

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 $-140\text{dBc}/\text{Hz}$ 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	-55°C to $+125^{\circ}\text{C}$
Maximum Clock Input Voltage	2.5V p-p

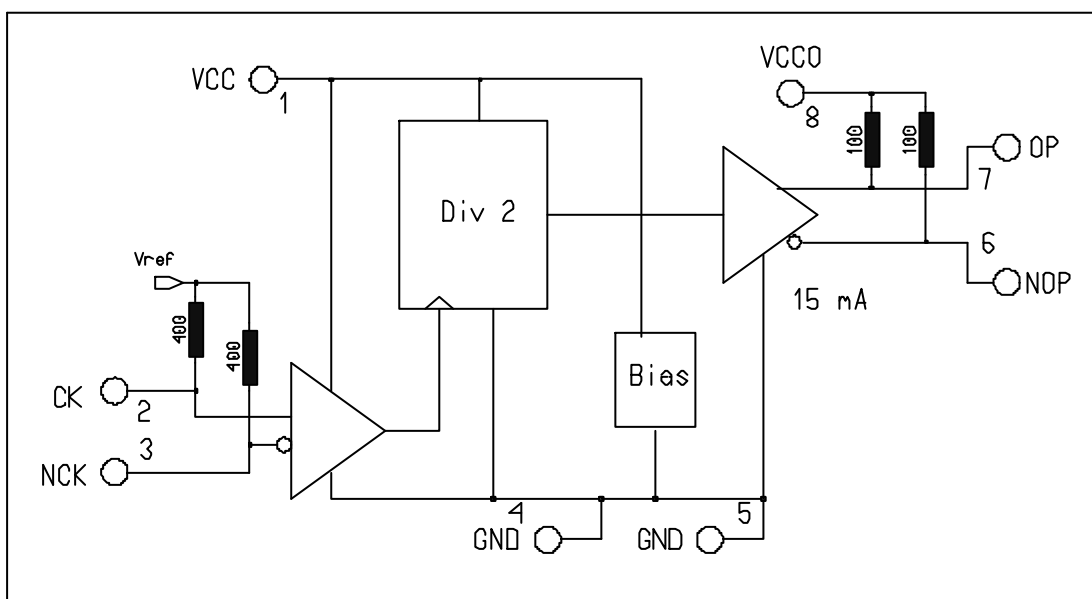


Figure 1 Block Diagram

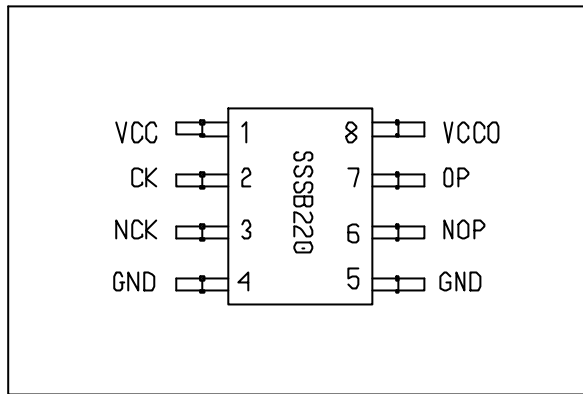


Figure 2 Pin connections – top view

Electrical Characteristics

These characteristics are guaranteed by either production test or design over the following range of operating conditions unless otherwise stated:

$T_{AMB} = -40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$, $V_{CC} = 3.0\text{V}$ 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	

