SP8830

1.5GHZ ，10 Prescaler
Data Sheet

ZARLINK SEMICONDUCTOR

DS3690 May 2002

Features

- High speed operation 1.5GHz
- Silicon techology for low phase noise (typically better than -140dBc/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

Ordering Information

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

- Temperature Range: -55°C to +125°C (A Grade)
  -40 °C to +85°C (B Grade)

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.

Absolute Maximum Ratings

Supply voltage, V_{CC}	6.5V
Clock input voltage	2.5V p-p
Storage temperature range	-65°C to +150°C
Junction temperature	+ 175°C

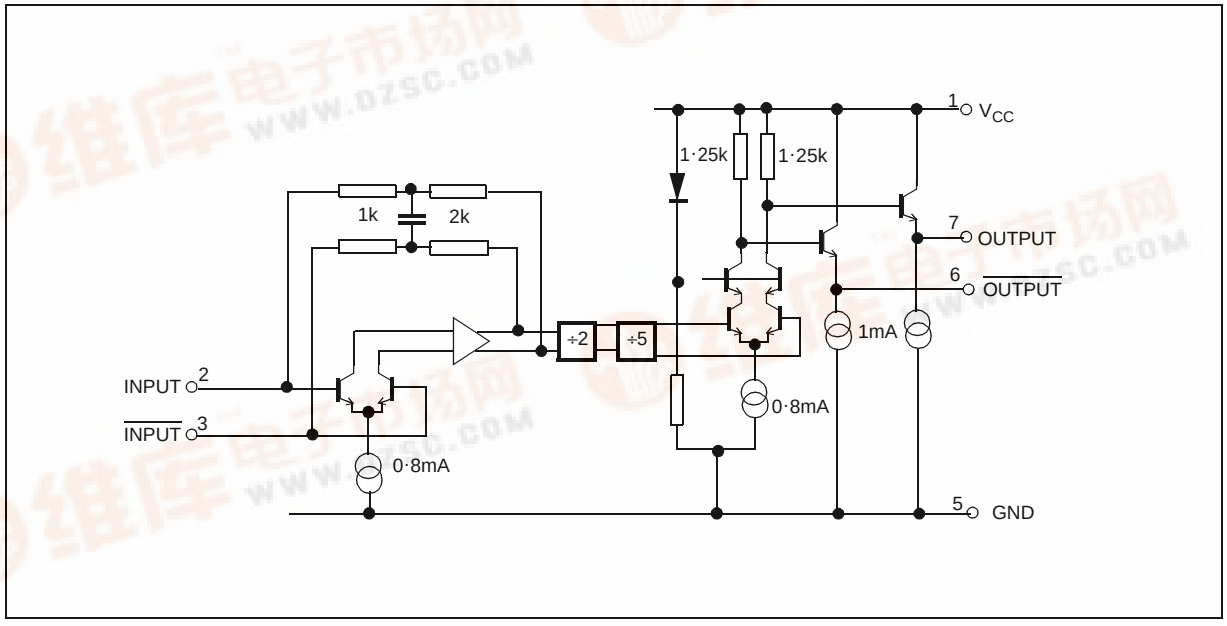


Figure 1 - SP8830 Block Diagram

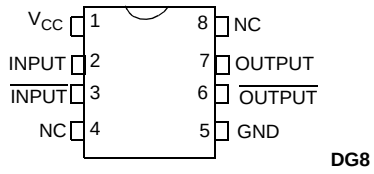


Figure 2 - Pin Connections

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°C to +125°C (A Grade), -40°C to +85°C (B Grade)

Characteristic	Pin	Value			Units	Conditions
		Min.	Typ.	Max.		
Supply current, I_{CC}	1				mA	
			40	50		
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	6, 7	0·7	1		V p-p	
Output voltage with f_{IN} = 1500MHz	6, 7		0·4		V p-p	

