

**TECHNICAL DESCRIPTION**

**FEATURES**

- 3.3 - 3.7 GHz
- LOW LOSS
- HIGH ISOLATION
- EXCELLENT PHASE/AMPLITUDE BALANCE
- SURFACE MOUNT
- TAPE & REEL AVAILABLE



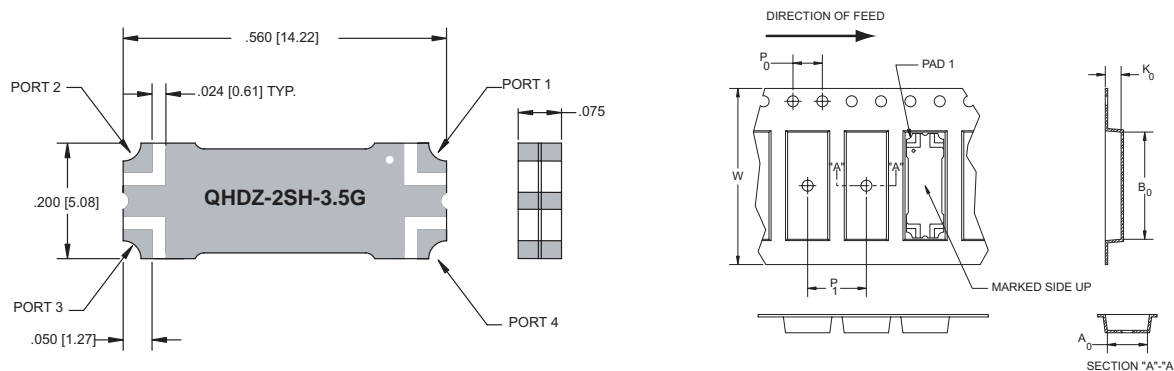
The Multi-Mix® QHDZ series provides a 3 dB 90° coupling with low insertion loss, low VSWR, and high isolation. Accurate phase and amplitude balance make this series ideal for use in IQ networks, power amplifiers, radio transceivers, receiver multicouplers and RF signal distribution and processing equipment.

QHDZ quad hybrids are fusion bonded multilayer stripline devices. The fusion bonding process yields a homogeneous monolithic dielectric structure with reliability, ruggedness, and electrical performance that is superior to conventional adhesive bonding techniques.

**GENERAL SPECIFICATIONS**

| FREQUENCY RANGE<br>GHz      |  | INSERTION LOSS<br>(dB MAX) | AMPLITUDE<br>BALANCE<br>(dB MAX) | PHASE BALANCE   | ISOLATION<br>(dB MIN)    |
|-----------------------------|--|----------------------------|----------------------------------|-----------------|--------------------------|
| 3.3 - 3.7                   |  | 0.20                       | ± 0.20                           | 90 ± 3°         | 23                       |
| VSWR<br>(MAX,<br>ALL PORTS) | INPUT POWER<br>(CW @ 1.2:1<br>LOAD VSWR) | SIZE<br>(INCHES)           | WEIGHT<br>(OZ./GRAMS)            | RF<br>INTERFACE | OPERATING<br>TEMPERATURE |
| 1.15:1                      | 125 W                                    | 0.56 x 0.20 x 0.075        | 0.02 / 0.6                       | Surface Mount   | -55° - +85° C            |

