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ZARLINK SEMICONDUCTOR

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GEC PLESSEY
SEMICONDUCTORS

DS2276-2.2

SP4982

2·5GHz ÷8192 PRESCALER

The SP4982 prescaler is one a range of very high speed low power prescalers for use in consumer applications such as satellite TV receivers. The device features a CMOS compatible output stage.

FEATURES

- High Speed Operation 2·5GHz
- Silicon Technology for Low Phase Noise
- Very Low Power Dissipation 220mW
- Single 5V Supply Operation
- High Input Sensitivity
- Very Wide Operating Frequency Range
- Electrostatic Protection †

† ESD precautions must be observed

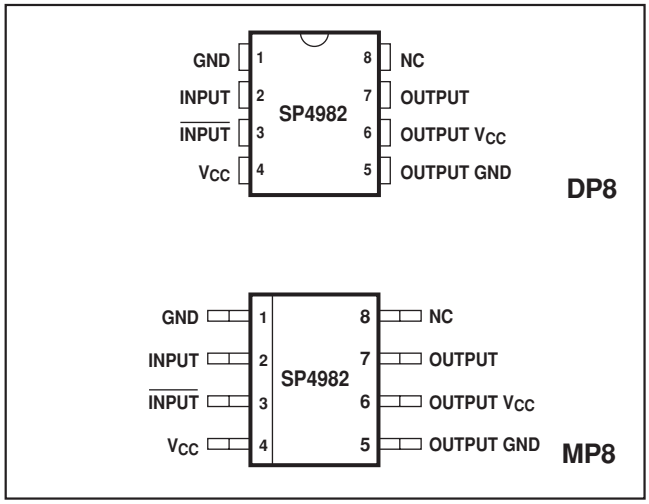

Fig 1. Pin connections - top view

ABSOLUTE MAXIMUM RATINGS

Supply voltage, V_{CC}	+6·5V
Input voltage	2·5V p-p
Storage temperature	−55°C to +150°C
Junction temperature	+175°C

ORDERING INFORMATION

SP4982 NA DP
SP4982 NA MP

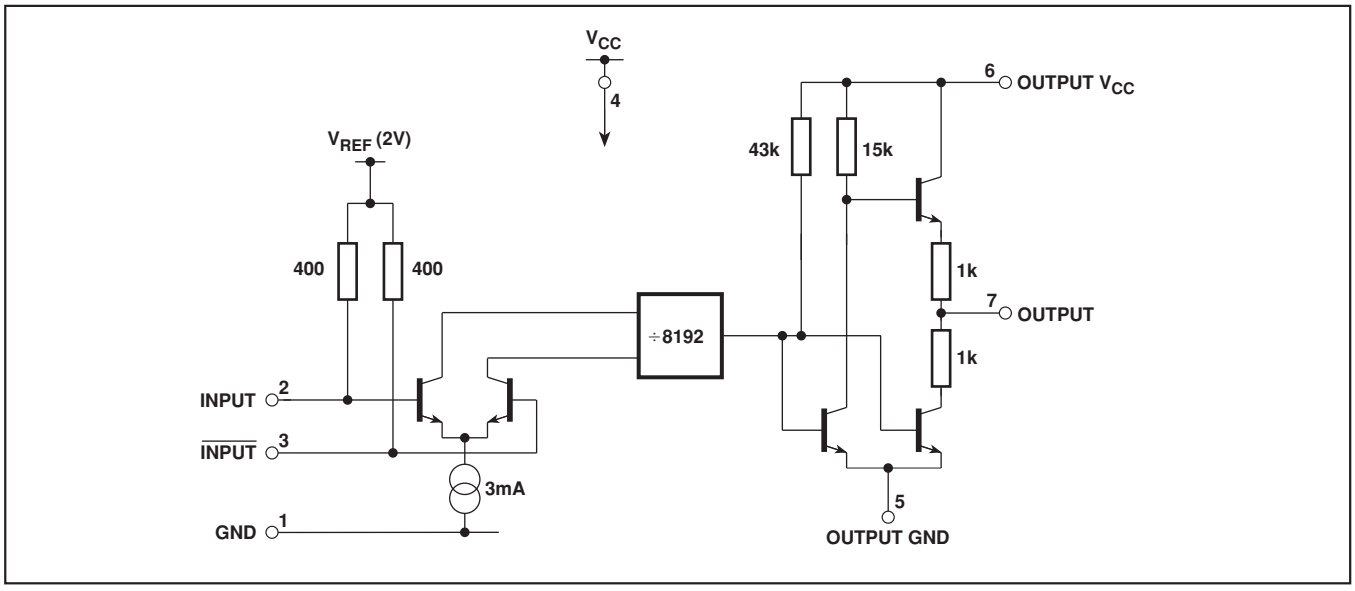

Fig. 2 SP4982 block diagram

ELECTRICAL CHARACTERISTICS

These characteristics are guaranteed over the following conditions (unless otherwise stated):

