RF BAY
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DCA-50-30

DCA 50 Ω Series — 0Hz – 17MHz DC Coupled Amplifier

Features

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

Picture

Description

DCA-50-30 is a 50 Ω 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 Ω, 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		± 1.5	± 1.7
Voltage Gain (RL=∞) 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 RL=∞	Vp-p	7.0	8.0	
Pin= -15dBm f = 17MHz RL=∞	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

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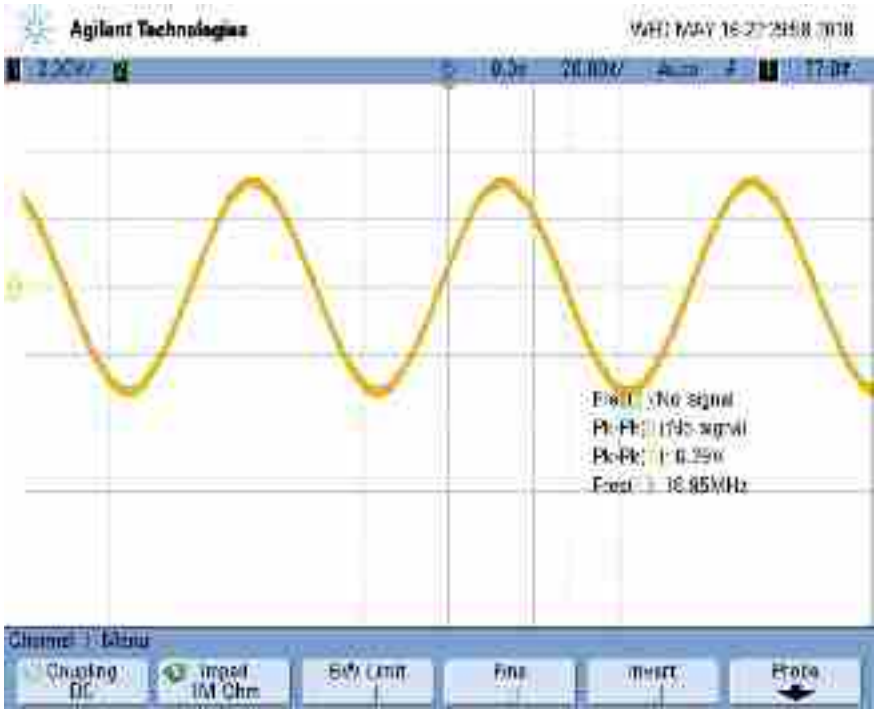
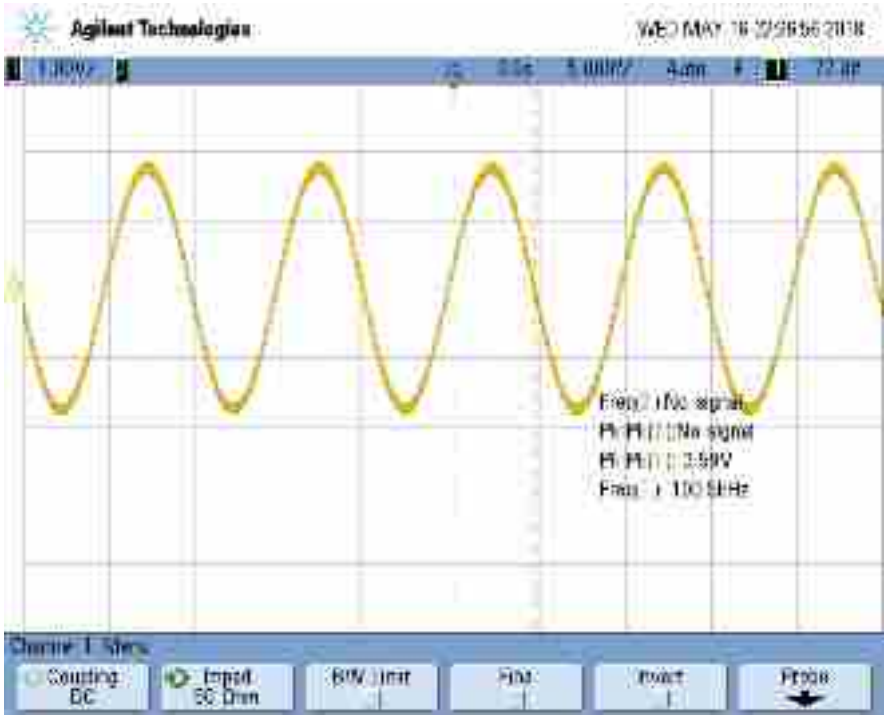
Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency

