

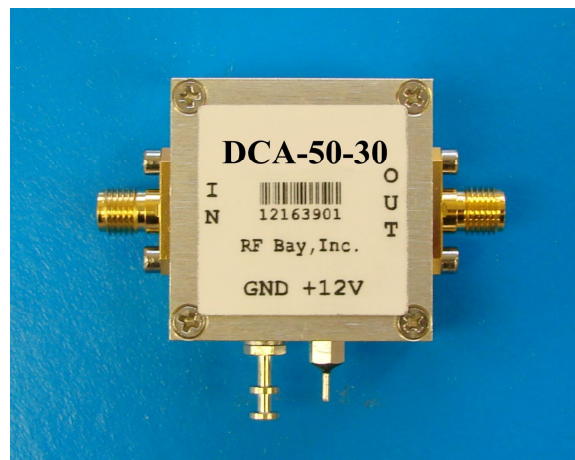
## DCA 50 $\Omega$ Series

## 0Hz – 17MHz DC Coupled Amplifier

### Features

- 3-dB Bandwidth: 17MHz
- Gain: 30dB
- $P_{1dB}$ : +14dBm
- IP3: +25dBm
- Input/Output: 50  $\Omega$
- DC Power: +12V
- SMA Connector

### Picture



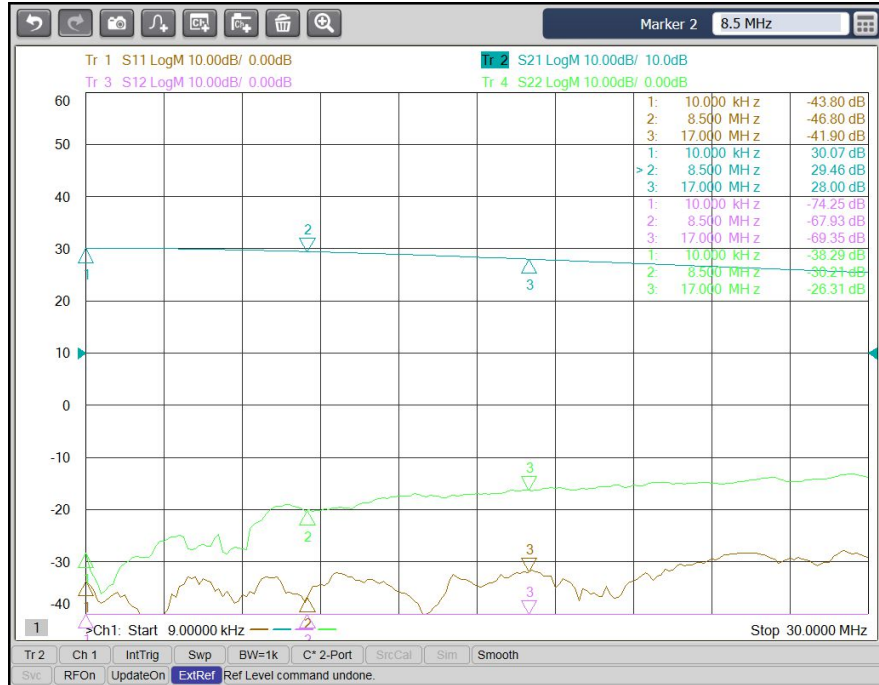
### Description

DCA-50-30 is a 50  $\Omega$  30dB gain DC Coupled Amplifier operates with 3-dB bandwidth of 17MHz, designed for low frequency, small signal application.