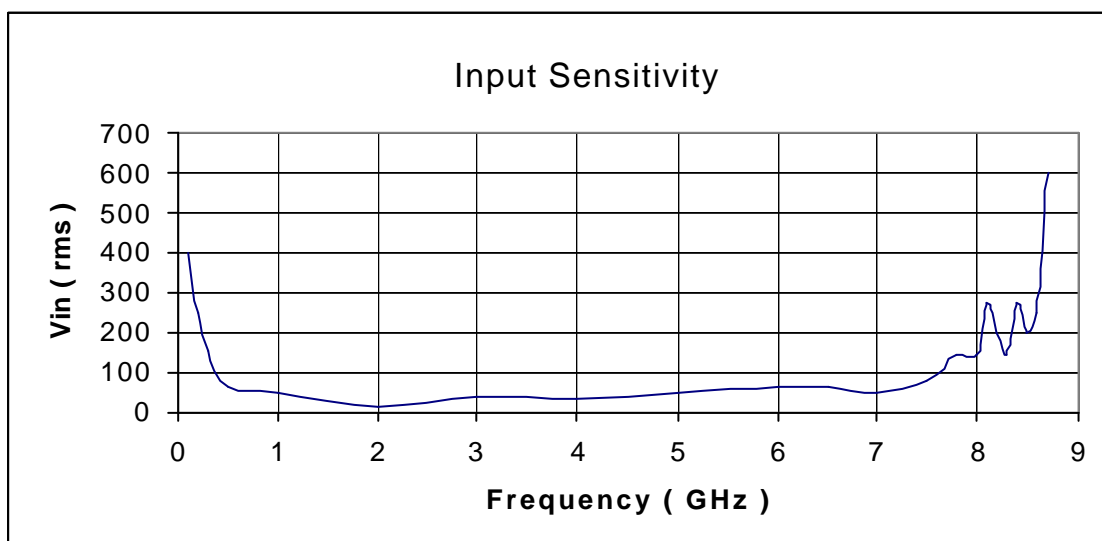


Figure 3 Typical input sensitivity (sinewave input)

