- Low Offset Voltage: 50μV (Max.)
- Low Drift: 0.2μV/ºC
- Low Input Bias Current: 2nA (Max.)
- Gain Bandwidth Product: 1.5MHz
- Slew Rate: 1.0V/μs
- Wide Supply Range ±2.25V ~ ±18V
- Low Quiescent Current: 1.0mA
- Unity Gain Stable
- Input Over-Voltage Protection
- Extended Temperature Ranges
  From -40°C to +125°C
- Available

Gain Range	GR		1		10000	V/V
Gain Equation			1 + 49.4 kΩ/R_G			V/V
Gain Error	GE				±2	%
Output Voltage High	V_{OH}				$+V_S$-1.1	V
Output Voltage Low	V_{OL}		$-V_S$+1.1			V
Output Current	I_{OUT}	$V_{DROPOUT}$ < 1.2 V		±10		mA
Short-Circuit Current	I_{SC}			±24		mA
Operating Voltage Range			±2.25		±18	V
Power Supply Rejection Ratio	PSRR			120		dB
Quiescent Current / Amplifier	I_Q			1.0	1.3	mA
Gain Bandwidth Product	GBWP	C_L=100pF, R_L=10kΩ		1.5		MHz
Slew Rate	SR	C_L=100pF, R_L=10kΩ, Av=1		1.0		V/μs
Voltage Noise Density	e_n	f=1kHz		8.0		nV/ √ Hz

The COS620 instrumentation amplifier is a type of differential amplifier that has been outfitted with input protection circuit and input buffer amplifiers, which eliminate the need for input impedance matching and make the amplifier particularly suitable for use in measurement and test equipment. Additional characteristics of the COS620 include a very low DC offset, low drift, low noise, very high open-loop gain, very high common-mode rejection ratio, and very high input impedances.

COS620 measures small differential voltage with high common-mode voltage developed between the noninverting and inverting input. The ability to set the reference pin to adjust the functionality of the output signal offers additional flexibility that is practical for multiple configurations.

