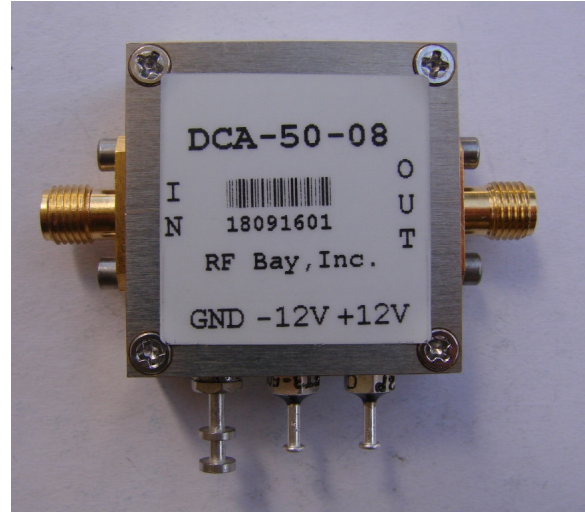


### Features

- 3-dB Bandwidth: 2000MHz
- Gain: 8dB
- P<sub>1dB</sub>: +11dBm
- IP3: +25dBm
- Input/Output: 50  $\Omega$
- DC Power: +12V/-12V
- SMA Connector

### Picture



Performance @ 500MHz

### Description

DCA-50-08 is a 50  $\Omega$  8dB gain DC Coupled Amplifier operates with 3-dB bandwidth of 2000MHz, designed for wideband signal processing application.

### Electrical Specifications @ +25 °C, Z<sub>in</sub>, Z<sub>out</sub> = 50 $\Omega$ , V<sub>cc</sub> = $\pm$ 12V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range (-3dB)	MHz	0		2000
Power Gain f = 0Hz	dB		8.0	
f = 100MHz	dB		8.0	
f = 500MHz	dB		8.0	
f = 1000MHz	dB		7.8	
f = 1500MHz	dB		7.3	
f = 2000MHz	dB		5.0	
Voltage Gain (RL= $\infty$ ) f = 0 Hz			+5	
P <sub>1dB</sub> f = 10KHz	dBm		+12.4	
f = 100MHz	dBm		+12.4	
f = 500MHz	dBm		+11.3	
f = 1000MHz	dBm		+6.5	
f = 1500MHz	dBm		+2.0	
f = 2000MHz	dBm		-2.5	
IP3 f = 100MHz	dBm		+39	

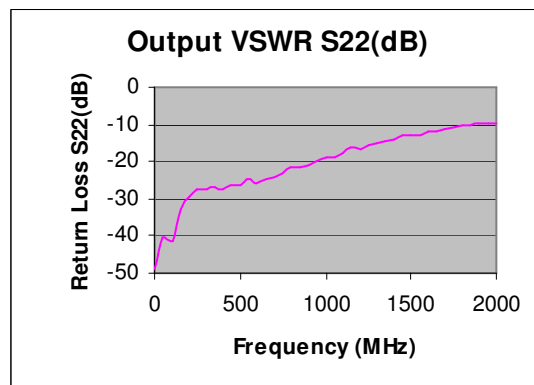
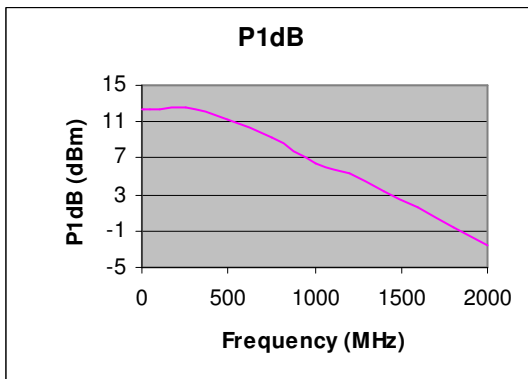
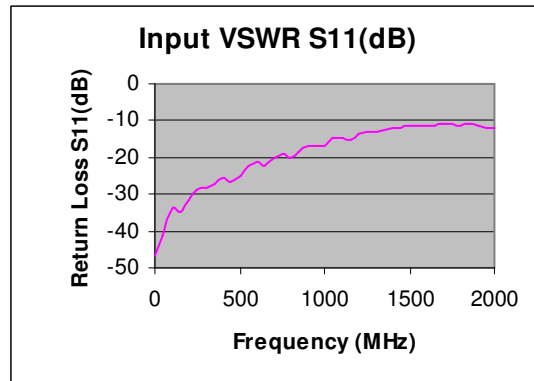
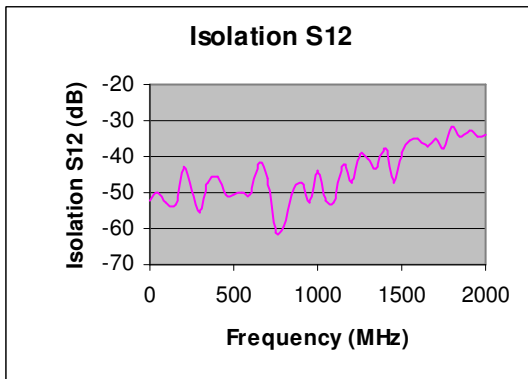
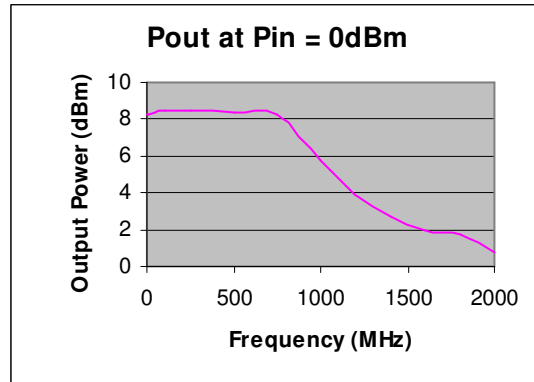
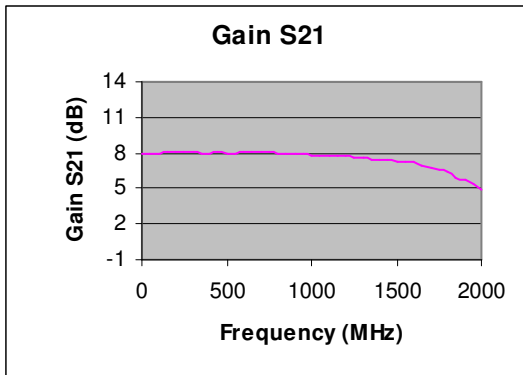
## DCA 50 $\Omega$ Series