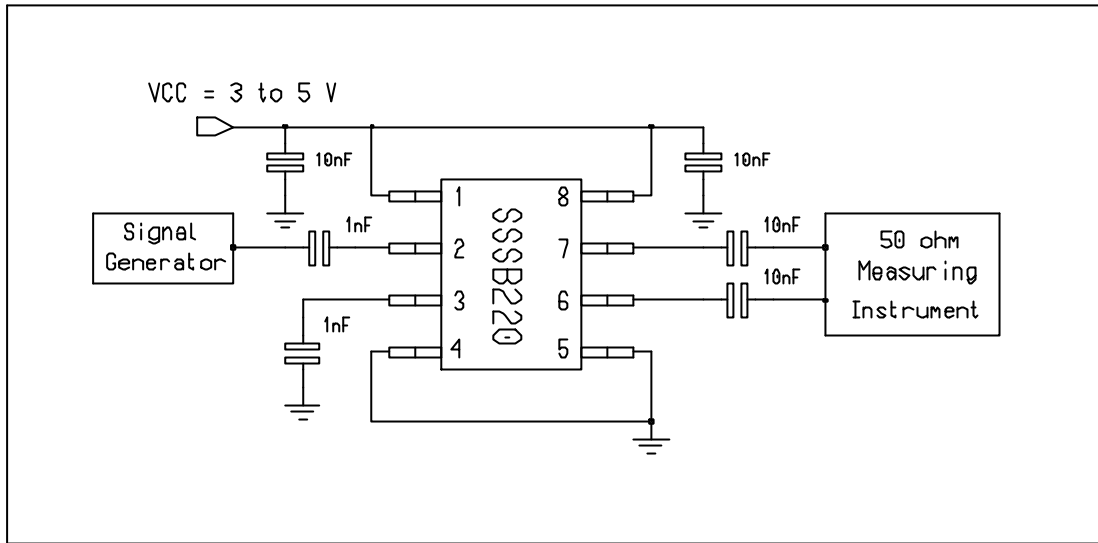


Figure 4 Typical application and test circuit

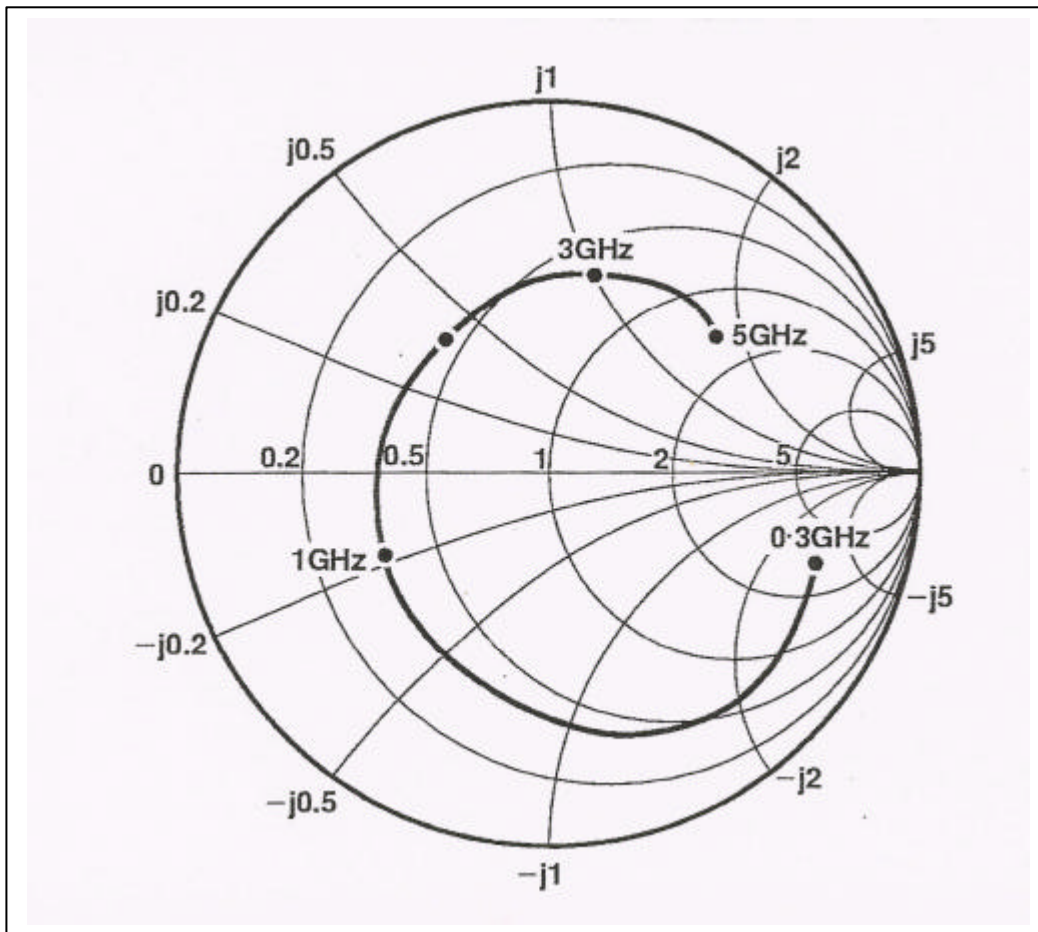


Figure 5 Typical input impedance

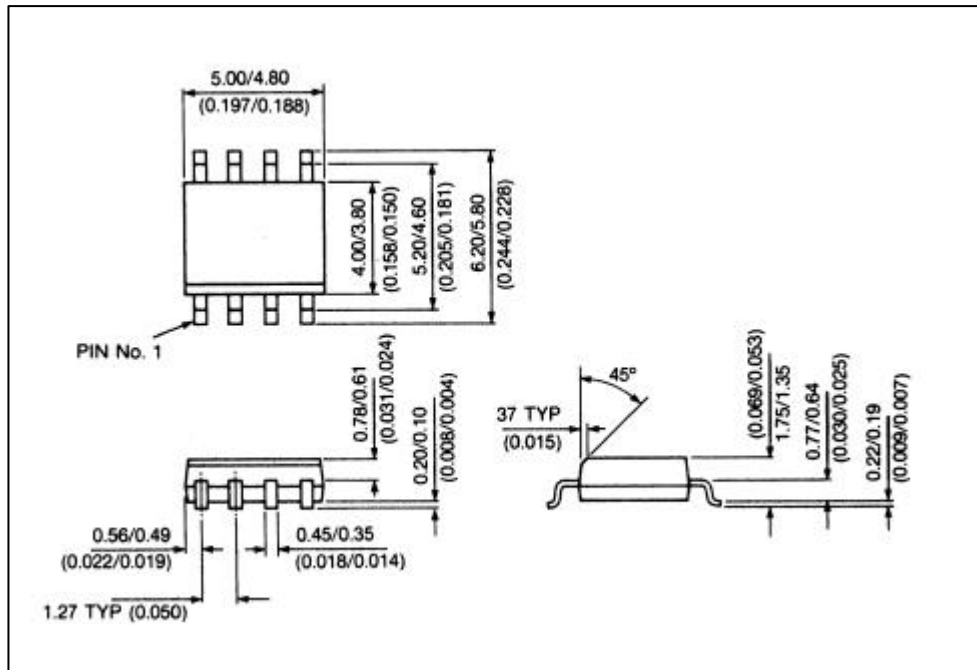


Figure 6 Package Outline – 8 pin miniature plastic SO8



Headquarters
 Swindon Silicon Systems Ltd
 Radnor Street
 Swindon SN1 3PR UK
 Tel: +44 1793 649400
 Fax: +44 1793 616215
 Email: sssl@sssl.co.uk
www.sssl.co.uk

This publication is issued to provide information only which (unless agreed by the company in writing) may not be used, applied or reproduced nor form any part of any order or contract nor to be regarded as a representation relating to the products or services concerned. No warranty or guarantee express or implied is made regarding the capability, performance or suitability of any products or service. The Company reserves the right to alter without prior notice the specification, design or price of any product or service. Information concerning possible methods of use is provided as a guide only and does not constitute any guarantee that such methods of use will be satisfactory in a specific piece of equipment. It is the user's responsibility to fully determine the performance and suitability of any equipment using such information and to ensure that any publication or data sheet is up to date and has not been superseded. These products are not suitable for use in any medical products whose failure to perform may result in significant injury or death to the user. All products and materials are sold and services provided subject to the Company's conditions of sale