*Plug-In*

# Power Splitter/Combiner

# PSCQ-2-50+

## 2 Way-90° 50Ω 25 to 50 MHz

*Generic photo used for illustration purposes only*

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 |

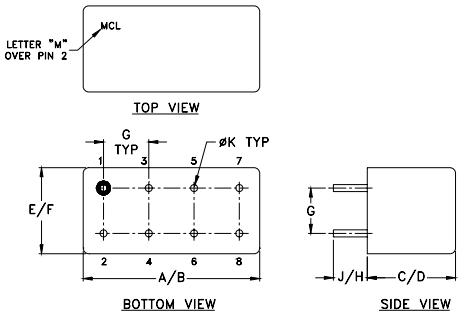
### Features

- low insertion loss, 0.3 dB typ.
- high isolation, 30 dB typ.
- rugged shielded case

### Applications

- modulators
- balanced amplifiers

### Outline Drawing




### Outline Dimensions (inch / mm)

| 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 |

### Electrical Specifications

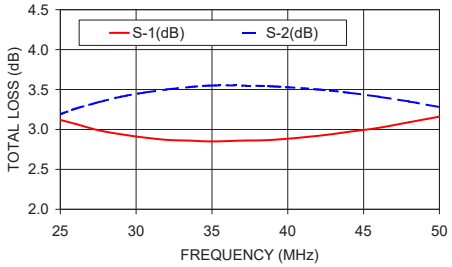
| FREQ. RANGE (MHz) | ISOLATION (dB) | | INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB | | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) |
|---|---|---|---|---|---|---|
| $f_L$-$f_U$ | Typ. | Min. | Typ. | Max. | Max. | Max. |
| 25-50 | 30 | 20 | 0.3 | 0.7 | 3 | 1.5 |

### Typical Performance Data

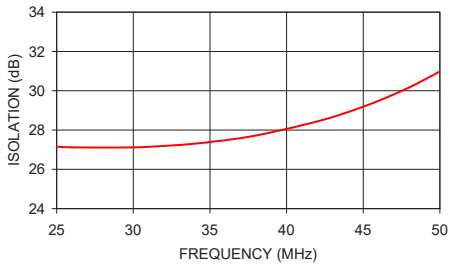
| Frequency (MHz) | Total Loss[1] (dB) | | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|---|---|---|---|---|---|---|---|---|
| | S-1 | S-2 | | | | | | |
| 25.00 | 3.12 | 3.19 | 0.07 | 27.15 | 90.74 | 1.10 | 1.10 | 1.11 |
| 26.00 | 3.07 | 3.26 | 0.19 | 27.12 | 90.78 | 1.11 | 1.10 | 1.12 |
| 27.50 | 2.99 | 3.34 | 0.35 | 27.11 | 90.84 | 1.11 | 1.11 | 1.12 |
| 29.00 | 2.94 | 3.41 | 0.47 | 27.11 | 90.89 | 1.11 | 1.11 | 1.13 |
| 30.50 | 2.90 | 3.46 | 0.56 | 27.13 | 90.94 | 1.12 | 1.11 | 1.13 |
| 32.00 | 2.87 | 3.50 | 0.63 | 27.19 | 91.00 | 1.12 | 1.11 | 1.13 |
| 33.50 | 2.86 | 3.53 | 0.67 | 27.27 | 91.03 | 1.12 | 1.11 | 1.13 |
| 35.00 | 2.85 | 3.55 | 0.70 | 27.39 | 91.08 | 1.12 | 1.11 | 1.13 |
| 37.00 | 2.86 | 3.55 | 0.69 | 27.59 | 91.14 | 1.12 | 1.11 | 1.13 |
| 39.00 | 2.87 | 3.54 | 0.67 | 27.88 | 91.19 | 1.12 | 1.11 | 1.13 |
| 42.00 | 2.92 | 3.50 | 0.58 | 28.44 | 91.26 | 1.11 | 1.11 | 1.13 |
| 44.00 | 2.97 | 3.46 | 0.49 | 28.91 | 91.31 | 1.11 | 1.11 | 1.13 |
| 46.00 | 3.02 | 3.41 | 0.39 | 29.49 | 91.35 | 1.10 | 1.10 | 1.12 |
| 48.00 | 3.09 | 3.35 | 0.26 | 30.17 | 91.38 | 1.10 | 1.10 | 1.12 |
| 50.00 | 3.16 | 3.28 | 0.12 | 30.98 | 91.44 | 1.09 | 1.09 | 1.11 |

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

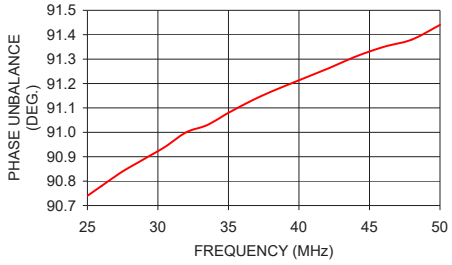
PSCQ-2-50+
TOTAL LOSS



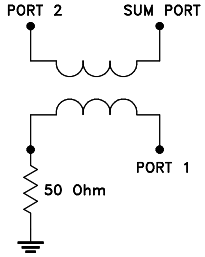

PSCQ-2-50+
ISOLATION




PSCQ-2-50+
PHASE UNBALANCE




### electrical schematic




Notes

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