



### CDS-E 6GHz Directional Coupler Series with N-Female Connector

Broadband Directional Coupler for Wireless & Indoor Application, Support 555-6000MHz with various coupling value from 5dB to 30dB

#### PRODUCT DESCRIPTION

RFS' CDSE series of Directional Couplers have been designed for a variety of wireless applications in the frequency band from 555 to 6000MHz. The units couple off a defined fraction of a RF signal from 5 to 30 dB (depending on the model number) with minimal reflections or loss. The broad frequency range is ideally suited for multi-band distributed antenna systems or in combination with RADIAFLEX® radiating cables.



#### FEATURES / BENEFITS

- Broadband 555MHz-6000MHz
- N Female Interface
- PIM Optimized Design (160dBc @2x43dBm)
- Low Insertion Loss
- High Power Handling
- Small Size, Low Weight

#### TECHNICAL FEATURES

##### ELECTRICAL SPECIFICATIONS

|                   |     |  |
|-------------------|-----|--|
| Frequency Range   | MHz | 555-6000   |
| VSWR              |     | 1.20:1@555-2700MHz, 1.25:1@2700-3800MHz, 1.30:1@3800-6000MHz |
| Power Rating      | W   | 300  |
| PIM 3rd @2*43 dBm | dBc | 160  |
| Input Impedance   | Ohm | 50   |

##### MECHANICAL SPECIFICATIONS

|                        |         |             |
|------------------------|---------|-------------|
| Connectors             |         | N Female    |
| Number of Input Ports  |         | 1           |
| Number of Output Ports |         | 2           |
| Net Weight ±10%        | kg (lb) | 0.34 (0.75) |
| Temperature Range      | °C      | -25 to +65  |
| IP Level               |         | IP66        |
| RoHS                   |         | Compliant   |



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**MODEL NUMBER SPECIFICATIONS**

| Model Number       |         | CDS5E-555/6000  | CDS6E-555/6000  | CDS8E-555/6000                                       | CDS10E-555/6000                   |
|--------------------|---------|---|---|--|-----------------------------------|
| Coupling Loss      | dB      | 5.0   | 6.0   | 8.0  | 10.0                              |
| Coupling Tolerance | dB      | 5.0±1.15  | 6.0±1.2   | 8.0±1.2  | 10.0±1.25                         |
| Isolation          | dB      | 25@555-2700MHz<br>23@2700-3800MHz<br>21@3800-4900MHz<br>17@4900-6000MHz | 26@555-2700MHz<br>24@2700-3800MHz<br>22@3800-4900MHz<br>18@4900-6000MHz | 28@555-2700MHz<br>24@2700-4900MHz<br>22@4900-6000MHz | 30@555-2700MHz<br>26@2700-6000MHz |
| Insertion Loss     | dB      | 2.45  | 1.9   | 1.25   | 0.8                               |
| Dimensions, L*W*H  | mm (in) | 156.5*60*29.5<br>(6.16*2.36*1.16)                                       | 156.5*60*23.5<br>(6.16*2.36*0.93)                                       | 156.5*60*23.5<br>(6.16*2.36*0.93)                    | 159*62*22<br>(6.26*2.44*0.87)     |

**MODEL NUMBER SPECIFICATIONS**

| Model Number       |         | CDS13E-555/6000                                      | CDS15E-555/6000                                       | CDS20E-555/6000                   | CDS30E-555/6000                                      |
|--------------------|---------|--|---|-----------------------------------|--|
| Coupling Loss      | dB      | 13.0   | 15.0  | 20.0                              | 30   |
| Coupling Tolerance | dB      | 13.0±1.3   | 15.0±1.35   | 20.0±1.4                          | 30.0±1.55  |
| Isolation          | dB      | 33@555-2700MHz<br>30@2700-4900MHz<br>27@4900-6000MHz | 34@555-3800MHz<br>32@3800-4900MHz<br>28@ 4900-6000MHz | 38@555-4900MHz<br>32@4900-6000MHz | 46@555-2700MHz<br>43@2700-4900MHz<br>39@4900-6000MHz |
| Insertion Loss     | dB      | 0.6  | 0.5   | 0.3                               | 0.3  |
| Dimensions, L*W*H  | mm (in) | 159*62*22<br>(6.26*2.44*0.87)                        | 159*62*22<br>(6.26*2.44*0.87)                         | 159*62*22<br>(6.26*2.44*0.87)     | 159*62*22<br>(6.26*2.44*0.87)                        |

**External Document Links**

[LINK to VEX FILES](#)

**Notes**