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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

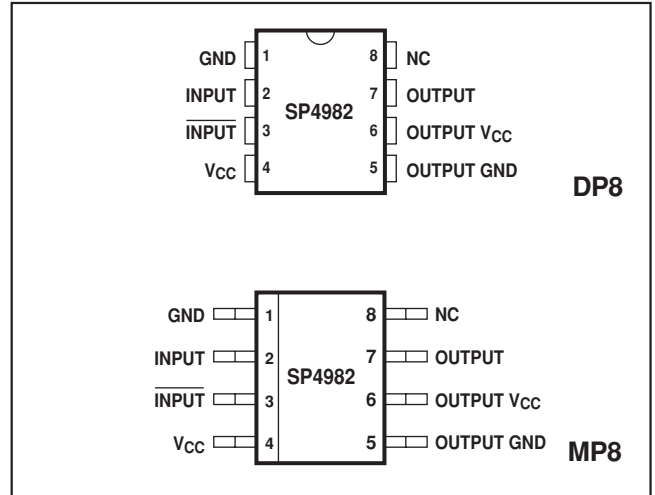


Fig 1. Pin connections - top view

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

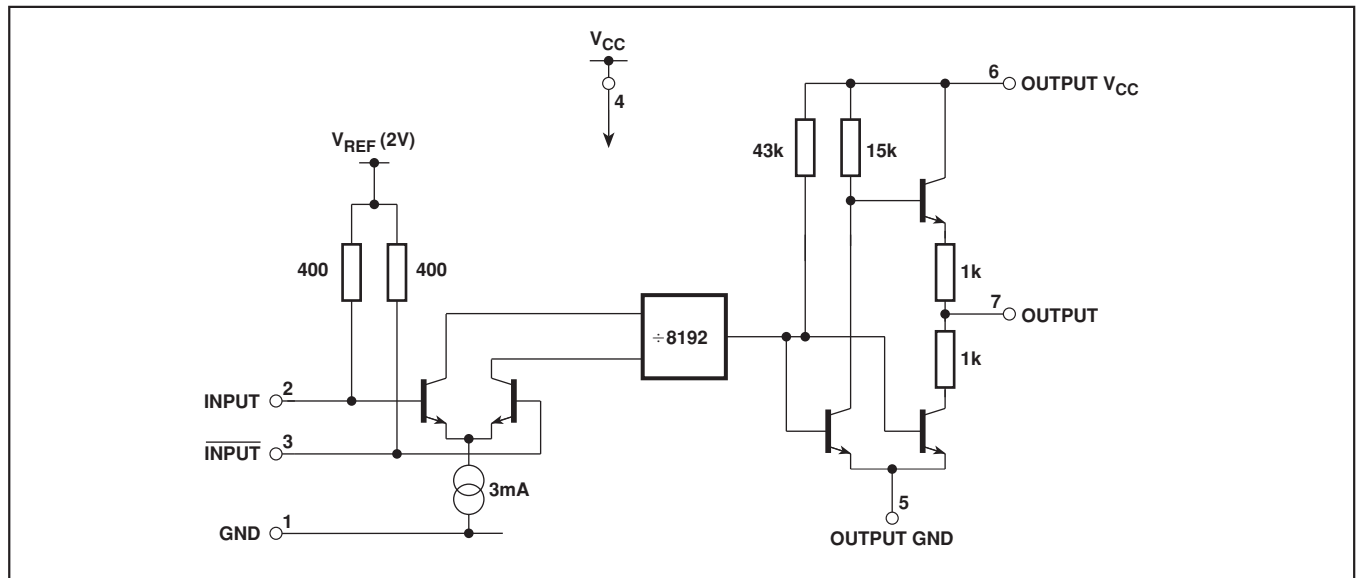


Fig. 2 SP4982 block diagram

ELECTRICAL CHARACTERISTICS

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

$T_{AMB} = -10^{\circ}\text{C}$ to $+85^{\circ}\text{C}$, $V_{CC} = +4.75\text{V}$ to $+5.25\text{V}$ (Test circuit see Fig. 4)

| Characteristic | Pin | Value | | | Units | Conditions |
|--|-----|-----------------|------|------|-------|---|
| | | Min. | Typ. | Max. | | |
| Supply current, I_{CC} | 4 | | 44 | 65 | mA | $V_{CC} = +5\text{V}$ |
| Input sensitivity | 2,3 | | | | | |
| 500MHz to 1800MHz | | | | 50 | mV | RMS sinewave, measured in 50Ω system, see Figs 3 and 4. |
| 2500MHz | | | | 100 | mV | |
| Input impedance (series equivalent) | 2,3 | | 50 | | Ω | See Fig. 5 |
| | | | | | pF | |
| Output voltage high, $f_{IN} = 2500\text{MHz}$ | 7 | $V_{CC} - 0.75$ | | | V p-p | $V_{CC} = +5\text{V}$, load as Fig. 4 |
| Output voltage low, $f_{IN} = 2500\text{MHz}$ | 7 | | | 0.5 | V p-p | $V_{CC} = +5\text{V}$, load as Fig. 4 |