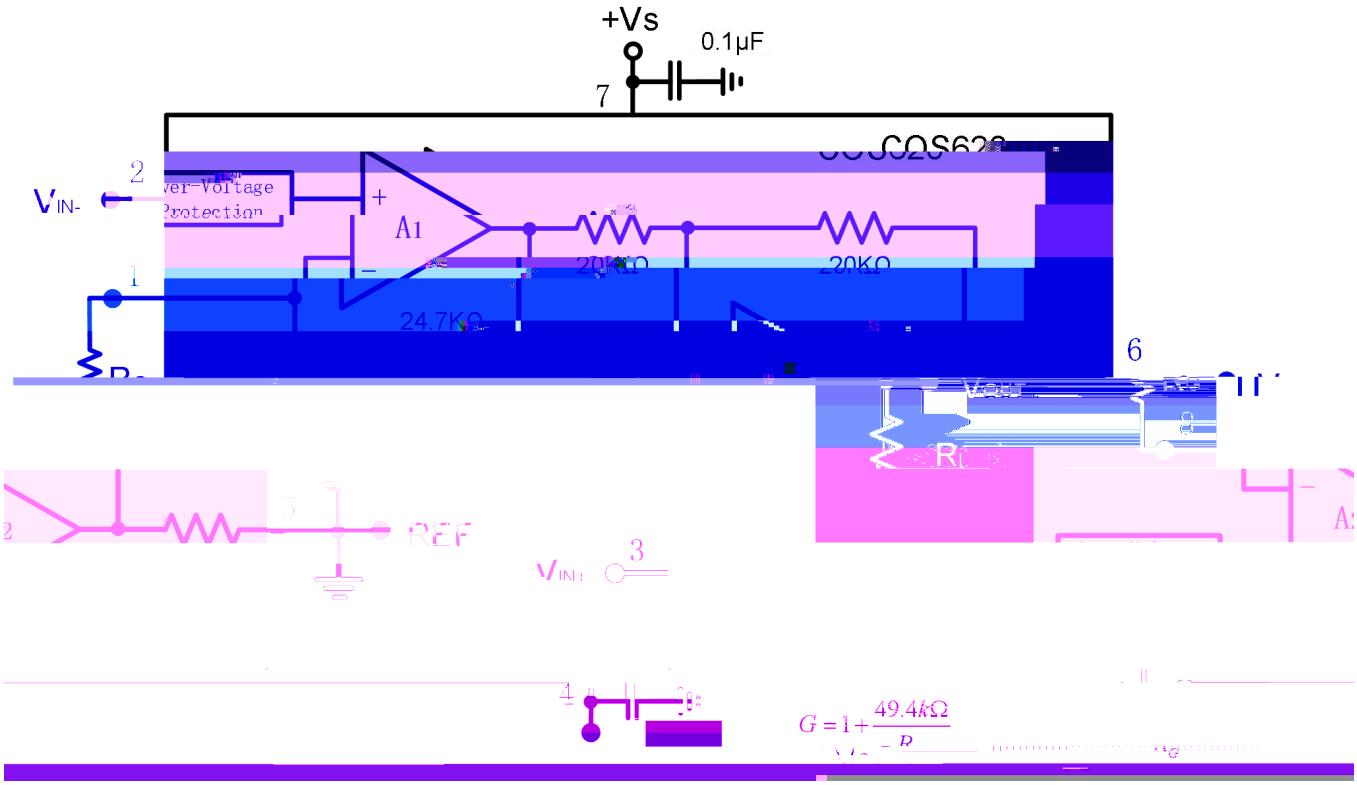
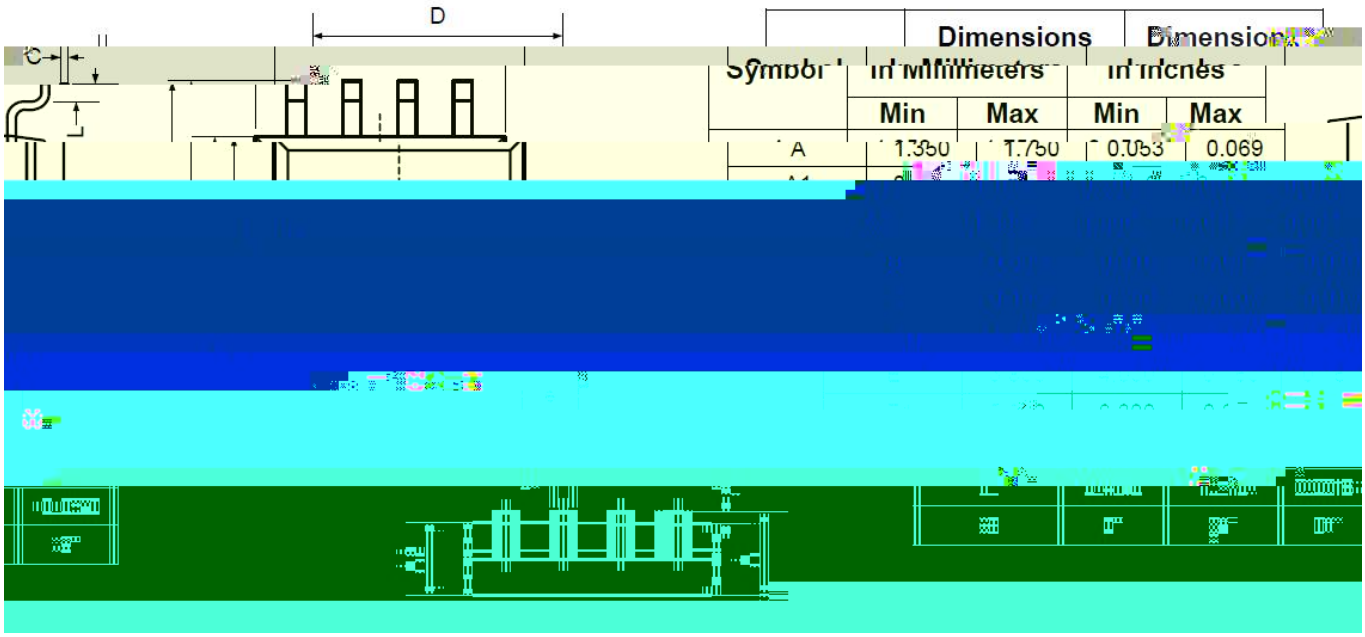
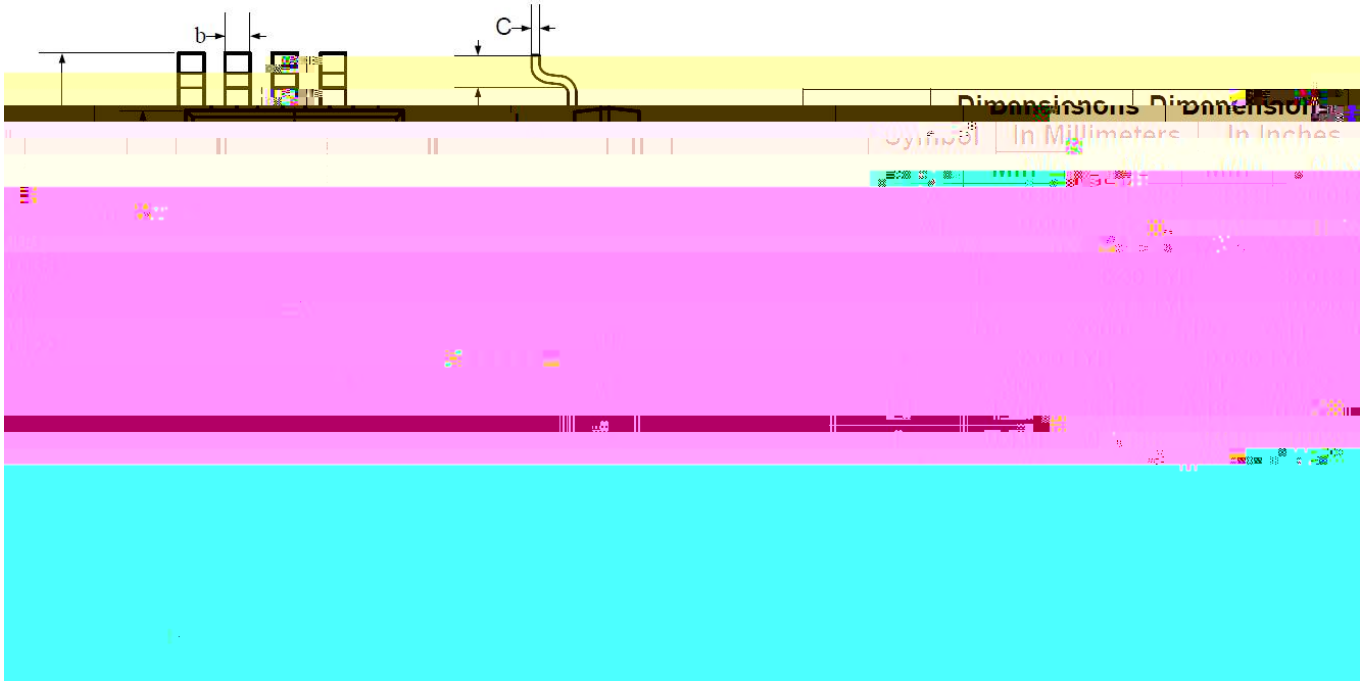


Figure 3.1 Functional Block Diagram and Basic Connections

Figure 3.1 shows the basic connections required for operation of the COS620. Applications with noisy or high impedance power supplies may require decoupling capacitors close to the device pins as shown. REF pin must be a low-impedance connection to assure good common-mode rejection. A resistance of 8Ω in series with the REF pin will cause a typical device to degrade to approximately 80dB CMR. The voltage gain is set by connecting a single external resistor, R_G, connected between pins



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069



Symbol	Dimensions In Millimeters	Dimensions In Inches