Swindon Silicon Systems Ltd

SSSB220
6 GHz ÷2 Prescaler

February 2003

The SSSB220 is one of a range of very high speed low power prescalers for professional applications. The dividing elements are static D type flip flops and therefore allow operation down to DC if the drive signal is a pulse waveform with fast risetime. The output stage has a differential output and provides a direct drive into a 50 ohm load.

FEATURES

Very high operating speed
Operation down to DC with square wave input
Silicon technology for low phase noise (typically better than –140dBc/Hz at 1KHz)
3V to 5V single supply operation
Low power dissipation: 200mW (typical)
Surface mount plastic package

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	6.5V
Output Current	20mA
Storage Temperature Range	-55ºC to +125ºC
Maximum Clock Input Voltage	2.5V p-p

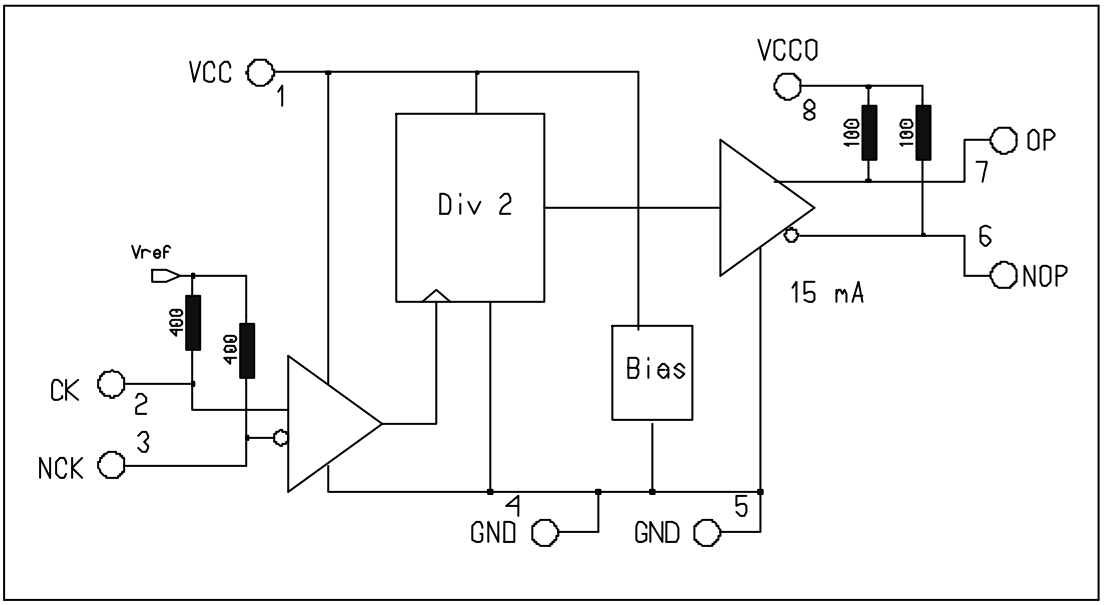

Figure 1 Block Diagram

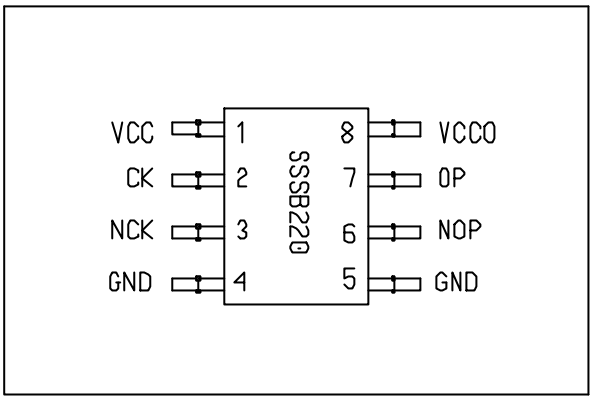

Figure 2 Pin connections – top view

Electrical Characteristics

These characteristics are guaranteed by either production test or design over the following range of operating conditions unless otherwise stated:
T_{AMB} = -40c to +85c, V_{CC} = 3.0V to 5.0V

Characteristics	Pin	Value			Units	Conditions
		Min	Typ	Max		
Supply current	1,8	-	5.0	70	mA	
Input frequency	2, 3	1.0	-	6.0	GHz	Sinewave input
Input sensitivity	2, 3	-	-	140	mVrms	
Input overload	2, 3	700	-	-	mVrms	
Output voltage	6, 7	-	0.5	-	Vp-p	Into 50Ω pullup resistor
Output power	6, 7	-5	-2	+1	dBm	