**PACKAGE OUTLINE / TAPE & REEL ORIENTATION**



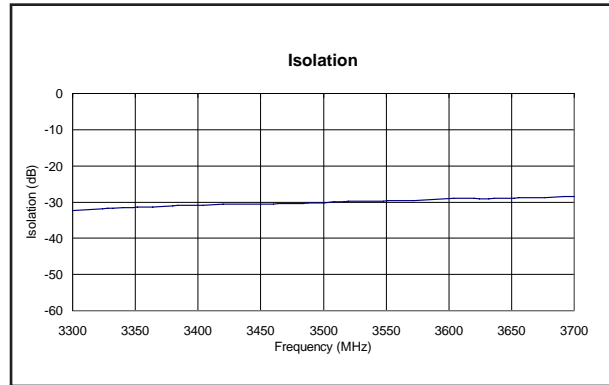
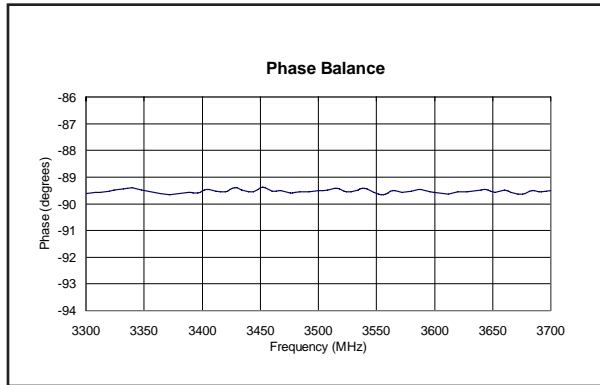
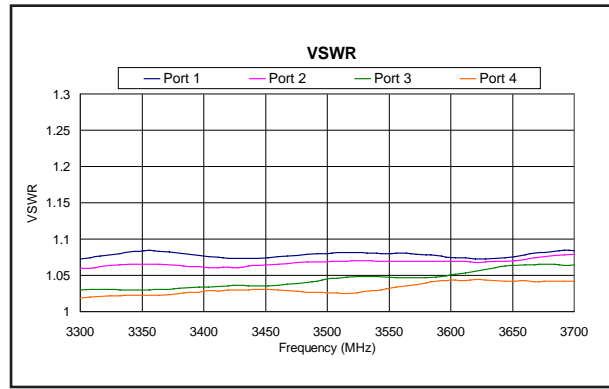
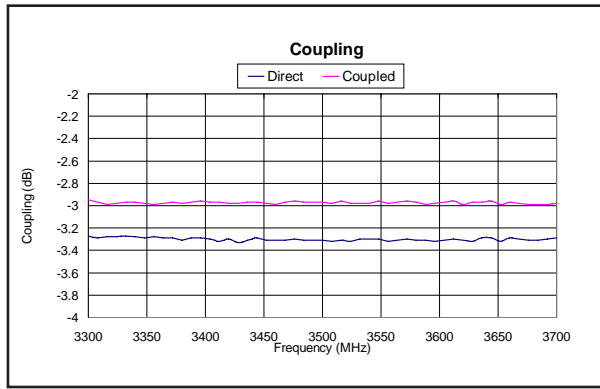
|              | W      | P <sub>1</sub> | P <sub>0</sub> | A <sub>0</sub> | B <sub>0</sub> | K <sub>0</sub> |
|--------------|--------|----------------|----------------|----------------|----------------|----------------|
| ENGLISH (in) | 0.9449 | 0.3150         | 0.1575         | 0.2150         | 0.5752         | 0.0850         |
| METRIC (mm)  | 24.00  | 8.00           | 4.00           | 5.46           | 14.61          | 2.16           |

**THE MULTI-MIX MICROTECHNOLOGY® GROUP IS ISO 9001:2000 REGISTERED**

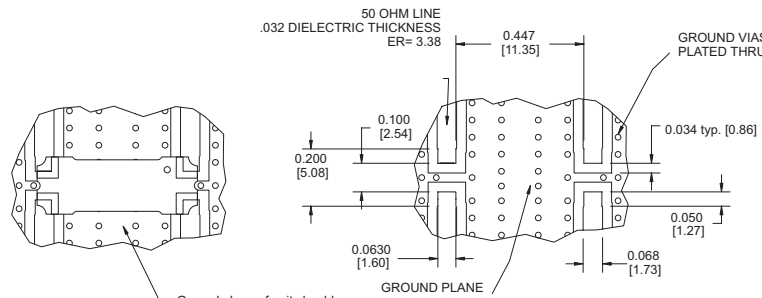


U.S. Patent 6,099,677 and other Patents Pending.

## TYPICAL PERFORMANCE



## MOUNTING CONFIGURATION



Ground plane of unit should be soldered to ground plane of circuit board for optimum performance

## TRUTH TABLE

|   | 1     | 2     | 3     | 4     |
|---|-------|-------|-------|-------|
| 1 | Input | Iso   | -90°  | 0°    |
| 2 | Iso   | Input | 0°    | -90°  |
| 3 | -90°  | 0°    | Input | Iso   |
| 4 | 0°    | -90°  | Iso   | Input |