

# Air Dielectric Directional Couplers

## Low Loss, Octave Bandwidth

### 2023 Series

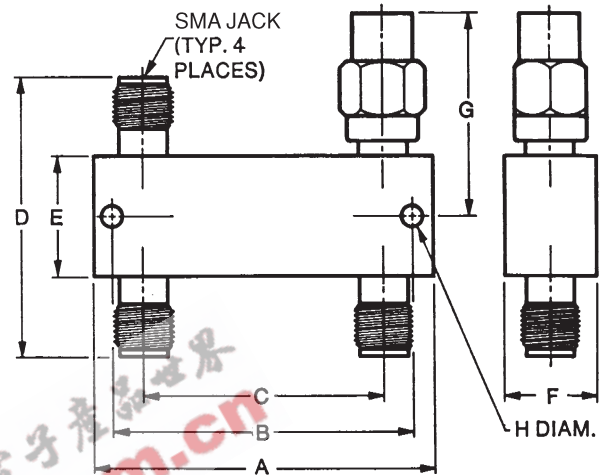
V2.00

#### Features

- Air Dielectric for Low Loss
- Frequency Range: 1.0 to 18 GHz
- Octave Bandwidths
- Meets MIL-E-5400 and MIL-E-16400 Environments

#### Description

These directional couplers feature compact packaging and four-port construction. This combination permits flexibility in system designs. They are intended for test and measurement setups as well as for system use. Temperature range is -54° to +110°C. These units incorporate three miniature, low VSWR SMA jack connectors. Isolated port is terminated with 1/2 watt, 50 ohm load.



NOTE: All dimensions are  $\pm .020$ , except mounting hole diameters ( $\pm .005$ ) and mounting hole location ( $\pm .010$ ).

#### Mechanical Specifications

| Case Style | A           | B           | C           | D           | E           | F          | G           | H            | Weight |    |
|------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|--------------|--------|----|
|            | Inch (mm)   | Inch (mm)   | Inch (mm)   | Inch (mm)   | Inch (mm)   | Inch (mm)  | Inch (mm)   | Inch (mm)    | oz.    | g  |
| 1          | 2.55 (64.8) | 2.39 (60.8) | 1.97 (50.1) | 1.16 (29.4) | 0.50 (12.7) | 0.38 (9.7) | 0.91 (23.2) | 0.093 (2.36) | 1.90   | 54 |
| 2          | 1.69 (42.7) | 1.52 (38.7) | 1.11 (28.2) | 1.16 (29.4) | 0.50 (12.7) | 0.38 (9.7) | 0.91 (23.2) | 0.093 (2.36) | 1.10   | 31 |
| 3          | 1.41 (35.6) | 1.24 (31.5) | 0.82 (20.8) | 1.16 (29.4) | 0.50 (12.7) | 0.38 (9.7) | 0.91 (23.2) | 0.093 (2.36) | 1.07   | 31 |
| 4          | 1.19 (30.0) | 1.02 (26.0) | 0.60 (15.2) | 1.16 (29.4) | 0.50 (12.7) | 0.38 (9.7) | 0.91 (23.2) | 0.093 (2.36) | 0.98   | 28 |
| 5          | 1.08 (27.4) | 0.92 (23.4) | 0.50 (12.7) | 1.28 (32.6) | 0.63 (15.9) | 0.38 (9.7) | 0.97 (24.6) | 0.093 (2.36) | 1.01   | 30 |

## Specifications

| Part No.     | Case Style | Frequency Range (GHz) | Coupling (Includ. Freq. Sens.) (dB) | Freq. Sens. (dB) | Insert. Loss Max. (dB) | Direct. Min. (dB) | VSWR Max. | Power Avg. (W) | Pk (kW) | M/A-COM MIL-C-15370/10* Commercial Equivalent Part No. |
|--------------|------------|-----------------------|-------------------------------------|------------------|------------------------|-------------------|-----------|----------------|---------|--|
| 2023-6121-06 | 1          | 1.0 - 2.0             | 6 ±1.0                              | ±0.50            | 0.20                   | 20                | 1.20      | 2              | 2       | 2023-4011-06   |
| 2023-6122-10 | 1          |                       | 10 ±1.0                             | ±0.75            | 0.20                   | 20                | 1.20      | 5              | 2       | 2023-4012-10   |
| 2023-6123-20 | 1          |                       | 20 ±1.0                             | ±1.00            | 0.20                   | 20                | 1.20      | 50             | 2       | 2023-4013-20   |
| 2023-6124-06 | 2          | 2.0 - 4.0             | 6 ±1.0                              | ±0.50            | 0.20                   | 20                | 1.20      | 2              | 2       | 2023-4014-06   |
| 2023-6125-10 | 2          |                       | 10 ±1.0                             | ±0.75            | 0.20                   | 20                | 1.20      | 5              | 2       | —  |
| 2023-6126-20 | 2          |                       | 20 ±1.0                             | ±1.00            | 0.20                   | 20                | 1.20      | 50             | 2       | —  |
| 2023-6127-06 | 3          | 2.6 - 5.2             | 6 ±1.0                              | ±0.60            | 0.20                   | 18                | 1.25      | 2              | 2       | —  |
| 2023-6128-10 | 3          |                       | 10 ±1.0                             | ±0.75            | 0.20                   | 18                | 1.25      | 5              | 2       | —  |
| 2023-6129-20 | 3          |                       | 20 ±1.0                             | ±1.00            | 0.20                   | 18                | 1.25      | 50             | 2       | —  |
| 2023-6130-06 | 4          | 4.0 - 8.0             | 6 ±1.0                              | ±0.60            | 0.20                   | 18                | 1.25      | 2              | 2       | 2023-4015-10   |
| 2023-6131-10 | 4          |                       | 10 ±1.0                             | ±0.75            | 0.20                   | 18                | 1.25      | 5              | 2       | —  |
| 2023-6132-20 | 4          |                       | 20 ±1.0                             | ±1.00            | 0.20                   | 18                | 1.25      | 50             | 2       | —  |
| 2023-6133-06 | 5          | 8.0 - 12.4            | 6 ±1.0                              | ±0.50            | 0.25                   | 15                | 1.30      | 2              | 2       | —  |
| 2023-6134-10 | 5          |                       | 10 ±1.0                             | ±0.75            | 0.25                   | 15                | 1.30      | 5              | 2       | 2023-4016-10   |
| 2023-6135-20 | 5          |                       | 20 ±1.0                             | ±1.00            | 0.25                   | 15                | 1.30      | 50             | 2       | 2023-4017-20   |
| 2023-6136-06 | 5          | 12.4 - 18.0           | 6 ±1.0                              | ±0.60            | 0.25                   | 12                | 1.35      | 2              | 2       | 2023-4085-06   |
| 2023-6137-10 | 5          |                       | 10 ±1.0                             | ±0.75            | 0.25                   | 12                | 1.35      | 5              | 2       | —  |
| 2023-6138-20 | 5          |                       | 20 ±1.0                             | ±1.00            | 0.25                   | 12                | 1.35      | 50             | 2       | —  |