T_{AMB} = −10°C to +85°C, V_{CC} = +4·75V to +5·25V (Test circuit see Fig. 4)

Characteristic	Pin	Value			Units	Conditions
		Min.	Typ.	Max.		
Supply current, I_{CC}	4		44	65	mA	V_{CC} = +5V
Input sensitivity	2,3					
500MHz to 1800MHz				50	mV	RMS sinewave, measured in 50Ω system,
2500MHz				100	mV	see Figs 3 and 4.
Input impedance (series equivalent)	2,3		50		Ω pF	See Fig. 5
Output voltage high, f_{IN} = 2500MHz	7	V_{CC}−0·75			V p-p	V_{CC} = +5V, load as Fig. 4
Output voltage low, f_{IN} = 2500MHz	7			0·5	V p-p	V_{CC} = +5V, load as Fig. 4

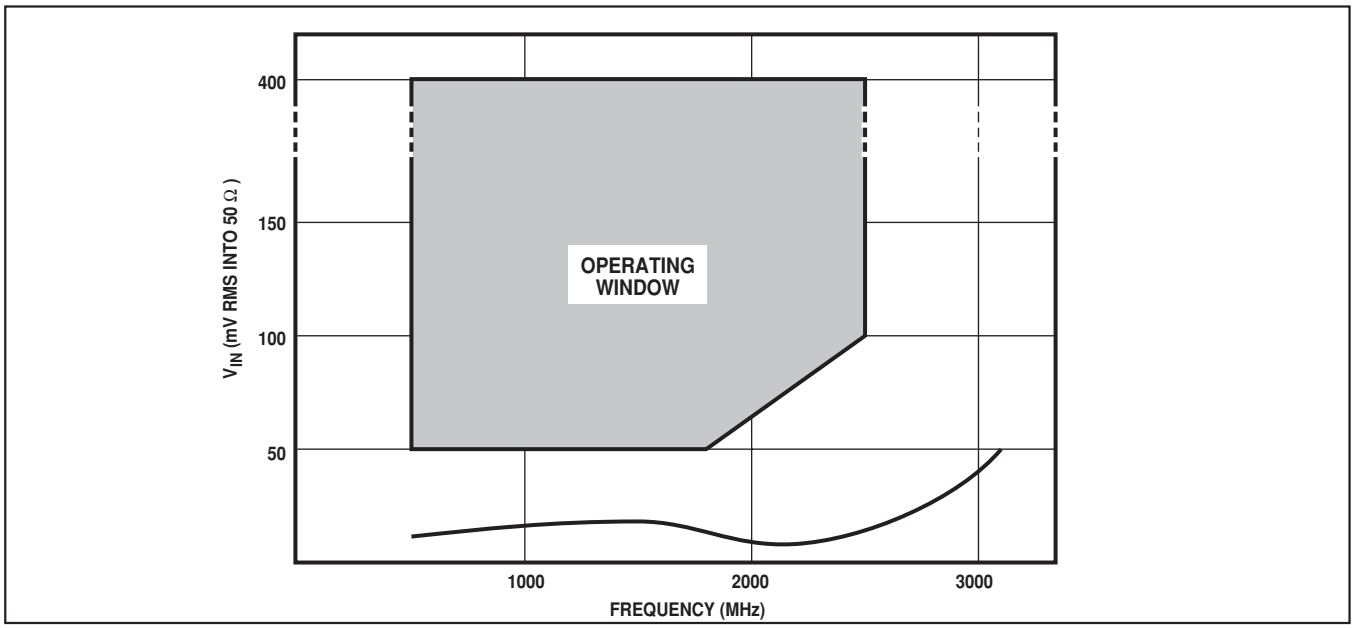

Fig. 3 Typical input sensitivity

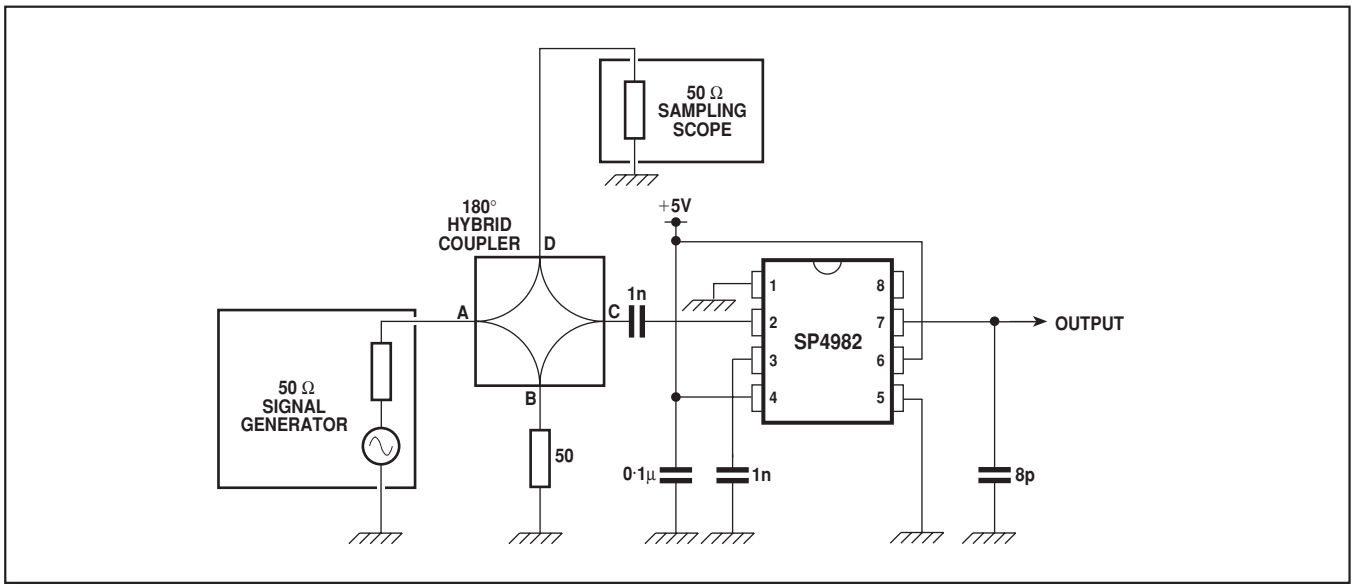

Fig. 4 Test circuit

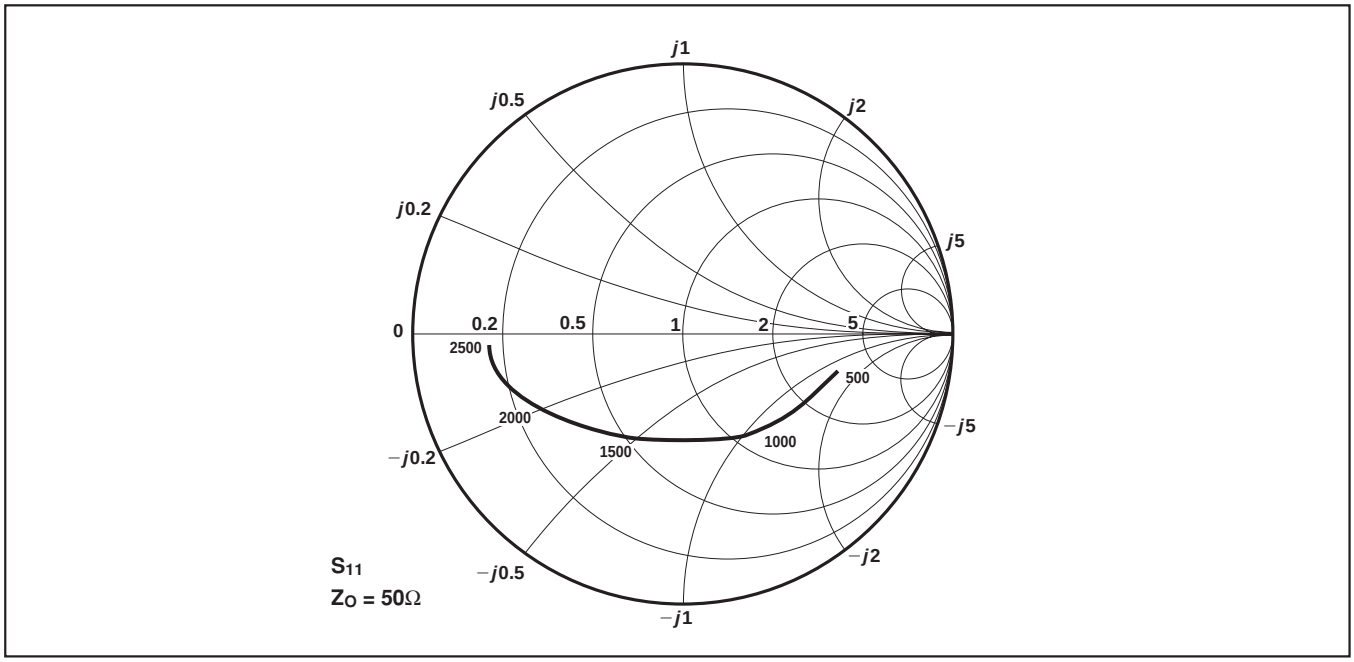

Fig. 5 Typical input impedance (frequencies in MHz)

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