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

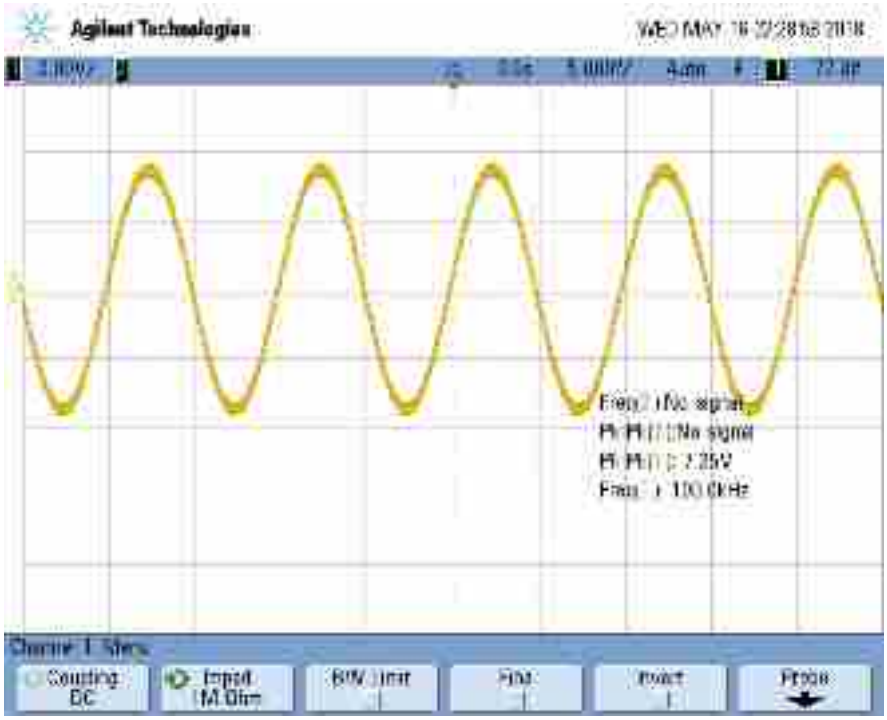


DCA 50 Ω Series — 0Hz – 17MHz DC Coupled Amplifier

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

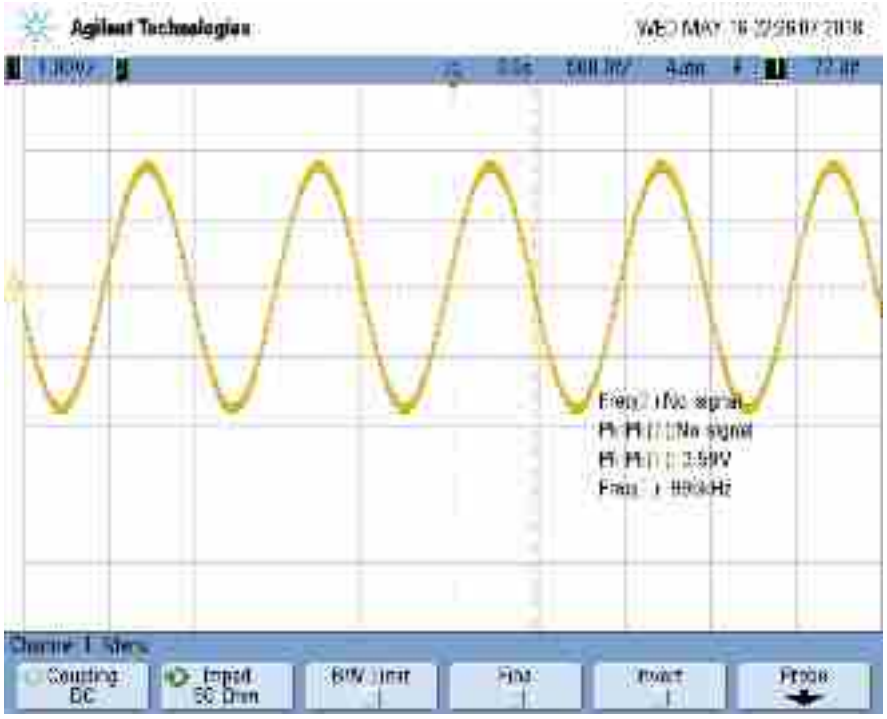


Output Waveform at 100KHz Pin=-15dBm, RL= High Z

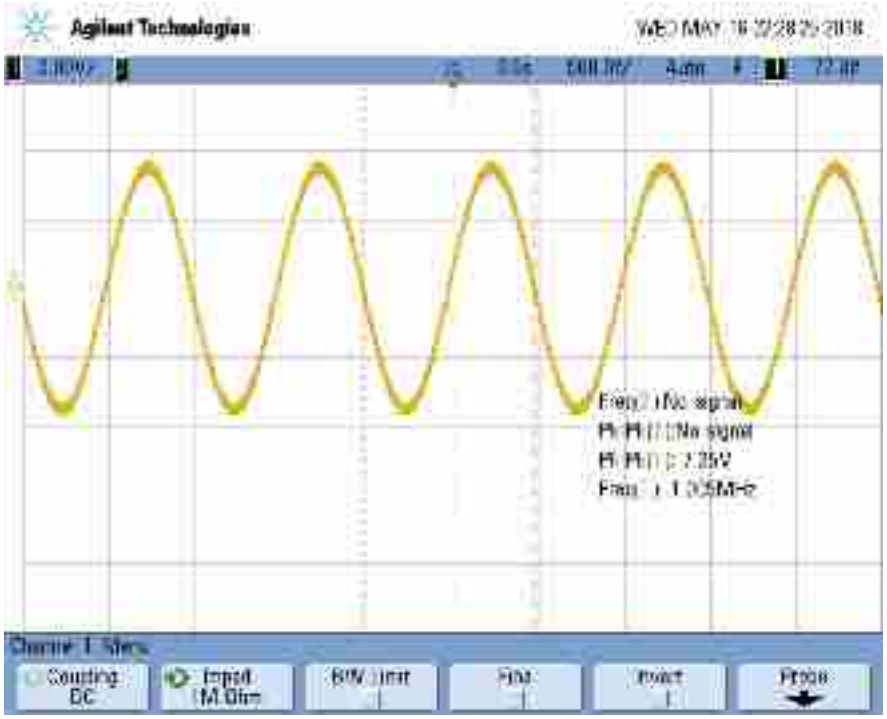


