

# MULTI-Mix ZAPPER®

## QHDZ-2H-0.45G QUAD HYBRID

REV: 003, 03/17/06

### TECHNICAL DESCRIPTION

#### FEATURES

- 350 - 525 MHz
- LOW LOSS
- HIGH ISOLATION
- EXCELLENT PHASE/AMPLITUDE BALANCE
- SURFACE MOUNT
- TAPE & REEL AVAILABLE

#### APPLICATIONS

- CDMA 450 BASE STATION POWER AMPLIFIERS
- UHF LAND MOBILE RADIO BASE STATION POWER AMPLIFIERS
- UHF RADAR (400-500 MHz)



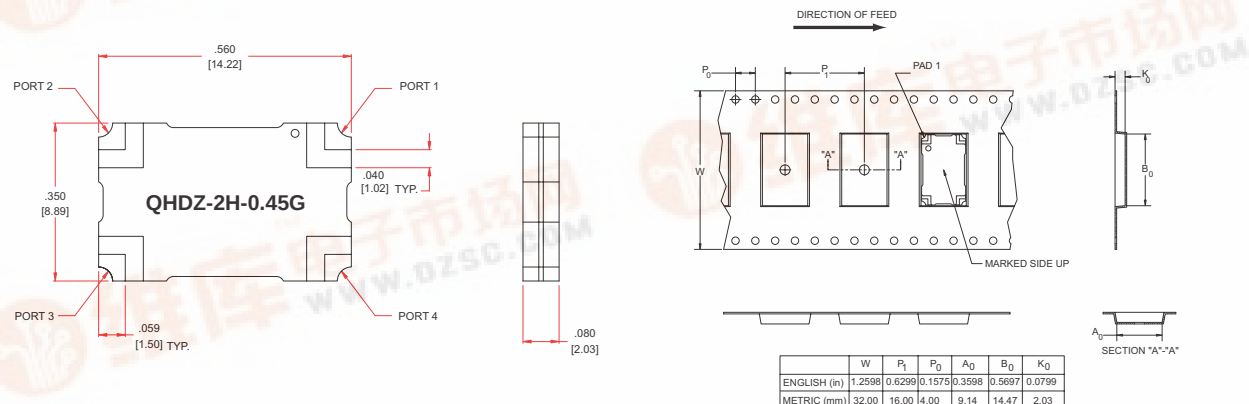
The Multi-Mix® QHDZ-2H-0.45G provides a 3 dB 90° coupling with low insertion loss, low VSWR, and high isolation for use in the 350 - 525 MHz range. Accurate phase and amplitude balance make this series ideal for use in IQ networks, power amplifiers, radio transceivers, receiver multicouplers and RF signal 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>MHz |                     | INSERTION LOSS<br>(dB MAX)                 | AMPLITUDE BALANCE<br>(dB MAX) | PHASE BALANCE         |
|------------------------|---------------------|--------------------------------------------|-------------------------------|-----------------------|
| 410 - 480              |                     | 0.25                                       | ± 0.2                         | 90 ± 2°               |
| 350 - 525              |                     | 0.30                                       | ± 0.3                         | 90 ± 3°               |
| ISOLATION<br>(dB MIN)  | VSWR<br>(ALL PORTS) | INPUT POWER<br>(CW @ 1.2:1 OUTPUT<br>VSWR) | RF<br>INTERFACE               | OPERATING TEMPERATURE |
| 27<br>25               | 1.12:1<br>1.15:1    | 125                                        | Surface Mount                 | -55° - +95° C         |

