PRODUCT DATASHEET

# CDS13E-555/6000

Broadband Directional Coupler for Wireless & Indoor Application, Support 555-6000MHz with 13dB

## 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 |



All values nominal unless tolerances provided; information contained in the present datasheet is subject to confirmation at time of ordering

## 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



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