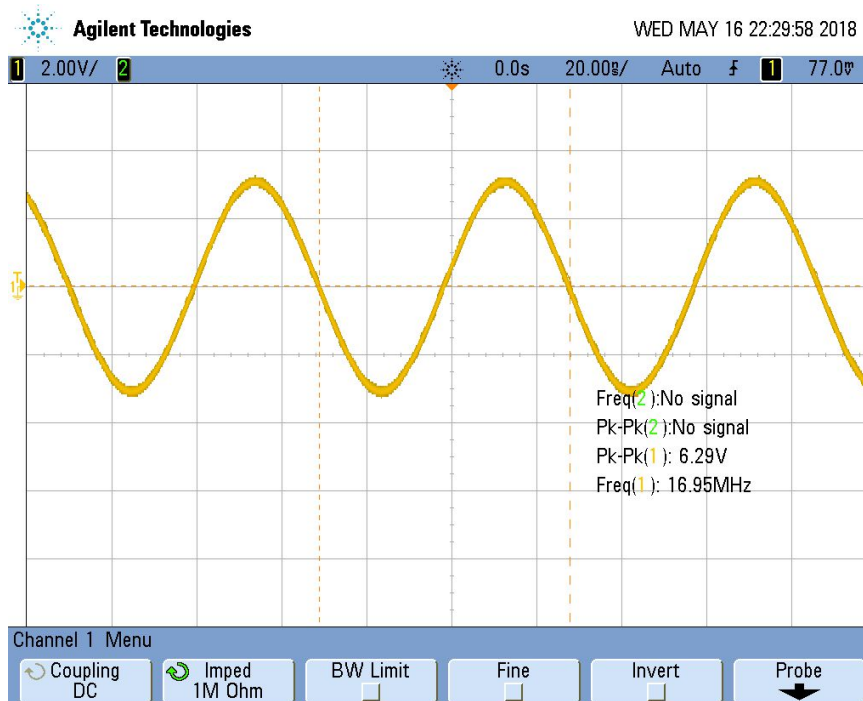
### Electrical Specifications @ +25 °C, $Z_{in}=Z_{out}=50 \Omega$ , DC Supply = +12VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range (-3dB)	MHz	0		17
Power Gain S21 f = 0Hz	dB	29.5	30	
f = 1MHz	dB	29.4	29.9	
f = 17MHz	dB	26.8	27.3	
Gain Flatness	dB		$\pm 1.5$	$\pm 1.7$
Voltage Gain ( $R_L=\infty$ ) f = 0 Hz		60	64	
$P_{1dB}$ f = 100KHz	dBm	+12	+14	
f = 17MHz	dBm	+12	+14	
IP3 f = 17MHz	dBm	+23	+25	
Noise Figure	dB		16	18
Reverse Isolation S12	dB	-60	-65	
Output Voltage f = 100KHz $R_L=\infty$	Vp-p	7.0	8.0	
Pin= -15dBm f = 17MHz $R_L=\infty$	Vp-p	5.0	6.0	
Input VSWR S11			1.1:1	1.2:1
Output VSWR S22			1.1:1	1.2:1
DC Power Supply	V	8	12	15
Supply Current	mA		45	60

**Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency**



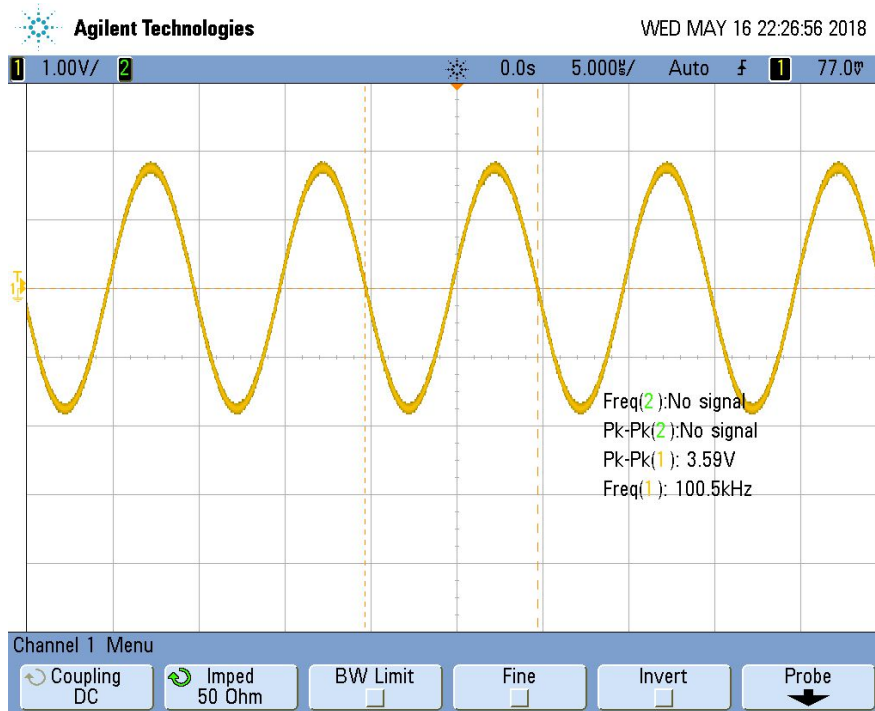
**Output Waveform at 17MHz Pin=-15dBm, RL= High Z**



