

1.5GHZ ÷ 10 Prescaler Advance Information

Features

- High Speed Operation 1.5GHz
- Silicon Technology for Low Phase Noise (Typically Better Than 2140dBc / Hz at 10kHz)
- Very Low Power Dissipation: 150mW (Typ.)
- · Single 5V Supply Operation
- · High Input Sensitivity
- · Very Wide Operating Frequency Range
- Available as DESC SMD 5962 9157201MPA

Description

The SP8830 is one of a range of very high speed low power prescalers for professional and military applications. The device features a complementary output stage with on chip current sources for the emitter follower outputs.

Ordering Information
SP8830 A DG
SP8830 B DG
DES9157201/AC/DGAZ (SMD)

• Temperature Range: 255°C to 1125°C (A Grade) 240°C to 185°C (B Grade)

Absolute Maximum Ratings

Supply voltage, V_{CC} - 6.5V Clock input voltage 2.5V p-p Storage temperature range 45° C to +150°C Junction temperature + 175°C

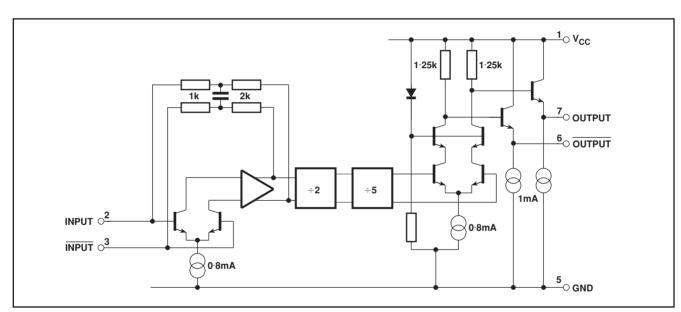


Figure 1 - SP8830 block diagram

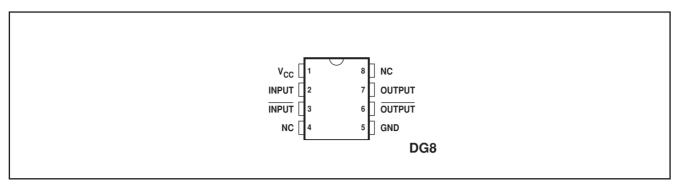


Figure 2 - Pin connections

Electrical Characteristics

Unless otherwise stated, the Electrical Characteristics are guaranteed over specified supply, frequency and temperature range

Supply voltage, V_{CC} -4·75V to +5·25V

Temperature, $T_{AMB} = -55^{\circ}C$ to $+125^{\circ}C$ (A Grade), $-40^{\circ}C$ to $+85^{\circ}C$ (B Grade)

Characteristic		Value			Units	Conditions	
		Min.	Тур.	Max.	Offics	Conditions	
Supply current, I _{CC}	1		40	50	mA		
Input sensitivity, 100MHz to 500MHz	2, 3			100	mV	RMS sinewave, measured in 50Ω system. See Figs 3 and 4.	
Input impedance (series equivalent)	2, 3		50 2		Ω pF	See Fig. 5	
Output voltage with $f_{IN} = 100MHz$ Output voltage with $f_{IN} = 1500MHz$	6, 7 6, 7	0.7	1 0·4		V p-p V p-p		