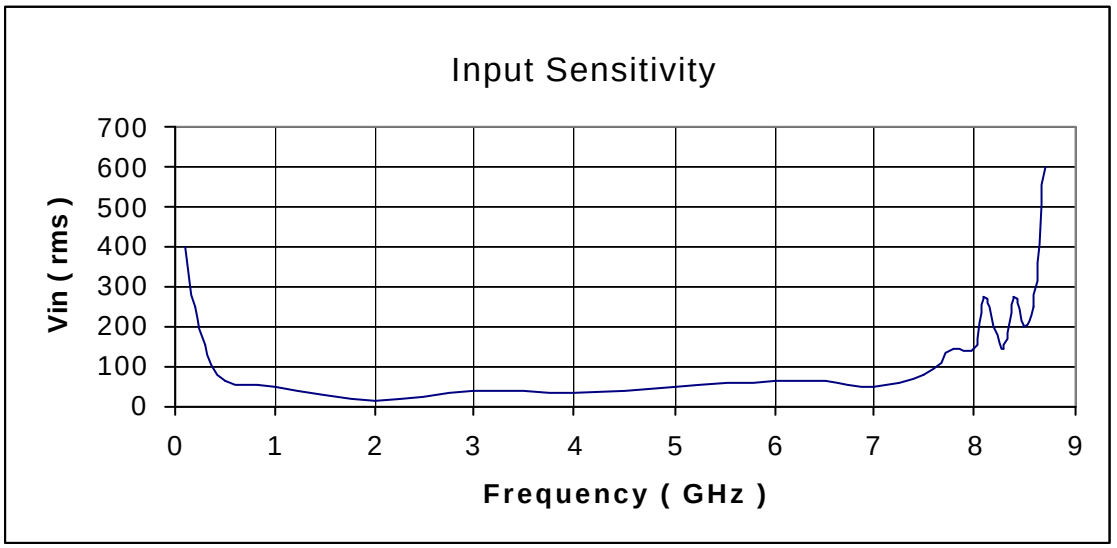

Figure 3 Typical input sensitivity (sinewave input)