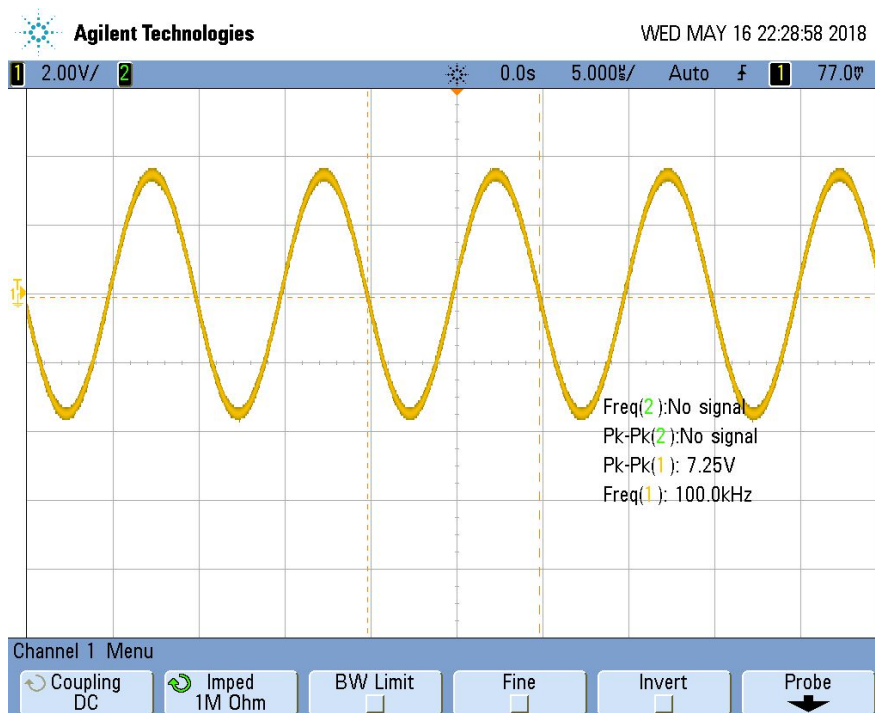
**DCA 50 Ω Series**

**0Hz – 17MHz DC Coupled Amplifier**

**Output Waveform at 100KHz Pin=-15dBm, RL= 50 Ohm**



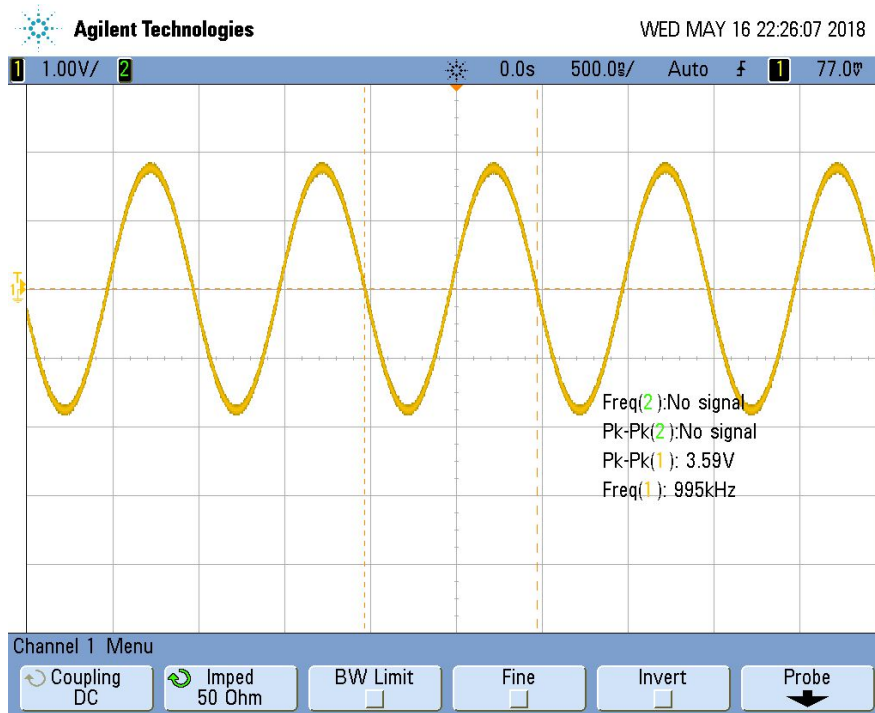
**Output Waveform at 100KHz Pin=-15dBm, RL= High Z**