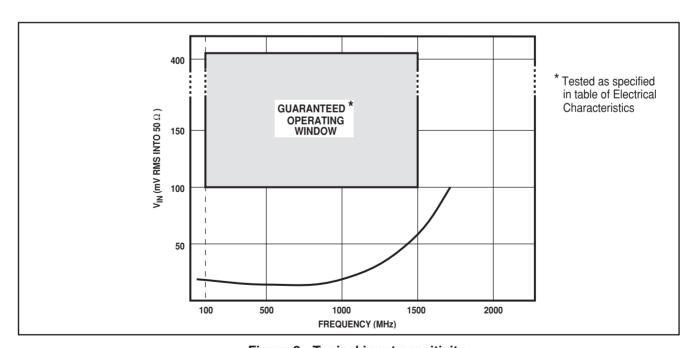


Figure 3 - Typical input sensitivity

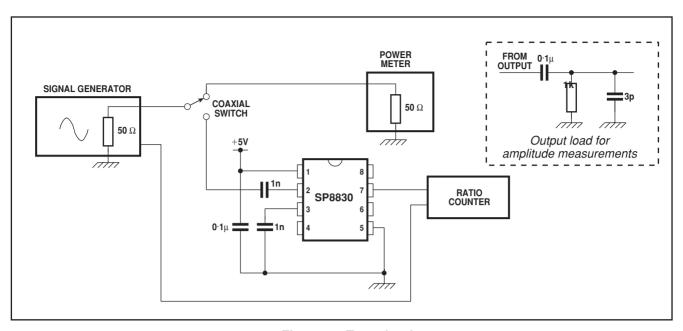


Figure 4 - Test circuit

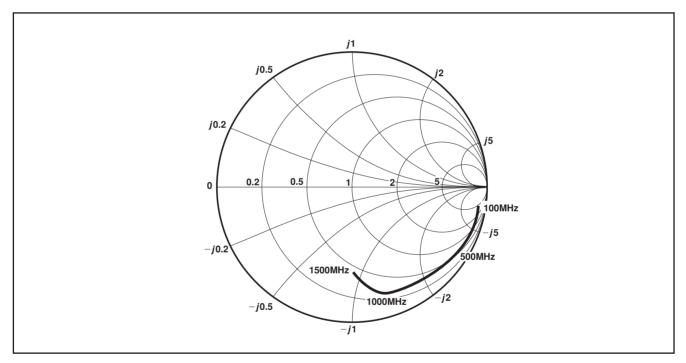
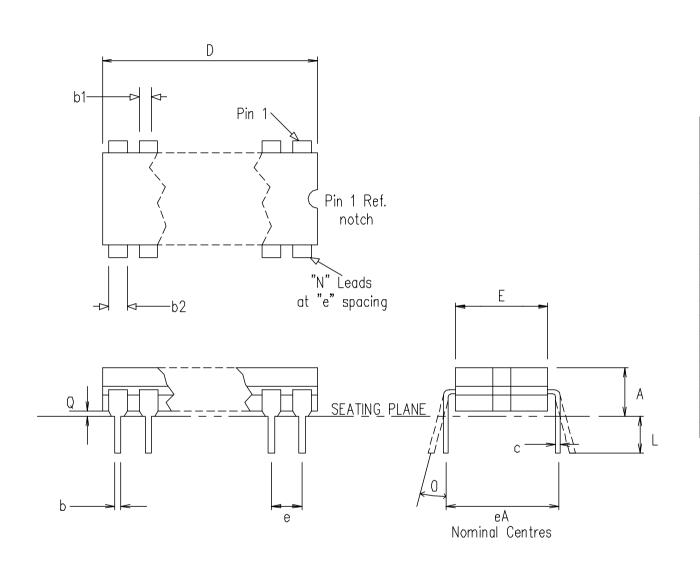


Figure 5 - Typical input impdance, normalised to 50 $\!\Omega$



Symbol		n. Dimer millimet			Control Dimensions in inches			
	MIN	Nominal	MAX		MIN	Nominal	MAX	
L	3.18		4.06		0.125		0.160	
Α			5.08				0.200	
Q	0.51				0.020			
E	5.59		7.87		0.220		0.310	
eА		7.62				0.300		
С	0.20		0.36		0.008		0.014	
D			10.29				0.405	
е		.54 BS(0.100 BSC.			
b1	1.14		1.65		0.045		0.065	
b	0.36		0.58		0.014		0.023	
b2	0.73		1.12		0.029		0.044	
0			15°				15°	
	Pin features							
N	8							
ND	4							
NE	0							
NOTE	RECTANGULAR							

This drawing supersedes 418/ED/39501/001 (Swindon)

				ORIGINATING SITE: SWINDON
ISSUE	1			Title: Outline drawing for
ACN	201728			Title: Outline drawing for 8 Lead Cerdip (DG)
DATE	20.NOV.96			Drawing Number
APPROVED				GPD002/0



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