

# Directional Coupler



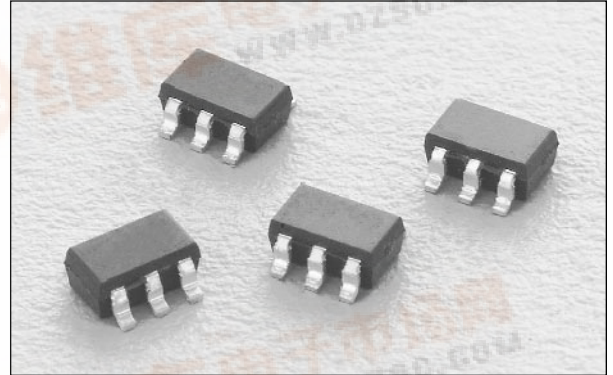
## DC17-73

### Features

- Low Cost
- Low Profile
- Small SOT-6 Package
- Tape & Reel

### Description

The DC17-73 is a monolithic directional coupler for low cost wireless applications. It offers low loss, good isolation, good input/output matching and exceptional coupling repeatability. Performance specified for two different bands. It is available in the SOT-6 lead surface mount package.

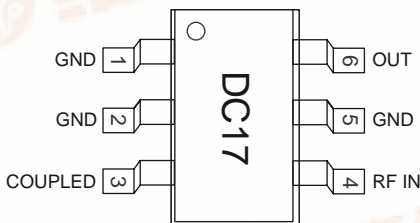


### Electrical Specifications at 25°C

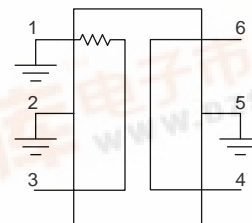
| Parameter                   | Min. | Typ.  | Max.  | Unit | Min. | Typ.   | Max.   | Unit |
|-----------------------------|------|-------|-------|------|------|--------|--------|------|
| Frequency                   | 1.42 |       | 1.66  | GHz  | 1.71 |        | 1.99   | GHz  |
| Insertion Loss <sup>1</sup> |      | .60   | .70   | dB   |      | .75    | .85    | dB   |
| Isolation                   | 21   | 22    |       | dB   | 20   | 21     |        | dB   |
| Input VSWR                  |      | 1.1:1 | 1.3:1 |      |      | 1.1:1  | 1.3:1  |      |
| Output VSWR                 |      | 1.1:1 | 1.3:1 |      |      | 1.1:1  | 1.3:1  |      |
| Coupling                    | 10.8 | 11.8  | 12.8  | dB   | 9.3  | 10.3   | 11.3   | dB   |
| Coupled Port VSWR           |      | 1.2:1 | 1.3:1 |      |      | 1.25:1 | 1.35:1 |      |