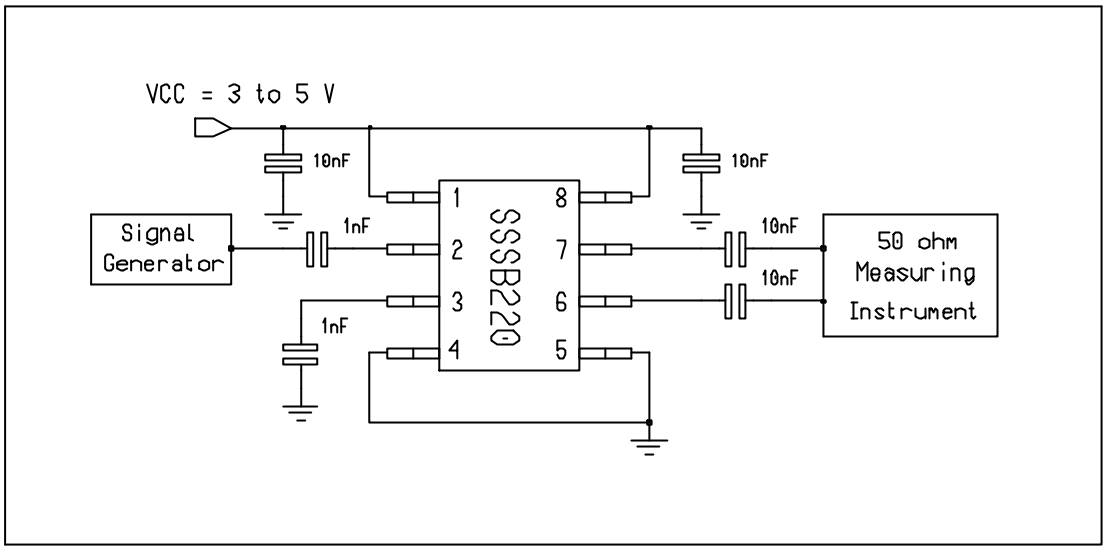

Figure 4 Typical application and test circuit

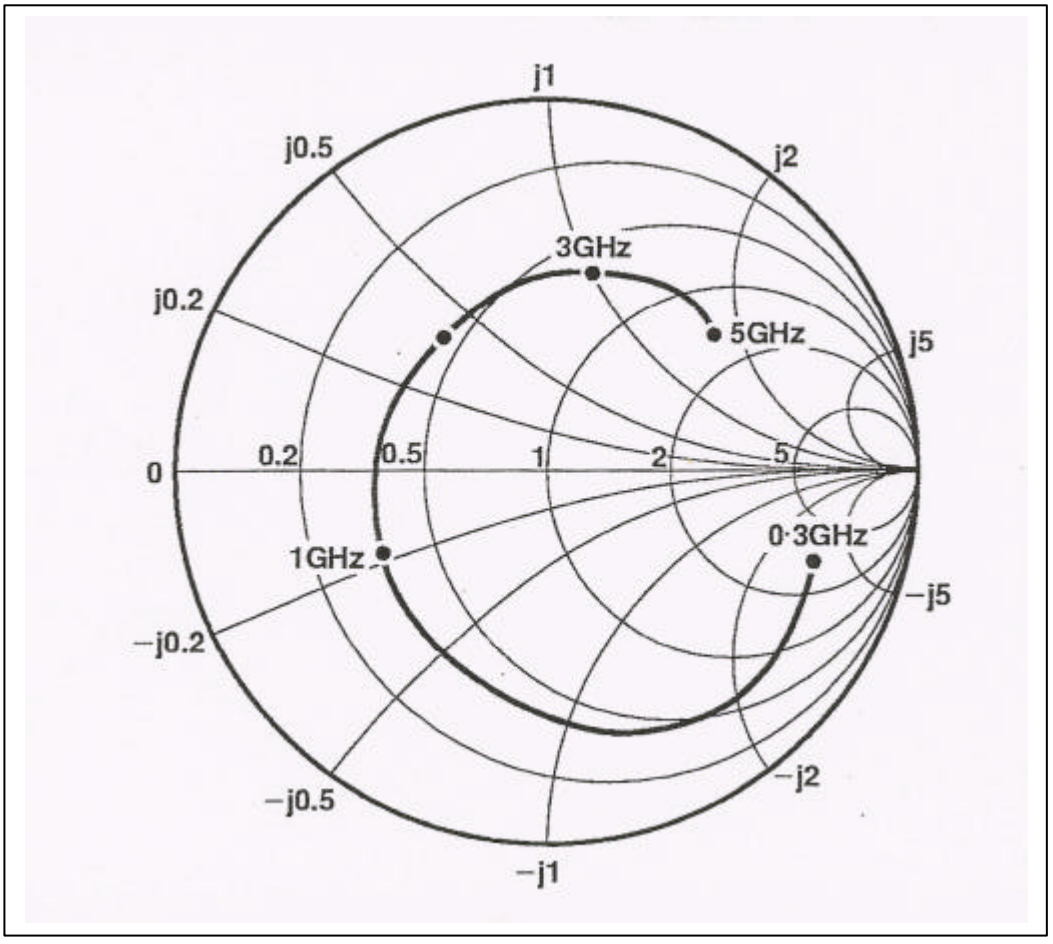

Figure 5 Typical input impedance

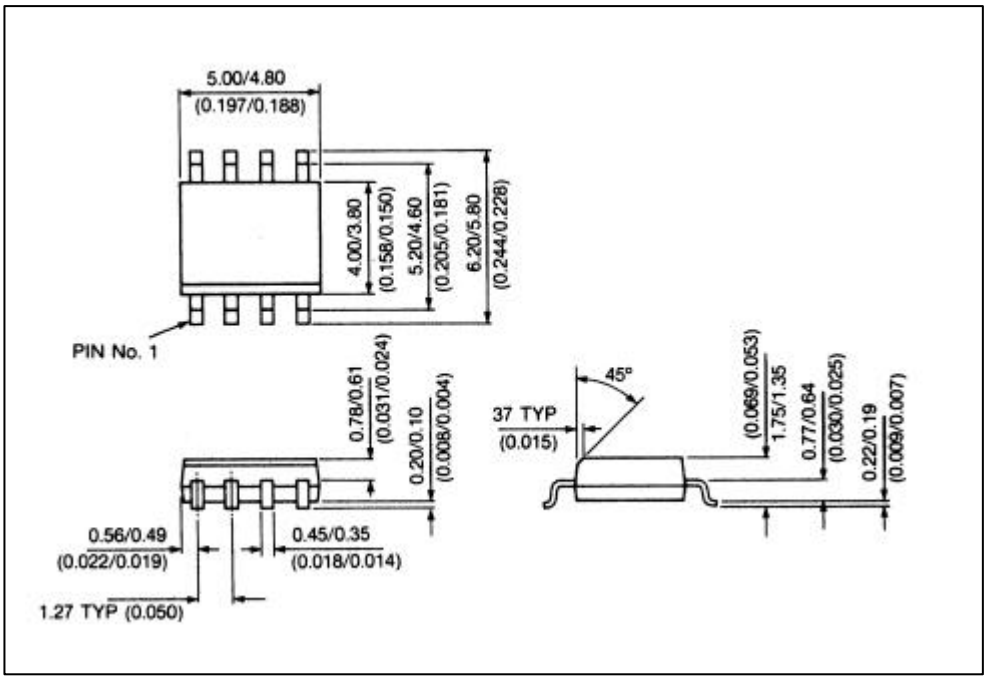

Figure 6 Package Outline – 8 pin miniature plastic SO8

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