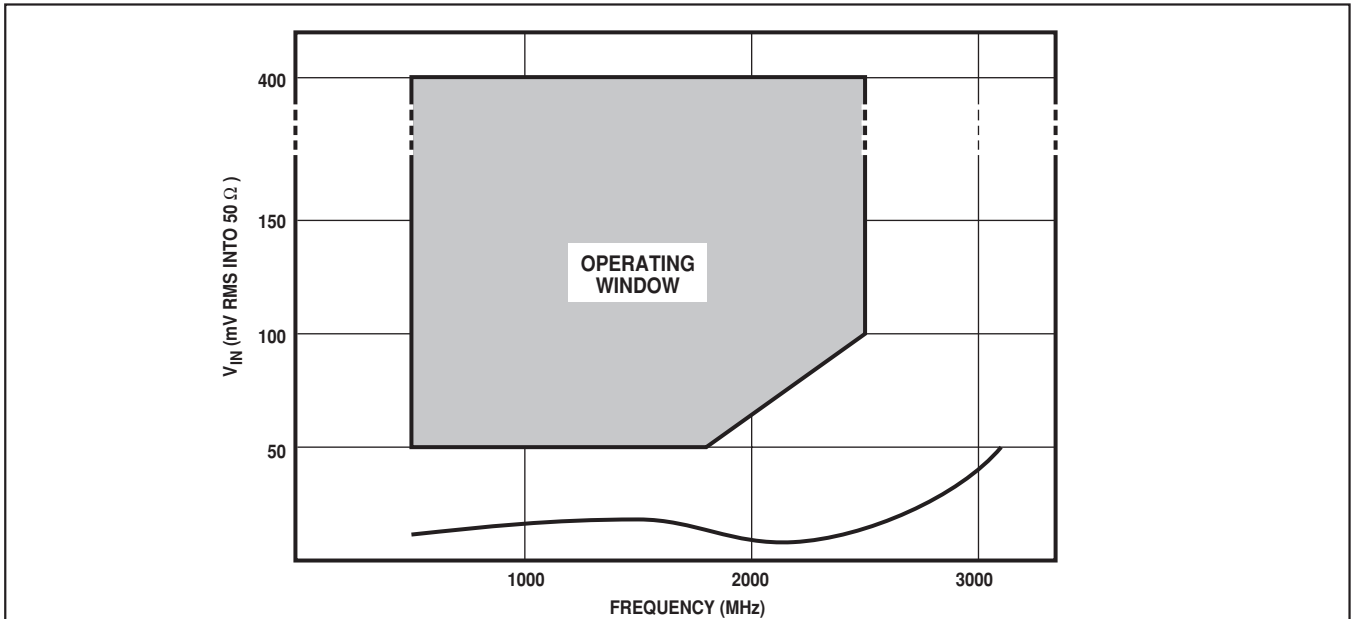


Fig. 3 Typical input sensitivity

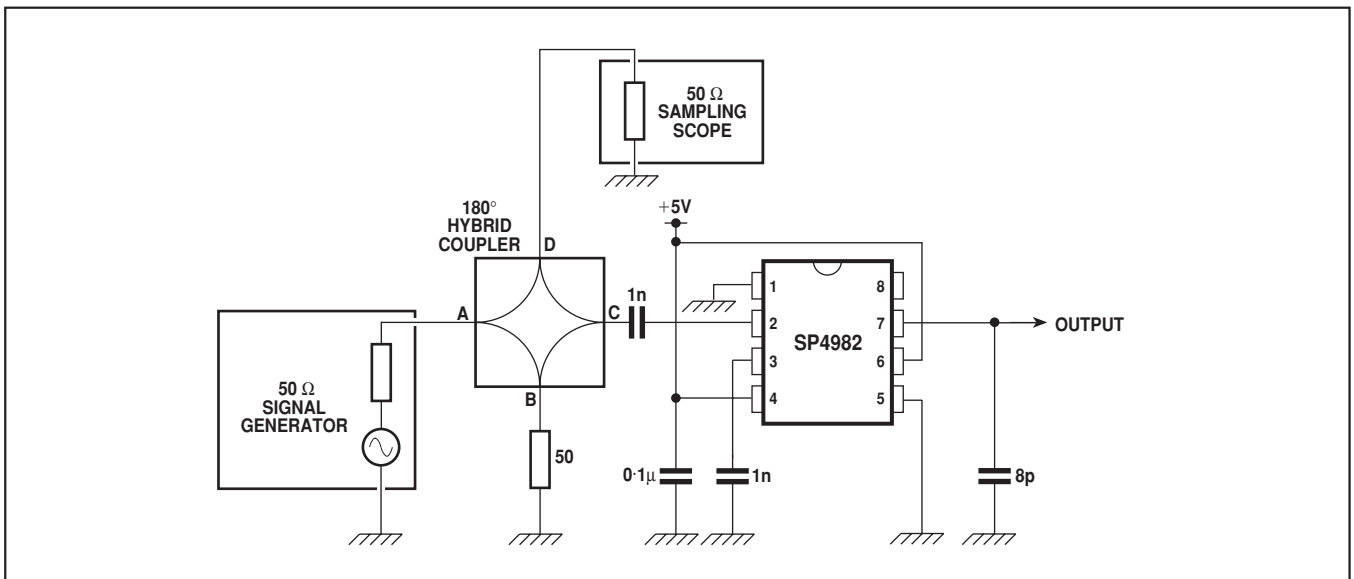


Fig. 4 Test circuit