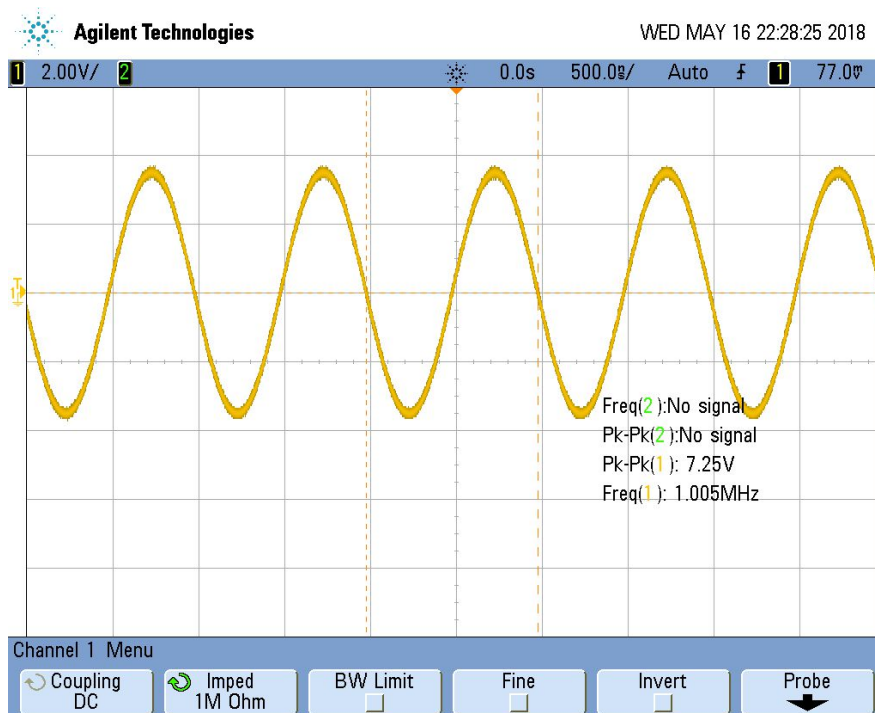
## DCA 50 $\Omega$ Series

## 0Hz – 17MHz DC Coupled Amplifier

### Output Waveform at 1MHz Pin=-15dBm, RL= 50 Ohm



### Output Waveform at 1MHz Pin=-15dBm, RL= High Z



## DCA 50 Ω Series

## 0Hz – 17MHz DC Coupled Amplifier

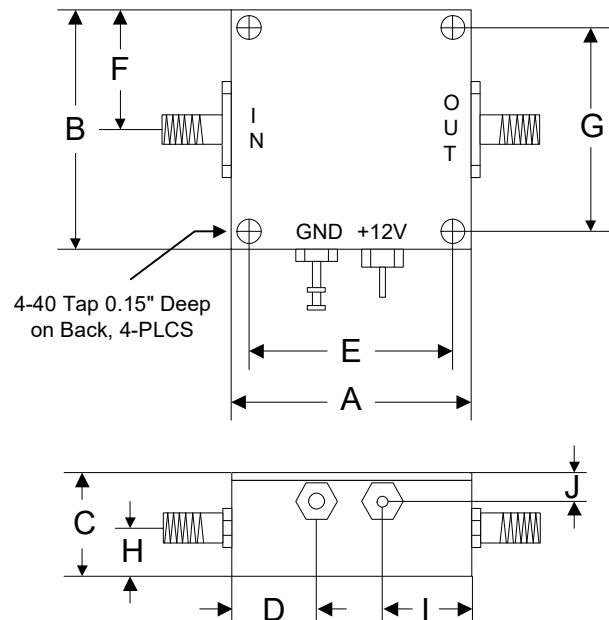
### Absolute Maximum Ratings

Parameter	Absolute Maximum
DC Supply Voltage	+20V
Input DC Voltage	± 2V
RF Input Power	+13dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

### ESD Sensitive Material



### Outline



	A	B	C	D	E	F	G	H	I	J
Inch	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187
mm	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76