## 0Hz – 2000MHz DC Coupled Amplifier

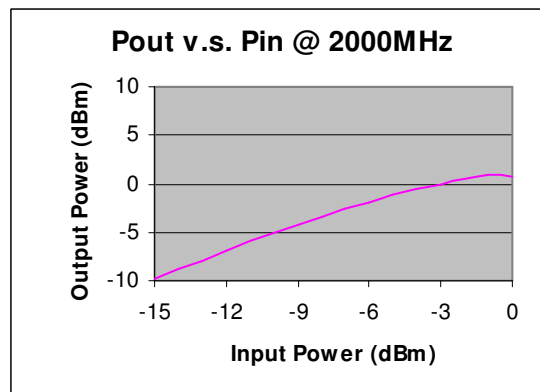
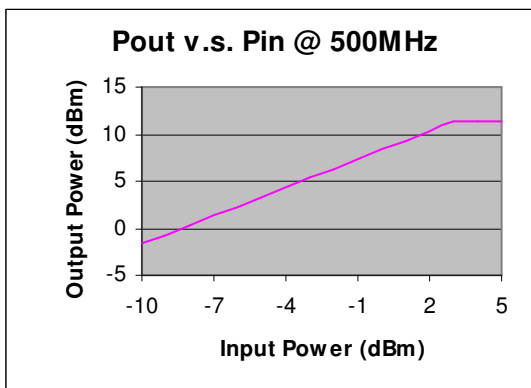
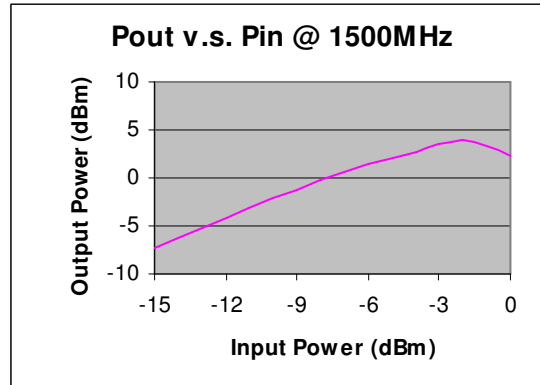
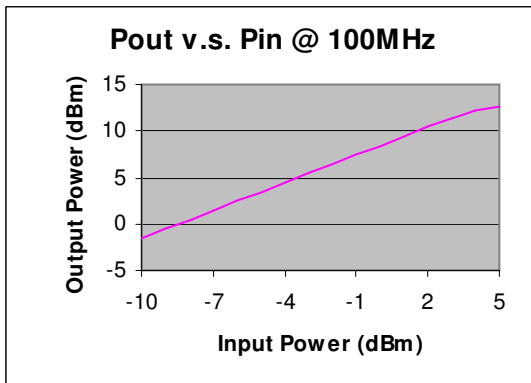
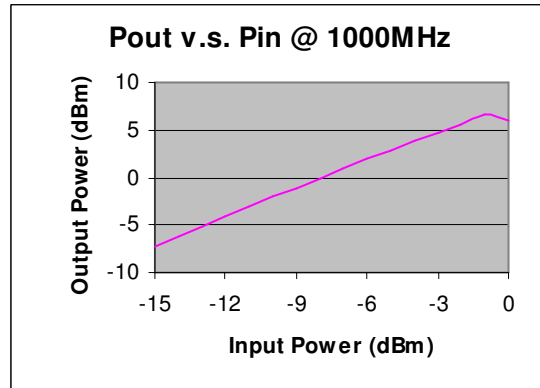
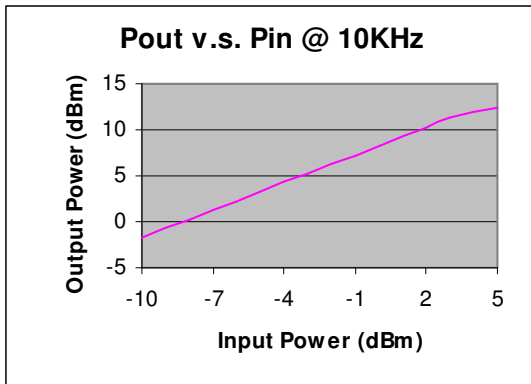
f = 300MHz	dBm		+32	
f = 500MHz	dBm		+27	
Slew Rate Vout = 1.5V Step	$\mu$ s/V		5500	
Output Voltage Swing f = 100MHz	Vp-p		1.6	
f = 500MHz	Vp-p		1.5	
Output Current f = 100MHz	mA		$\pm$ 16	
Output Voltage* Pin= 0dBm				
f = 100KHz RL= $\infty$	Vp-p		3.3	
f = 100MHz RL= $\infty$	Vp-p		2.9	
f = 500MHz RL= $\infty$	Vp-p		1.7	
Second Harmonic Distortion	dBc		-66	
Third Harmonic Distortion	dBc		-81	
Third Order Intermodulation IMD3	dBc		-73	
Reserve Isolation	dB		-50	
Input Offset Voltage	mV		2.0	
Average Offset Voltage Drift	$\mu$ V/ $^{\circ}$ C		$\pm$ 20	