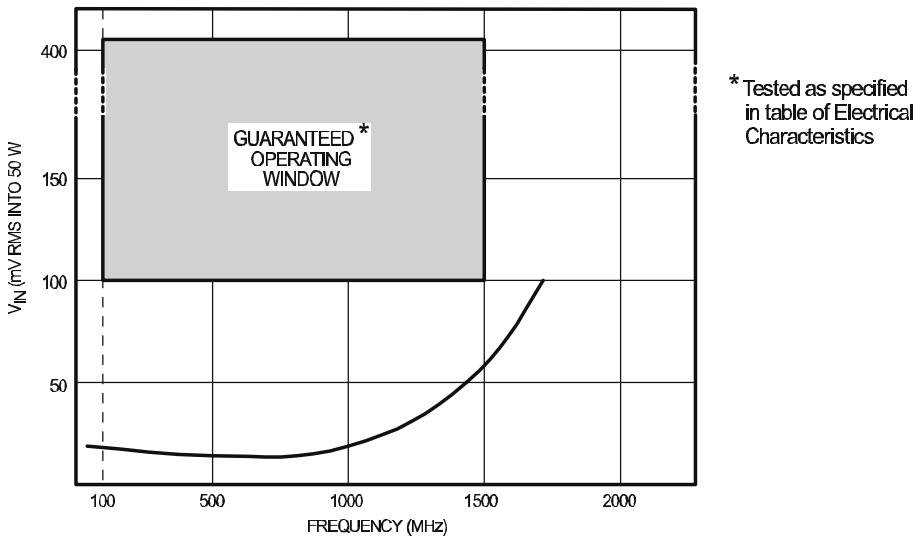


Figure 3 - Typical Input Sensitivity

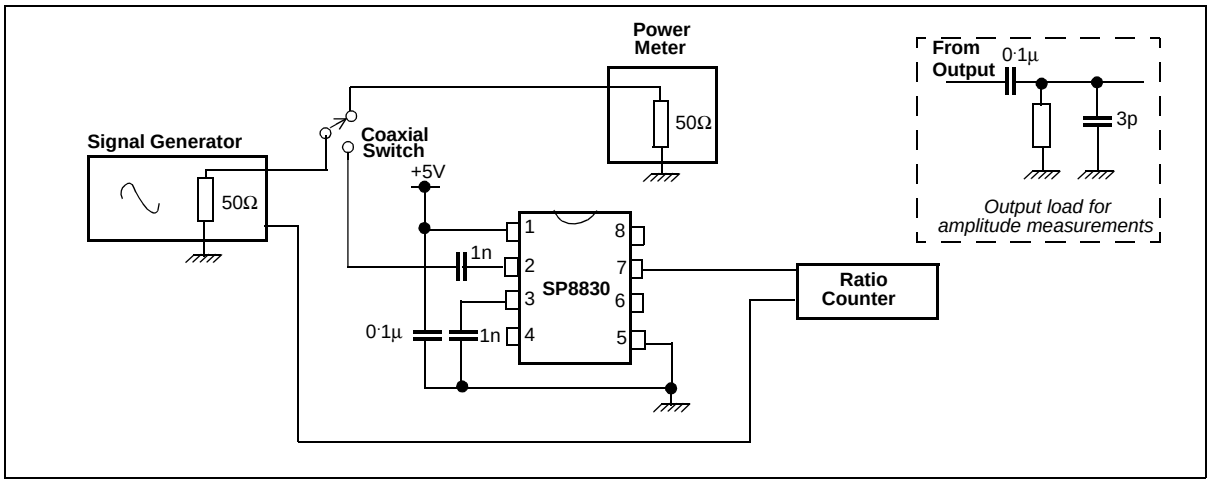


Figure 4 - Test Circuit

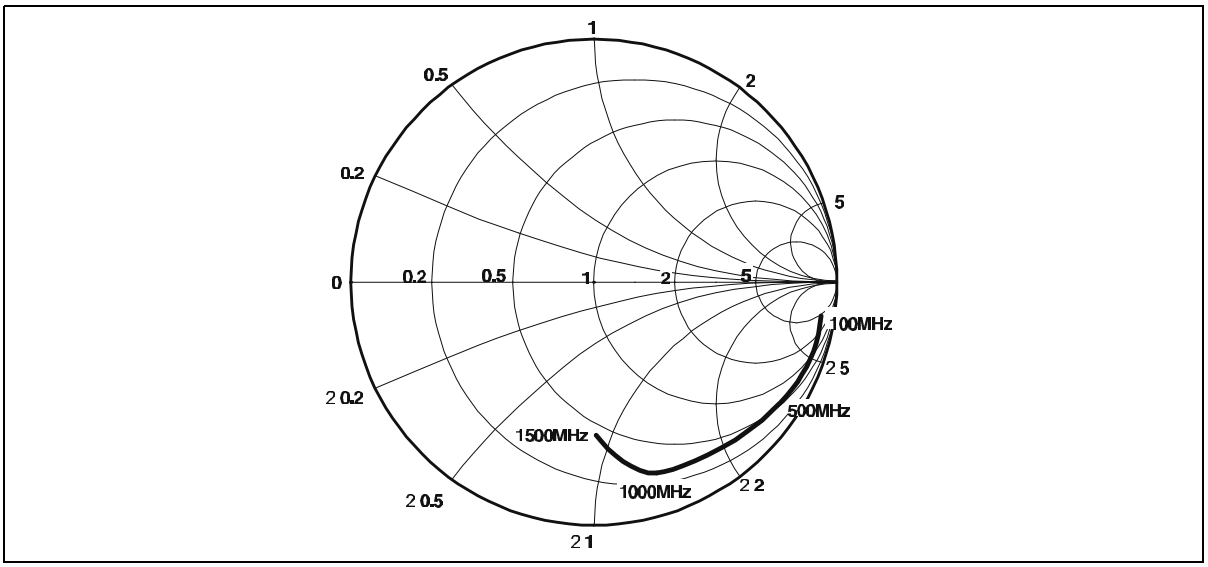
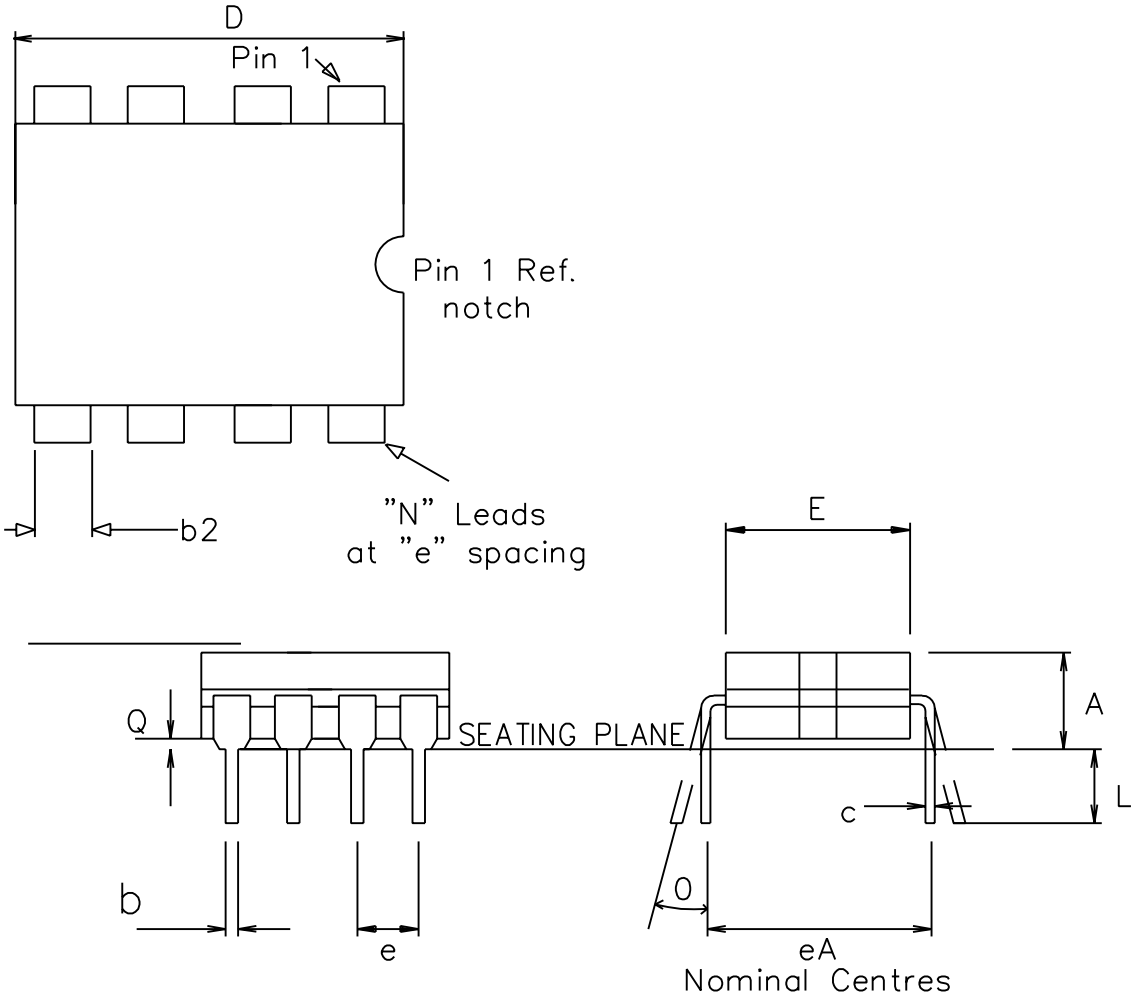


Figure 5 - Typical Input Impedance, Normalised to 50W



Symbol	Altern. Dimensions in millimetres				Control Dimensio in inches		
	MIN	Nominal	MAX		MIN	Nominal	M
L	3.18		4.06		0.125		0.
A			5.08				0.
Q	0.51				0.020		
E	5.59		7.87		0.220		0.
eA		7.62				0.300	
c	0.20		0.36		0.008		0.
D			10.29				0.
e	2.54 BSC.				0.100 BSC		
b2	1.14		1.65		0.045		0.
b	0.36		0.58		0.014		0.
θ			15°				1
	Pin features						
N	8						
ND	4						
NE	0						
NOTE	RECTANGULAR						

This drawing supersedes 418/ED/39501/001 (Swind

ISSUE	1	2		
ACN	201728	212450		
DATE	20Nov96	26Mar02		
APPRD.				

ZARLINK SEMICONDUCTOR

Previous package codes

DG / C

Package Code DH

Package Outline for 8 lead
(Glass Seal Ceramic)

GPD00270

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