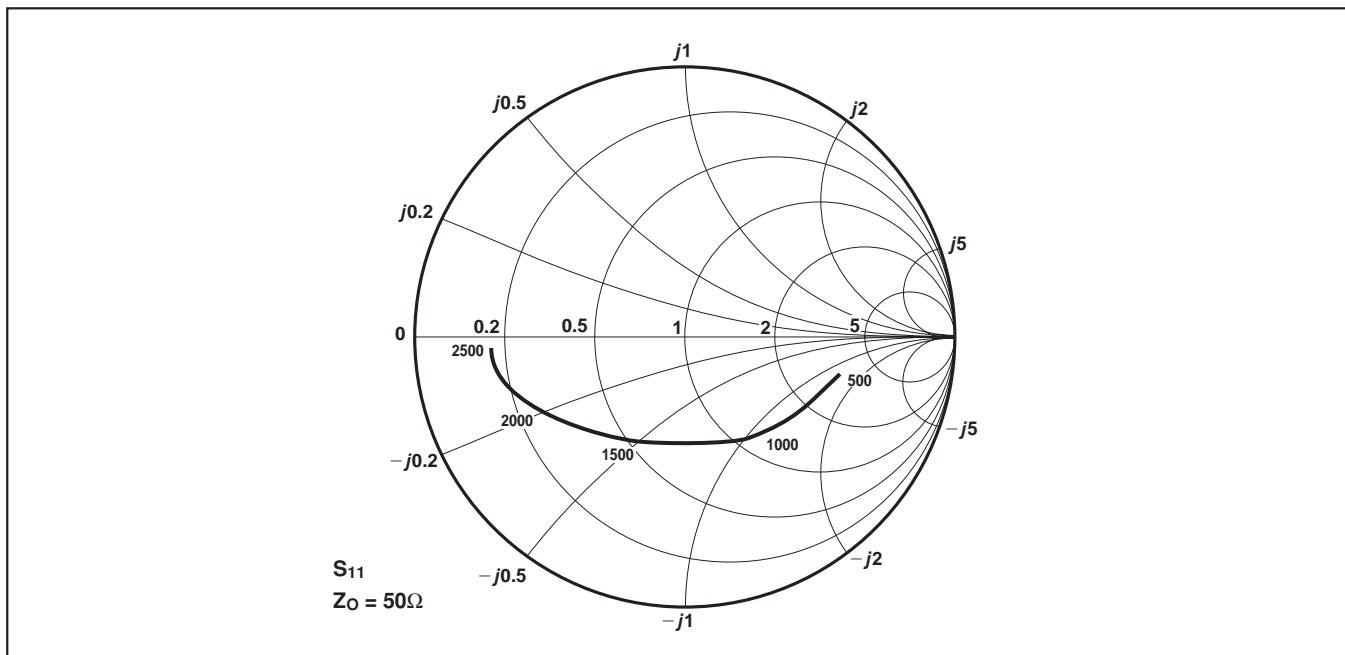


Fig. 5 Typical input impedance (frequencies in MHz)



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