

SP8824B1

1.6GHz ÷ 4 PRESCALER

(Supersedes December 1989 Edition)

The SP8824B1 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.

FEATURES

- High Speed Operation 1.6GHz
- Silicon Technology for Low Phase Noise (Typically Better than -140dBc/Hz at 10kHz)
- Very Low Power Dissipation 190mW (Typ)
- 5V Single Supply Operation
- High Input Sensitivity
- Very Wide Operating Frequency Range
- Temperature Range -40°C to +85°C

ABSOLUTE MAXIMUM RATINGS

Supply voltage V_{CC}	6.5V
Clock input voltage	2.5V p-p
Storage temperature range	-55°C to +150°C
Junction temperature	+175°C

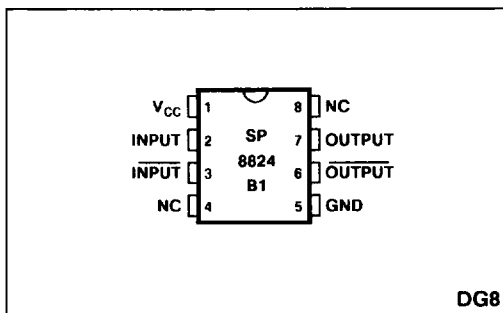


Fig 1 Pin Connections - top view

ORDERING INFORMATION

SP8824 B1 DG

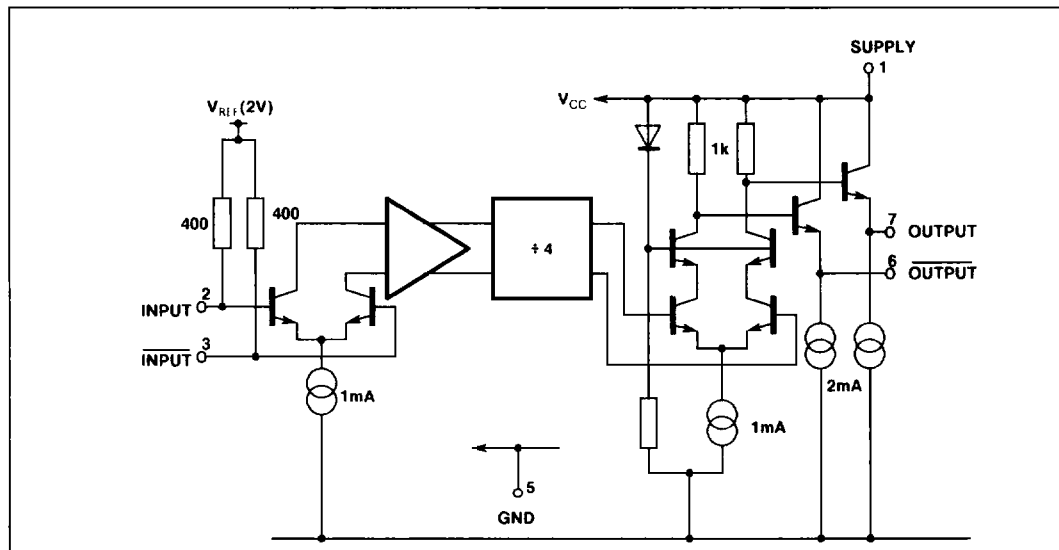


Fig 2 SP8824B1 Block Diagram

ELECTRICAL CHARACTERISTICS

Test conditions (unless otherwise stated)

Supply Voltage: $V_{CC} = 4.75V$ to $5.25V$

Temperature: $T_{amb} = -40^{\circ}C$ to $+85^{\circ}C$

Characteristic	Pin	Value			Units	Conditions
		Min.	Typ	Max.		
Supply Current	1		38	48	mA	RMS sinewave, measured in 50Ω system. See Figs. 3 & 4 See Fig. 5
Input Sensitivity, 200MHz to 1600MHz	2, 3			120	mV	
Input impedance (series equivalent)	2, 3		50		Ω	
Output voltage with $f_{IN} = 200MHz$	6, 7	0.6	2		pF	
Output voltage with $f_{IN} = 200MHz$	6, 7		1		Vp-p	
Output voltage with $f_{IN} = 1600MHz$	6, 7		0.15		Vp-p	

