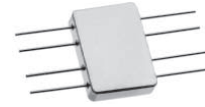


90° HYBRIDS



FLAT-PACK

| FREQUENCY RANGE (MHz) | INSERTION LOSS (dB) TYP/MAX | AMPLITUDE UNBALANCE (dB) TYP/MAX | PHASE UNBALANCE (Degrees) TYP/MAX | ISOLATION (dB) TYP/MIN | VSWR TYP | PACKAGE | MODEL |
|--------------------------|-----------------------------------|--|---|------------------------------|-------------|---------|---------|
| 5.5-16.5 | 0.3/0.5 | 0.8/1.0 | 1.0/3.0 | 23/20 | 1.3:1 | 101 | DQF-301 |
| 7-14 | 0.3/0.6 | 0.4/0.75 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-1B1 |
| 10-20 | 0.3/0.6 | 0.4/0.75 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-106 |
| 10.2 -11.2 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-151 |
| 19-21 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-157 |
| 20-40 | 0.3/0.6 | 0.4/0.75 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-101 |
| 20-60 | 0.3/0.5 | 0.8/1.0 | 1.0/3.0 | 23/20 | 1.3:1 | 101 | DQF-302 |
| 20.33-22.47 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-152 |
| 28.5-31.5 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-153 |
| 30-90 | 0.3/0.6 | 0.8/1.0 | 1.0/3.0 | 23/20 | 1.3:1 | 101 | DQF-303 |
| 38-42 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-158 |
| 40-80 | 0.3/0.6 | 0.4/0.75 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-102 |
| 40-120 | 0.3/0.6 | 0.8/1.2 | 2.0/4.0 | 23/17 | 1.4:1 | 101 | DQF-305 |
| 52-88 | 0.3/0.6 | 0.2/0.5 | 1.0/2.5 | 25/20 | 1.1:1 | 101 | DQF-120 |
| 55-90 | 0.3/0.7 | 0.6/1.2 | 1.0/3.0 | 30/20 | 1.2:1 | 101 | DQF-123 |
| 57-63 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-154 |
| 60-80 | 0.2/0.6 | 0.2/0.45 | 1.0/2.5 | 30/20 | 1.1:1 | 101 | DQF-122 |
| 66.5-73.5 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-156 |
| 76-84 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-161 |
| 80-160 | 0.4/0.75 | 0.5/1.0 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-103 |
| 90-270 | 0.4/0.7 | 0.8/1.2 | 2.0/4.0 | 23/17 | 1.5:1 | 101 | DQF-304 |
| 95-105 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-162 |
| 100-200 | 0.4/0.75 | 0.5/1.0 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-104 |
| 104-176 | 0.3/0.6 | 0.2/0.6 | 1.0/2.5 | 25/20 | 1.1:1 | 101 | DQF-121 |
| 115-345 | 0.5/0.8 | 0.8/1.4 | 2.0/4.0 | 20/17 | 1.5:1 | 101 | DQF-310 |
| 114-126 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-166 |
| 133-147 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-163 |
| 150-300 | 0.4/0.75 | 0.5/1.0 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-105 |
| 190-210 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-164 |
| 240-720 | 0.7/1.0 | 1.2/1.6 | 3.0/5.0 | 20/15 | 1.5:1 | 101 | DQF-330 |
| 285-315 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-165 |
| 430-470 | 0.2/0.3 | 0.5/0.7 | 1.0/3.0 | 25/20 | 1.1:1 | 101 | DQF-167 |

Power Rating: 1 Watt, max.

All specifications assume 50 ohms impedance of all ports

For pin location and package outline drawings, see back pages.

PIN-OUT TABLE

| INPUT | +90° OUTPUT | 0° OUTPUT | ISOLATED* | GROUND** |
|-------|-------------|-----------|-----------|----------|
| 1 | 8 | 5 | 4 | 2,3,6,7 |

*Terminate isolated port with 50 ohms externally

**GROUND = Ground externally