

SP8802

3.3GHz ÷ 2 FIXED MODULUS DIVIDER

The SP8802 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 source for the emitter follower outputs.

FEATURES

- Very High Speed Operation 3.3GHz
- Silicon Technology for low Phase Noise (Typically better than -140dBc/Hz at 10kHz)
- Specified Over the Full Military Temperature Range
- Low Power Dissipation 420mW (typ)
- 5V Single Supply Operation
- High Input Sensitivity
- Very Wide Operating Frequency Range

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

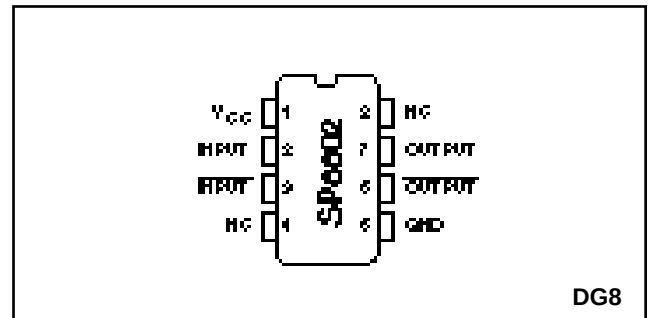


Fig.1 Pin connections top view

THERMAL CHARACTERISTICS

$\theta_{JA} = 150^{\circ}\text{C/W}$

ORDERING INFORMATION

SP8802/A/DG Military temperature range
5962-90661 (SMD)

