.07   | 1.08   | 1.08   |
| 12.50           | 3.41                         | 2.79 | 0.63                     | 30.60          | 89.63                  | 1.07   | 1.08   | 1.08   |
| 12.65           | 3.36                         | 2.84 | 0.53                     | 30.57          | 89.63                  | 1.07   | 1.08   | 1.08   |
| 12.80           | 3.31                         | 2.89 | 0.43                     | 30.53          | 89.60                  | 1.07   | 1.08   | 1.08   |
| 12.95           | 3.26                         | 2.93 | 0.33                     | 30.51          | 89.61                  | 1.07   | 1.08   | 1.08   |
| 13.15           | 3.19                         | 3.00 | 0.20                     | 30.45          | 89.63                  | 1.07   | 1.08   | 1.08   |
| 13.35           | 3.13                         | 3.06 | 0.07                     | 30.42          | 89.69                  | 1.07   | 1.08   | 1.08   |
| 13.55           | 3.06                         | 3.12 | 0.06                     | 30.38          | 89.64                  | 1.07   | 1.08   | 1.08   |
| 13.75           | 3.01                         | 3.19 | 0.18                     | 30.35          | 89.65                  | 1.07   | 1.08   | 1.08   |
| 13.90           | 2.96                         | 3.23 | 0.27                     | 30.32          | 89.63                  | 1.07   | 1.08   | 1.08   |
| 14.00           | 2.93                         | 3.26 | 0.33                     | 30.30          | 89.64                  | 1.07   | 1.08   | 1.08   |

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



## electrical schematic



## 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-Circuits 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-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)



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