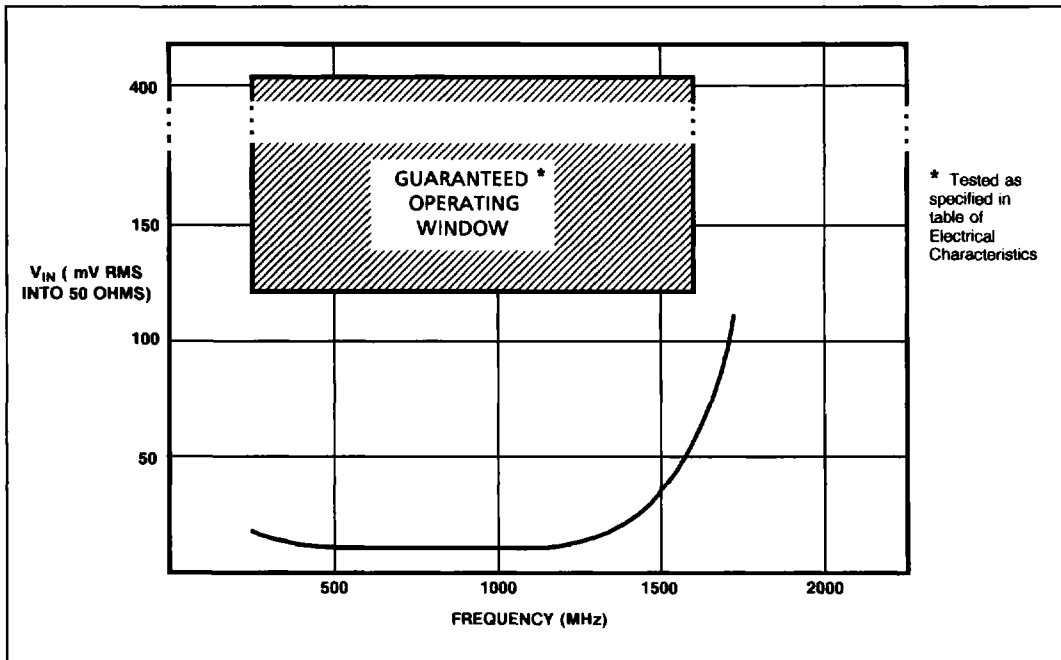


Fig.3 Typical input sensitivity

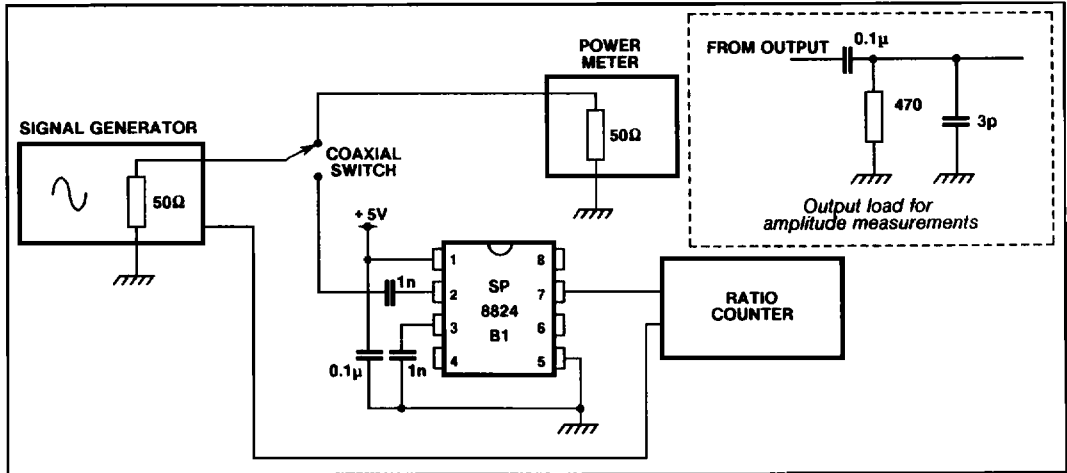


Fig.4 Test circuit

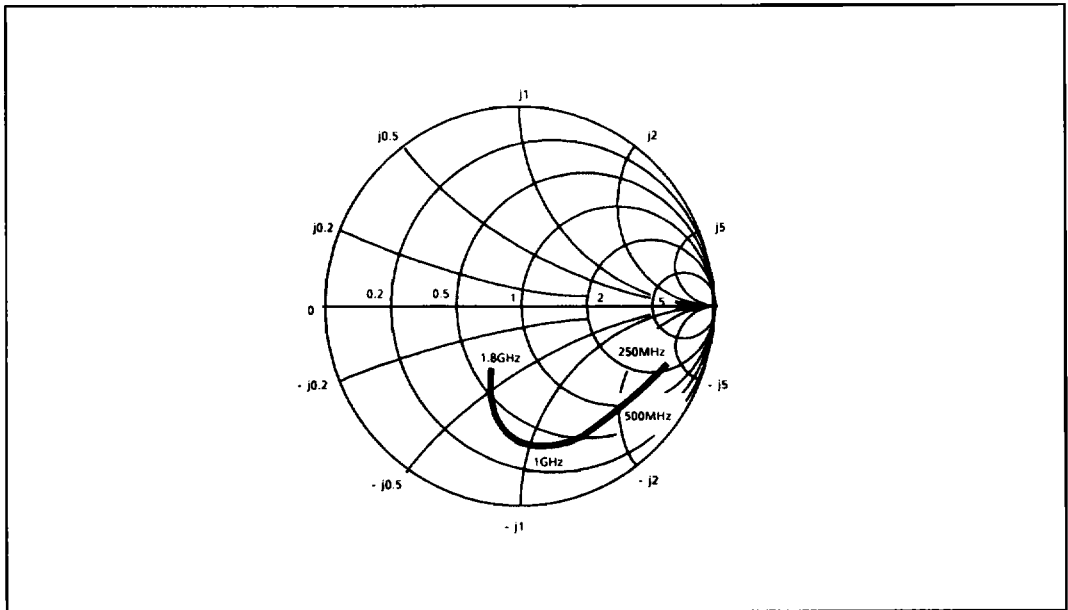


Fig.5 Typical input impedance, normalised to 50Ω