Input Bias Current	$\mu$ A			7
Average Bias Current Drift	nA/ $^{\circ}$ C		$\pm$ 55	
Input Voltage Noise f = 1MHz	nV/ $\sqrt$ Hz		2.5	
Noise Figure f = 100MHz	dB		16	
Setting Time	ns		0.6	
Return Loss f = 500MHz	Input		-25	
	Output		-26	
DC Power Supply	V	$\pm$ 8	$\pm$ 12	$\pm$ 18
Supply Current	mA		$\pm$ 45	
Operating Temperature	$^{\circ}$ C	-40		+85
Size	inch	1.25" x 1.25" x 0.56"		
Weight	Oz.	1.5		

\* Unit can drive high impedance or capacitive load

### Typical Performance @ +25 °C



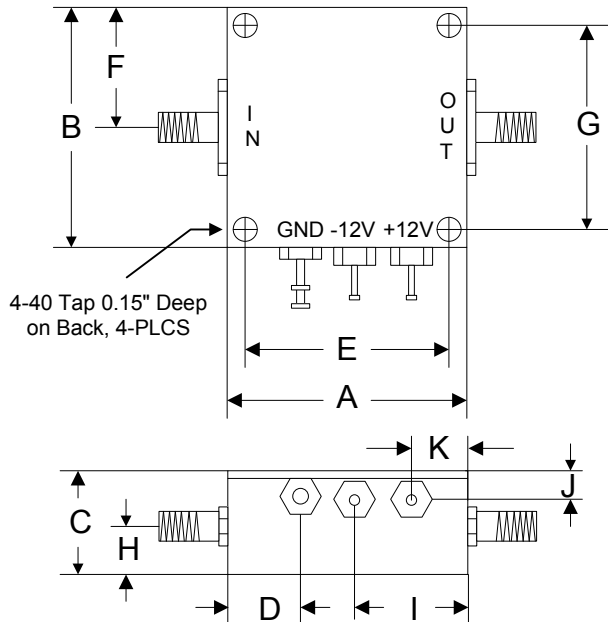
### Typical Performance @ +25 °C



### Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+13dBm
Input DC Voltage	± 3V
Supply Voltage	±20V
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	0.250	1.000	0.625	1.000	0.250	0.500	0.187	0.200
mm	31.75	31.75	14.29	6.35	25.40	15.88	25.40	6.35	12.70	4.76	5.08