### PACKAGE OUTLINE / TAPE & REEL ORIENTATION



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



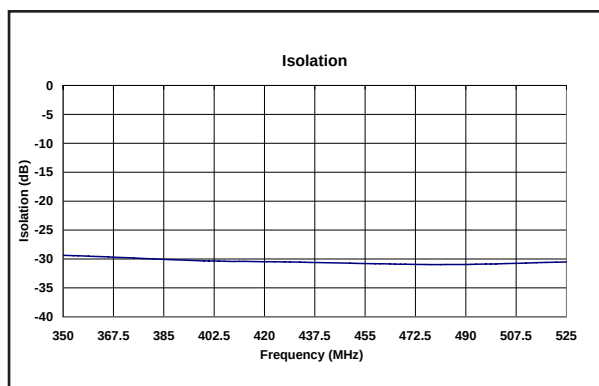
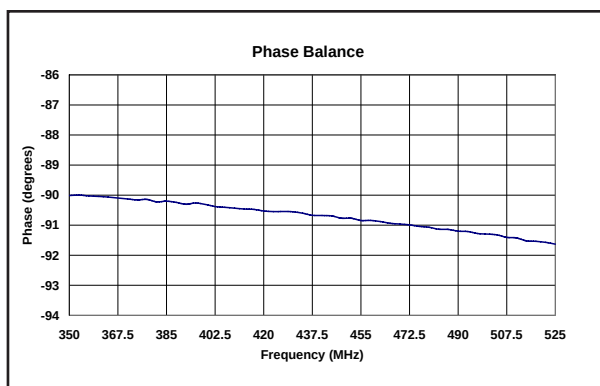
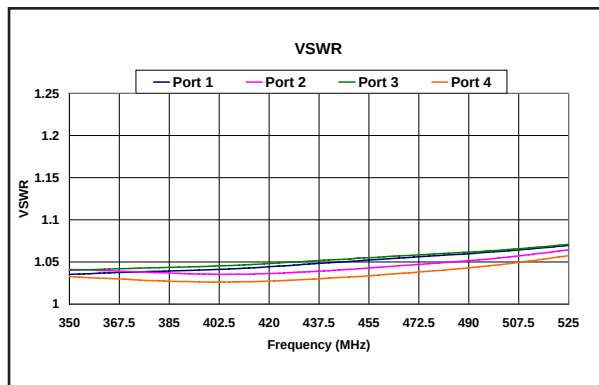
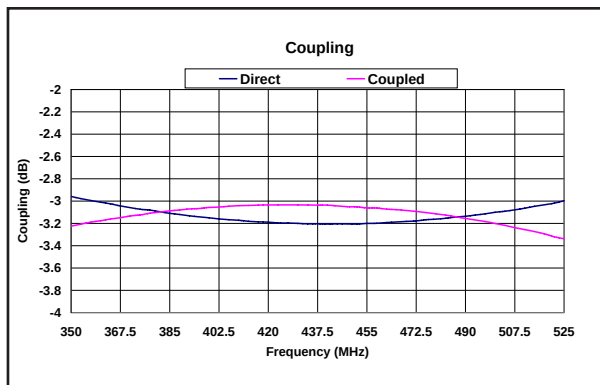
U.S. Patent 6,099,677 and other Patents Pending.

Merrimac Industries / 41 Fairfield Place, West Caldwell, NJ 07006

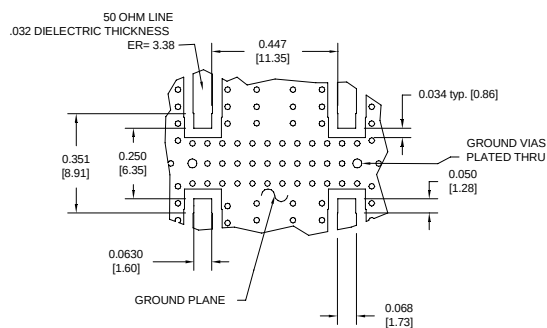
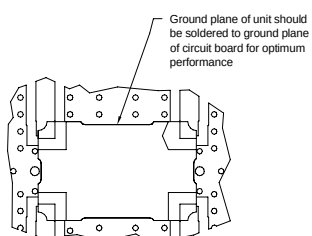
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## TYPICAL PERFORMANCE



## MOUNTING CONFIGURATION



## 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 |