

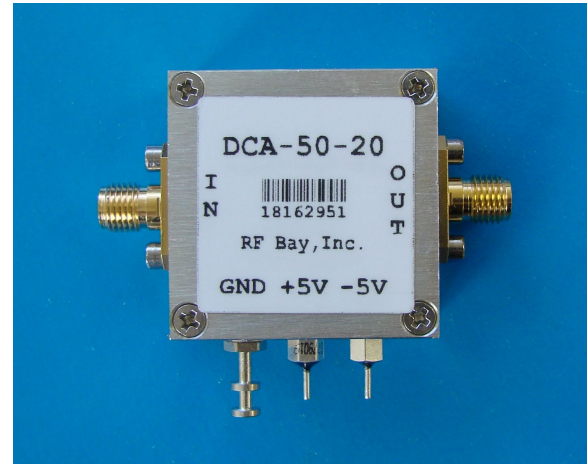
DCA 50 Ω Series

0Hz – 50MHz DC Coupled Amplifier

Features

- 1-dB Bandwidth: 50MHz
- Gain: 20dB
- P_{1dB} : +14dBm
- IP3: +25dBm
- Input/Output: 50 Ω
- DC Power: $\pm 5V$
- SMA Connector

Picture



Description

DCA-50-20 is a 50 Ω 20dB gain DC Coupled Amplifier operates with 1-dB bandwidth of 50MHz, designed for low frequency, small signal application.

Electrical Specifications @ +25 $^{\circ}C$, Z_{in} , $Z_{out} = 50 \Omega$, $V_{supply} = \pm 5V$

| Parameter | Unit | Minimum | Typical | Maximum |
|---|-----------------|-----------|----------|-----------|
| Frequency Range (-1dB) | MHz | 0 | | 50 |
| Power Gain G_{21} $f = 0Hz$ | dB | | 20.0 | |
| $f = 25MHz$ | dB | | 19.9 | |
| $f = 50MHz$ | dB | | 19.4 | |
| Voltage Gain ($RL = \infty$) $f = 0 Hz$ | | | 20 | |
| P_{1dB} $f = 100KHz$ | dBm | | +14 | |
| $f = 25MHz$ | dBm | | +14 | |
| $f = 50MHz$ | dBm | | +6 | |
| IP3 $f = 25MHz$ | dBm | | +25 | |
| Input Voltage Noise | nV/ \sqrt{Hz} | | 0.92 | |
| Reverse Isolation S_{12} | dB | | -50 | |
| Output Voltage $f = 100KHz$ $RL = \infty$ | Vp-p | | 7.4 | |
| $Pin = -5dBm$ $f = 50MHz$ $RL = \infty$ | Vp-p | | 3.6 | |
| VSWR Input VSWR S_{11} | | | 1.1:1 | |
| Output VSWR S_{22} | | | 1.1:1 | |
| DC Power Supply | V | ± 4.5 | ± 5 | ± 5.5 |
| Supply Current | mA | | ± 20 | |

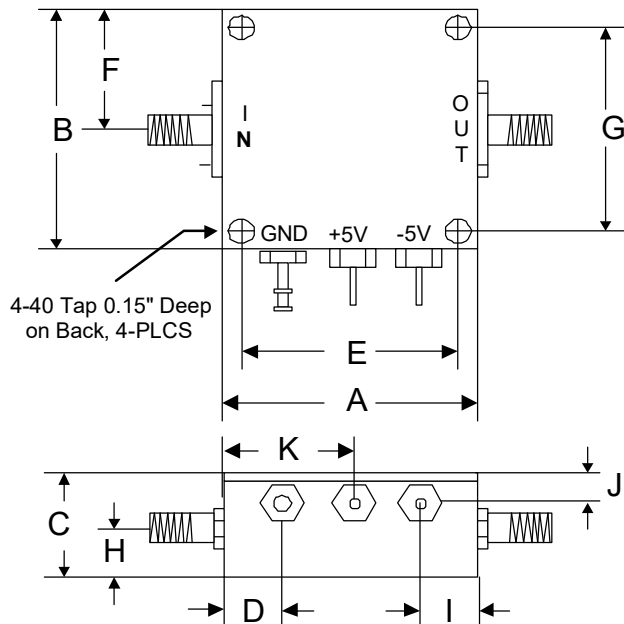
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Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|-------------------|
| RF Input Power | +13dBm |
| Input DC Voltage | ± 2V |
| Supply Voltage | ±6V |
| Operating Temperature | -40 °C to +85 °C |
| Storage Temperature | -55 °C to +125 °C |

Outline



| | A | B | C | D | E | F | G | H | I | J | K |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Inch | 1.250 | 1.250 | 0.563 | 0.325 | 1.000 | 0.625 | 1.000 | 0.250 | 0.325 | 0.187 | 0.625 |
| mm | 31.75 | 31.75 | 14.29 | 8.26 | 25.40 | 15.88 | 25.40 | 6.35 | 8.26 | 4.76 | 15.88 |