DCA 50 Ω Series 0Hz – 17MHz DC Coupled Amplifier

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



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



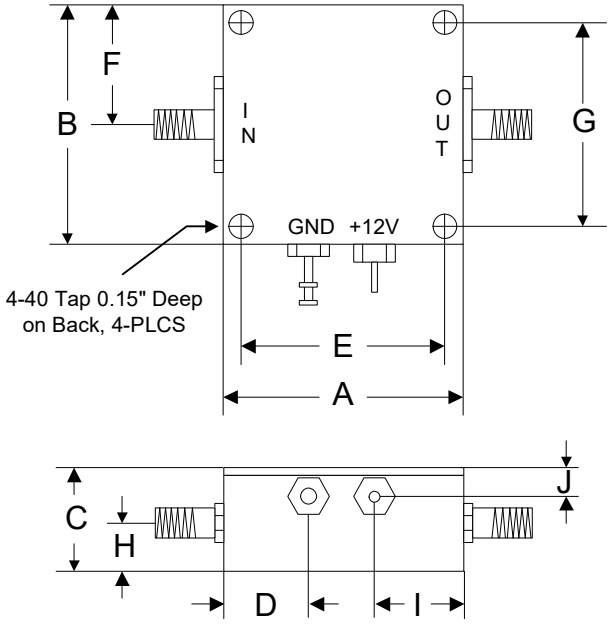
DCA 50 Ω Series — 0Hz – 17MHz DC Coupled Amplifier

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