1. Coupling loss included.

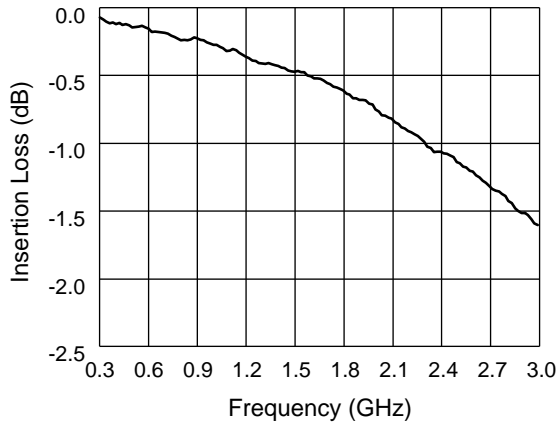
### Pin Out



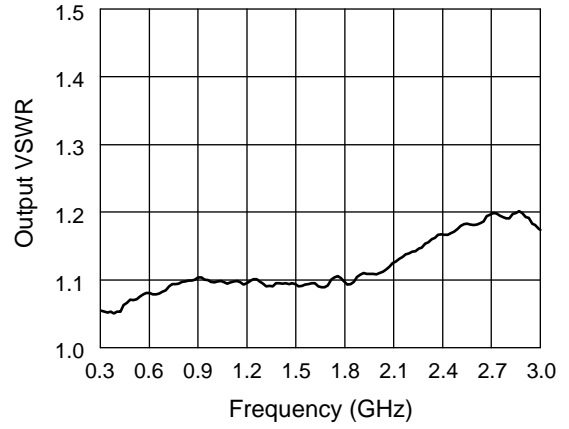
### Block Diagram



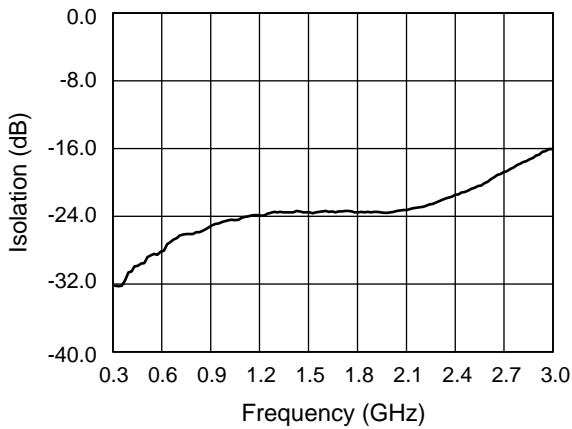
**Typical Performance Data**



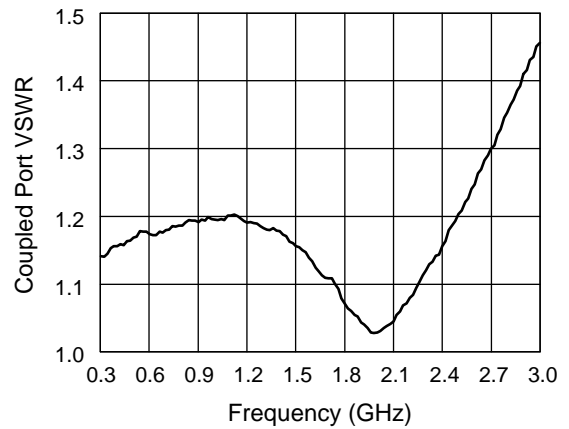
**Insertion Loss vs. Frequency**



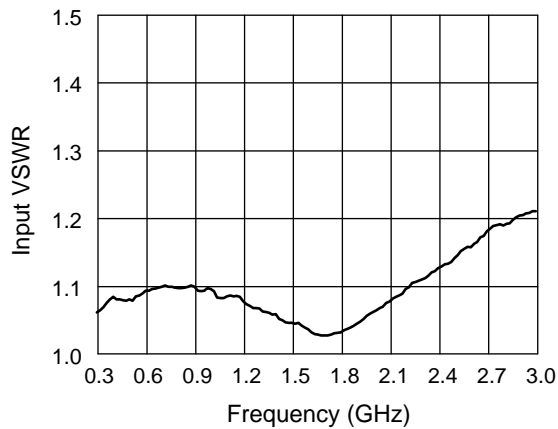
**Output VSWR vs. Frequency**



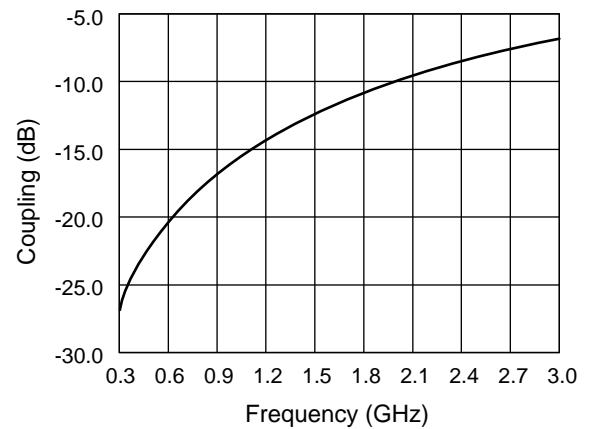
**Isolation vs. Frequency**



**Coupled Port VSWR vs. Frequency**



**Input VSWR vs. Frequency**



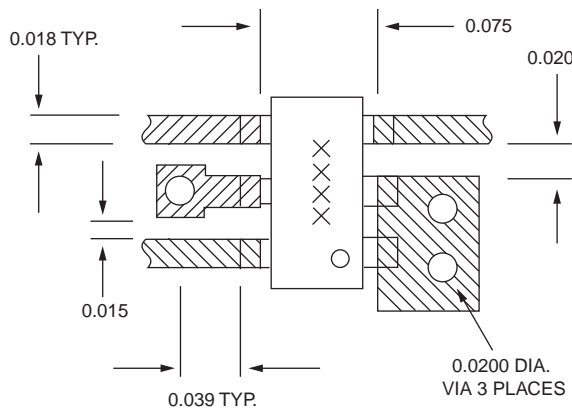
**Coupling vs. Frequency**

**Absolute Maximum Ratings**

| Characteristic          | Value           |
|-------------------------|-----------------|
| Input Power             | +4 W            |
| Operating Temperature   | -40°C to +85°C  |
| Storage Temperature     | -65°C to +150°C |
| Electrostatic Discharge | +125 V          |

Note: Exceeding these parameters may cause irreversible damage.

**Recommended Board Layout**



Material is 10 mil FR4.

**SOT-6**

