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# SP4916

## 2·5GHz ÷512 PRESCALER

The SP4916 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 complementary output stage.

### FEATURES

- High Speed Operation 2·5GHz
  - Silicon Technology for Low Phase Noise
  - Very Low Power Dissipation 250mW
  - Single 5V Supply Operation
  - High Input Sensitivity
  - Very Wide Operating Frequency Range
  - Electrostatic Protection †
- † ESD precautions must be observed

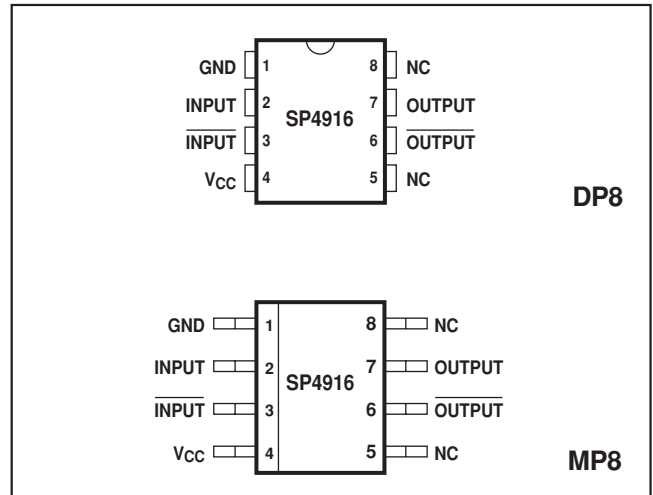


Fig 1. Pin connections - top view

### ABSOLUTE MAXIMUM RATINGS

Supply voltage, V <sub>CC</sub>	+6·5V
Input voltage	2·5V p-p
Storage temperature	-55°C to +150°C
Junction temperature	+175°C

### ORDERING INFORMATION

- SP4916 NA DP
- SP4916 NA MP

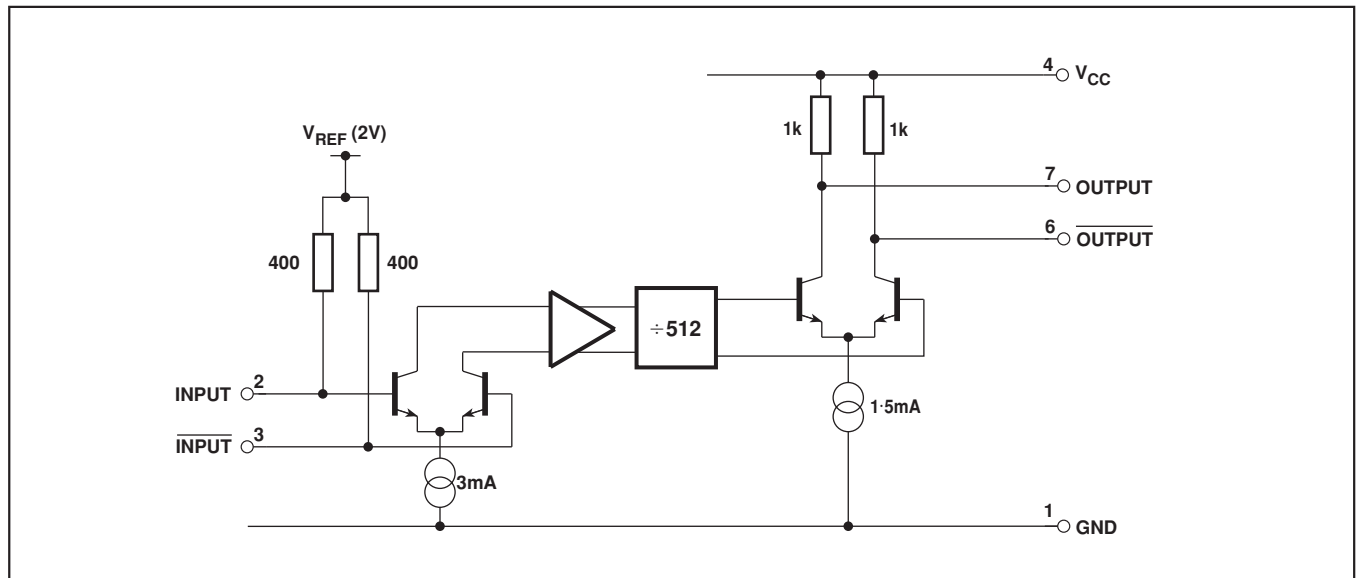


Fig. 2 SP4916 block diagram

**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		50	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
			2		pF	
Output voltage with $f_{IN} = 2500\text{MHz}$	6,7	1.2	1.5		V p-p	$V_{CC} = +5\text{V}$ , no load
		0.8	1.3		V p-p	$V_{CC} = +5\text{V}$ , load as Fig. 4