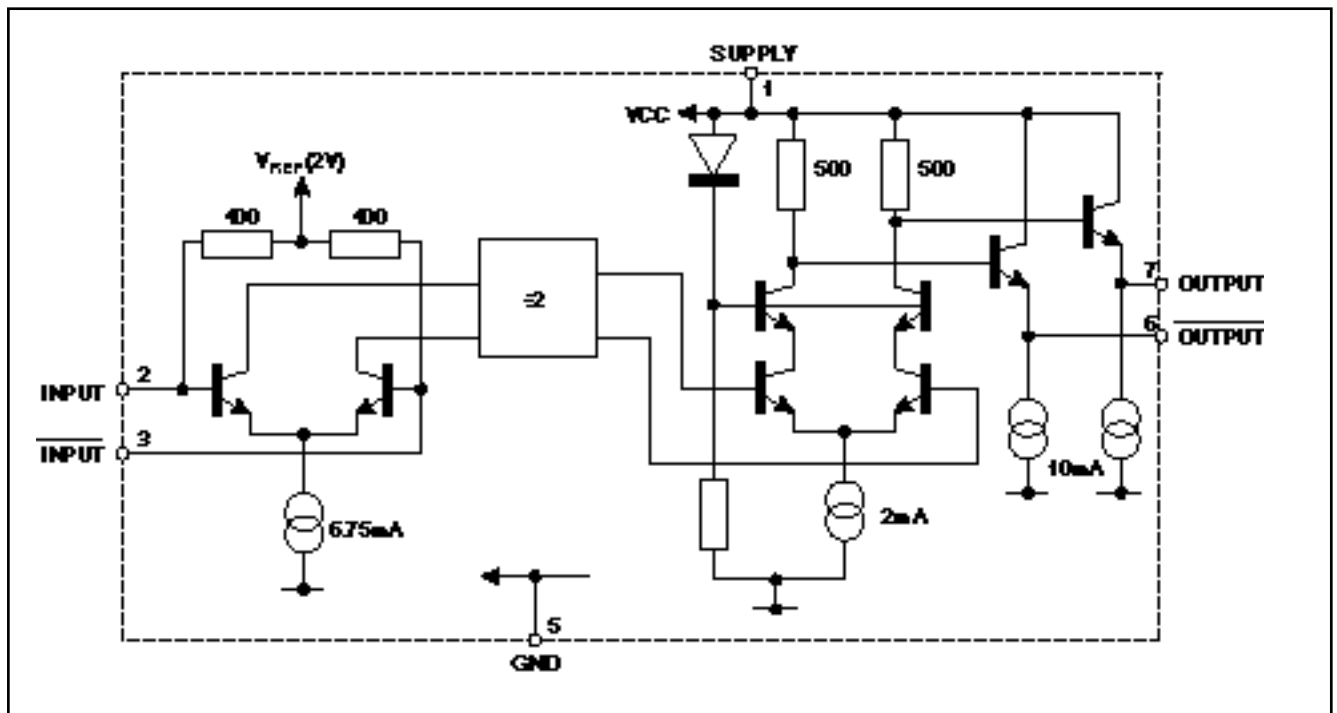


Fig.2 SP8802 Block diagram

SP8802

ELECTRICAL CHARACTERISTICS

Guaranteed over the temperature range T_{amb} -55°C to +125°C (see note) and supply voltage range 4.75V to 5.25V.
Tested at T_{amb} = -55°C and +100°C, V_{CC} = 4.75V and 5.25V.

Characteristic	Pin	Value			Units	Conditions
		Min	Typ	Max		
Supply current	1		84	100	mA	V_{CC} = 5V RMS sinewave measured in 50 ohm system. See Figs. 3 & 4
Input sensitivity	2, 3			175	mV	
0.65GHz to 2.8GHz				400	mV	
3.3GHz						
Input impedance (series equivalent)	2, 3		50		W	
			2		pF	
Output Voltage with f_{in} = 1000MHz	6, 7	0.8	1		Vp-p	V_{CC} = 5V
Output Voltage with f_{in} = 3GHz	6, 7		0.35		Vp-p	V_{CC} = 5V load as Fig. 4

NOTE: Devices must be used with a suitable heatsink to maintain chip temperature below 175°C when operating at T_{amb} > 100°C.

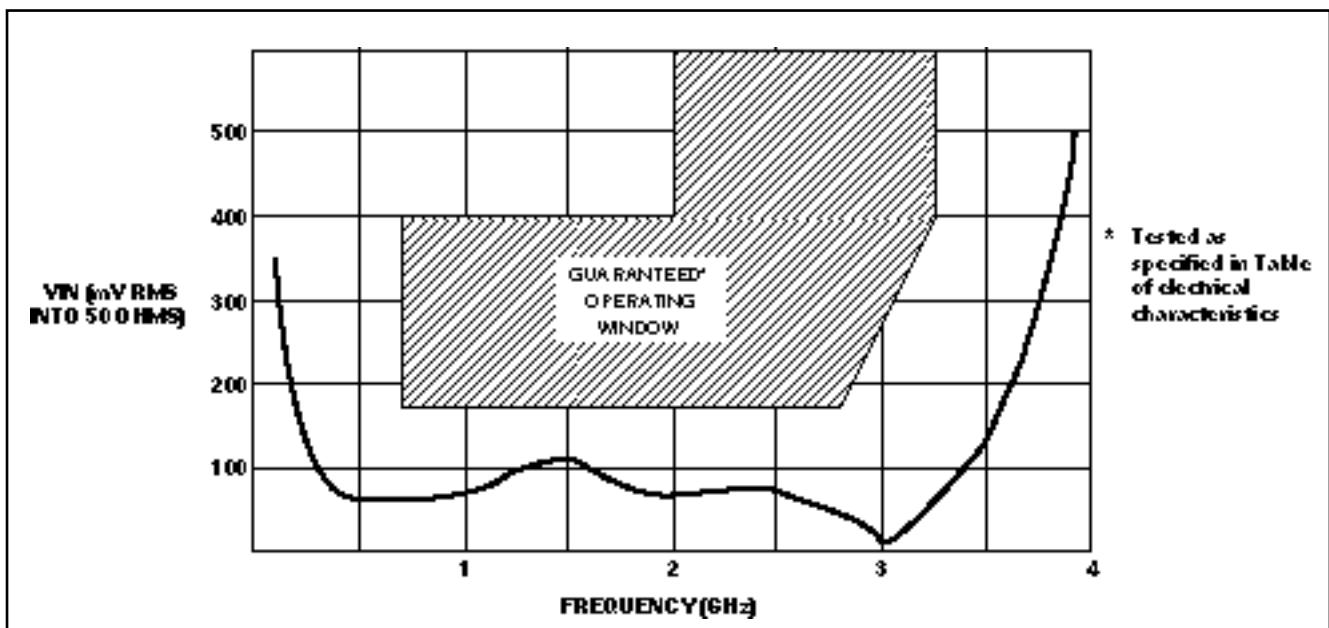


Fig.3 Typical input sensitivity

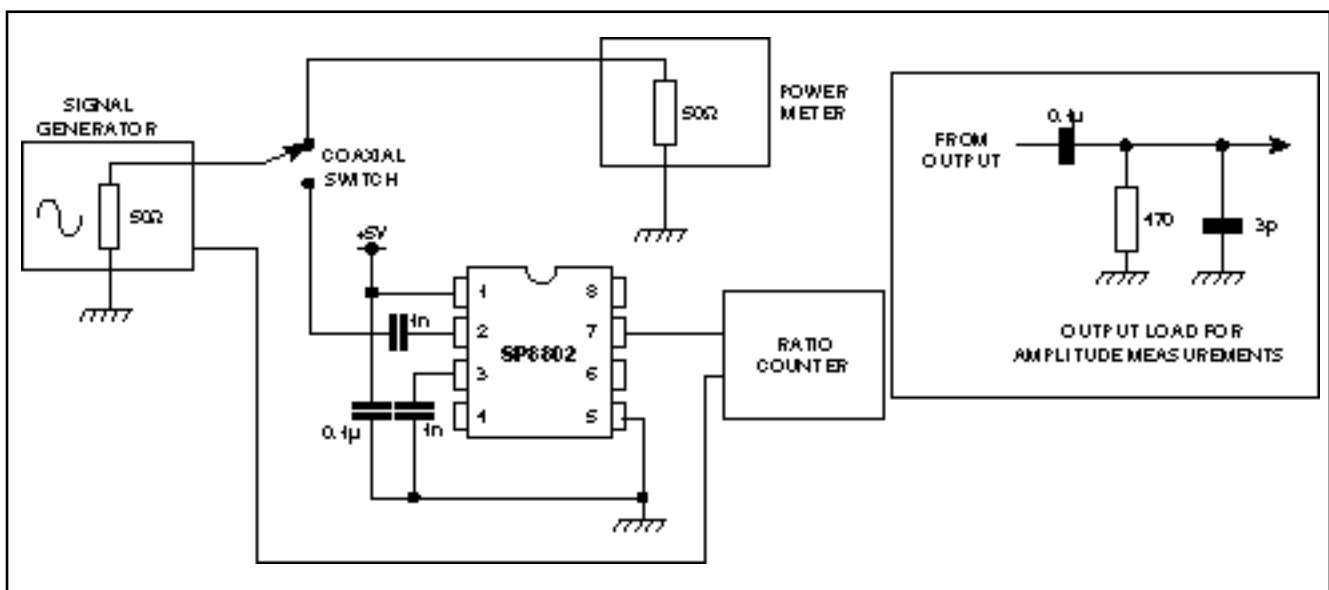


Fig.4 Test circuit

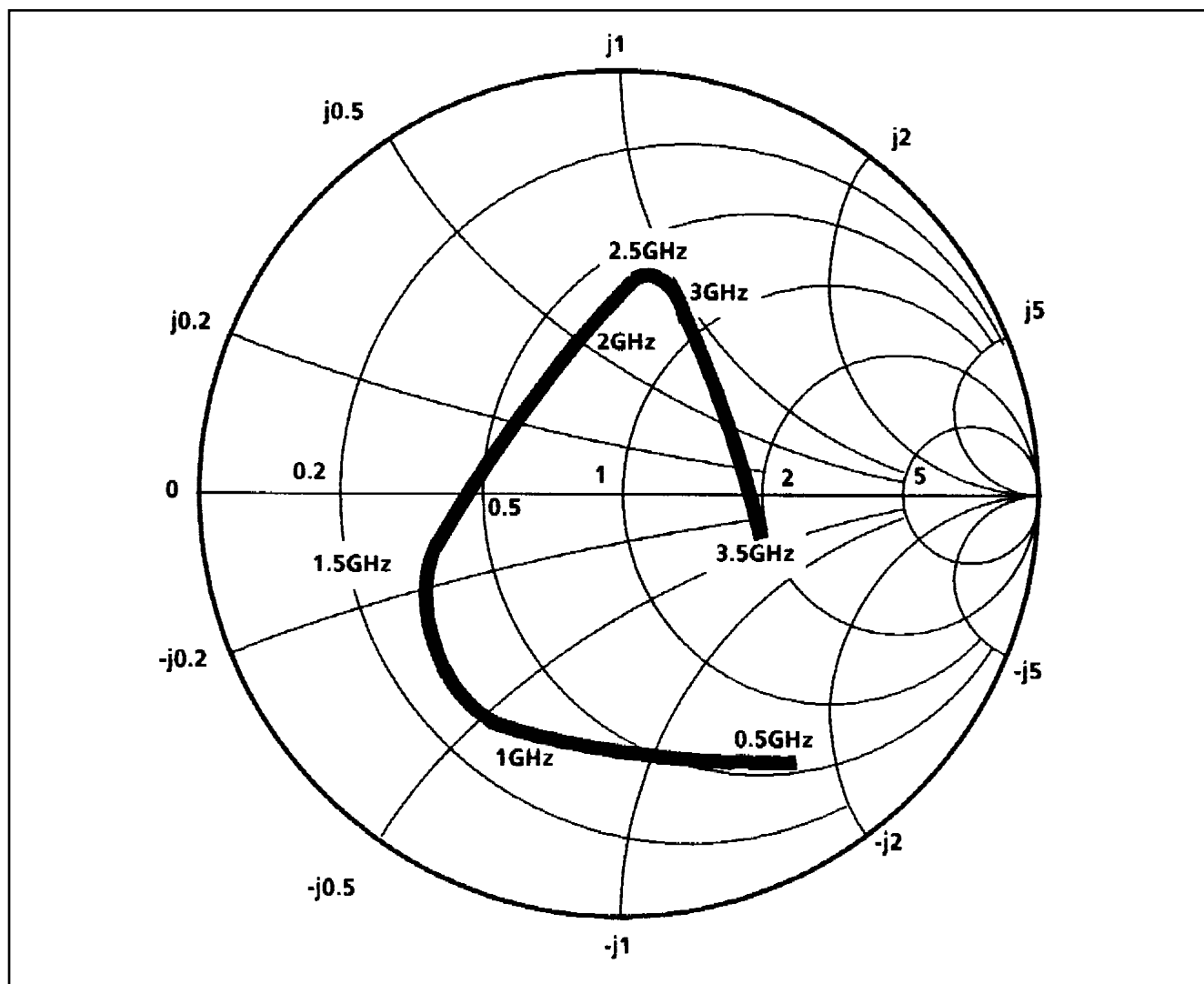
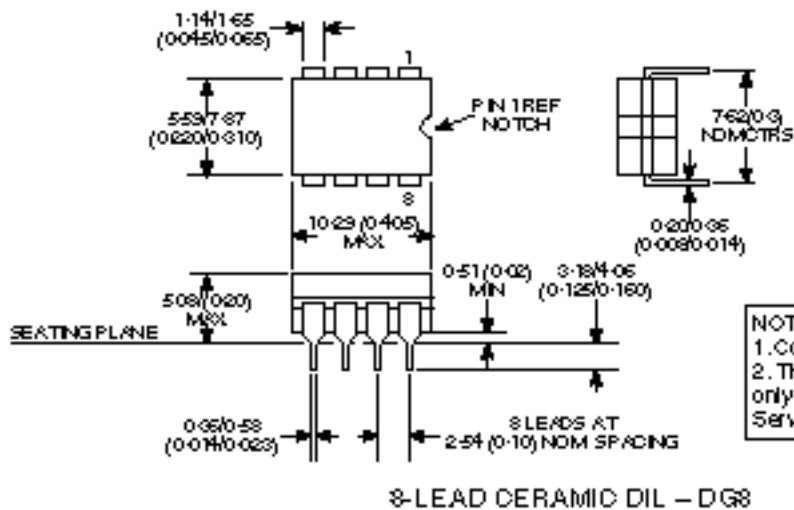


Fig.5 Typical input impedance



NOTES

1. Controlling dimensions are in inches.
2. This package outline diagram is for guidance only. Please contact your GPS Customer Service Centre for further information.



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