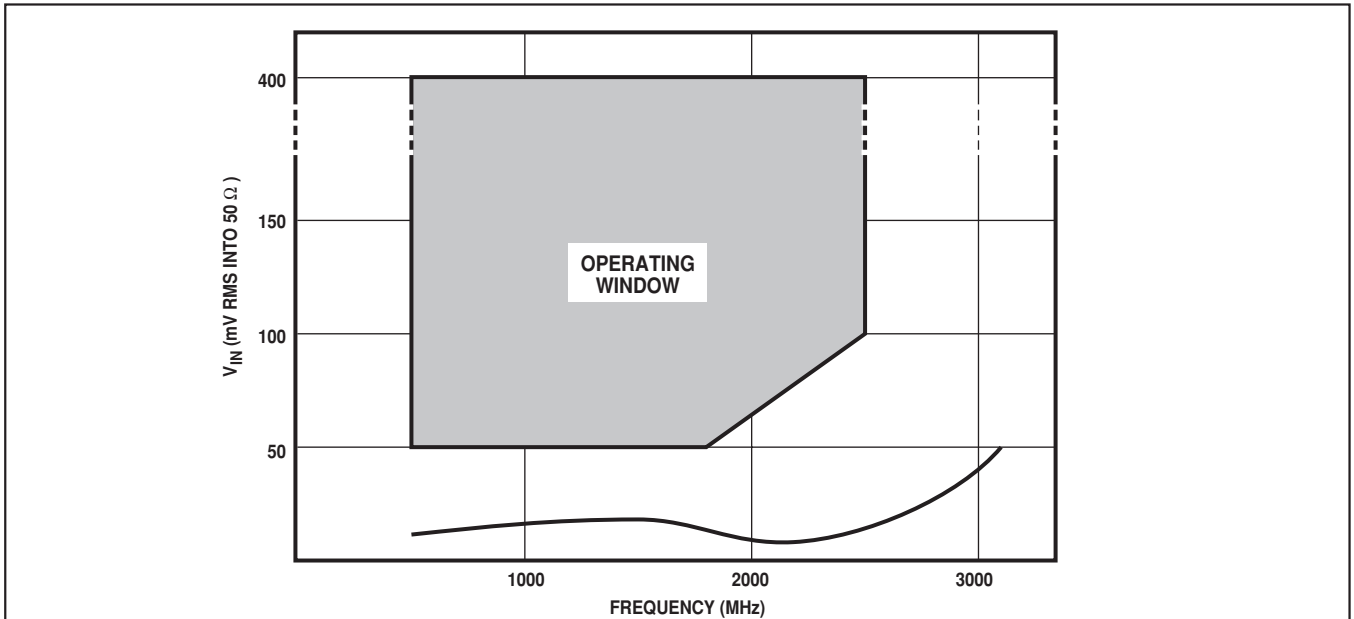


Fig. 3 Typical input sensitivity

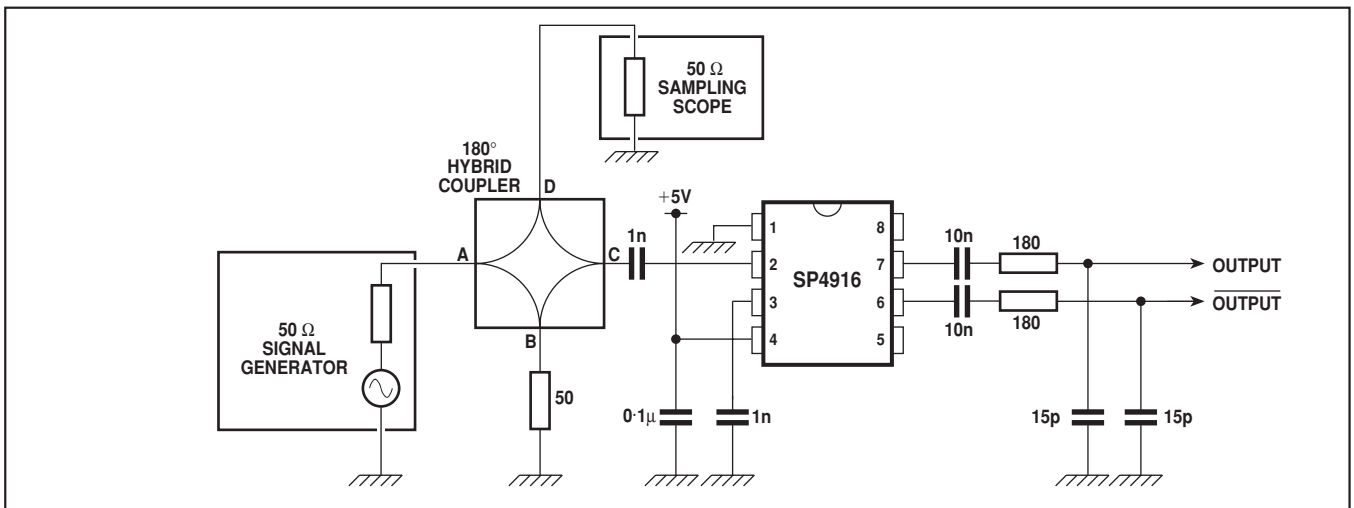


Fig. 4 Test circuit

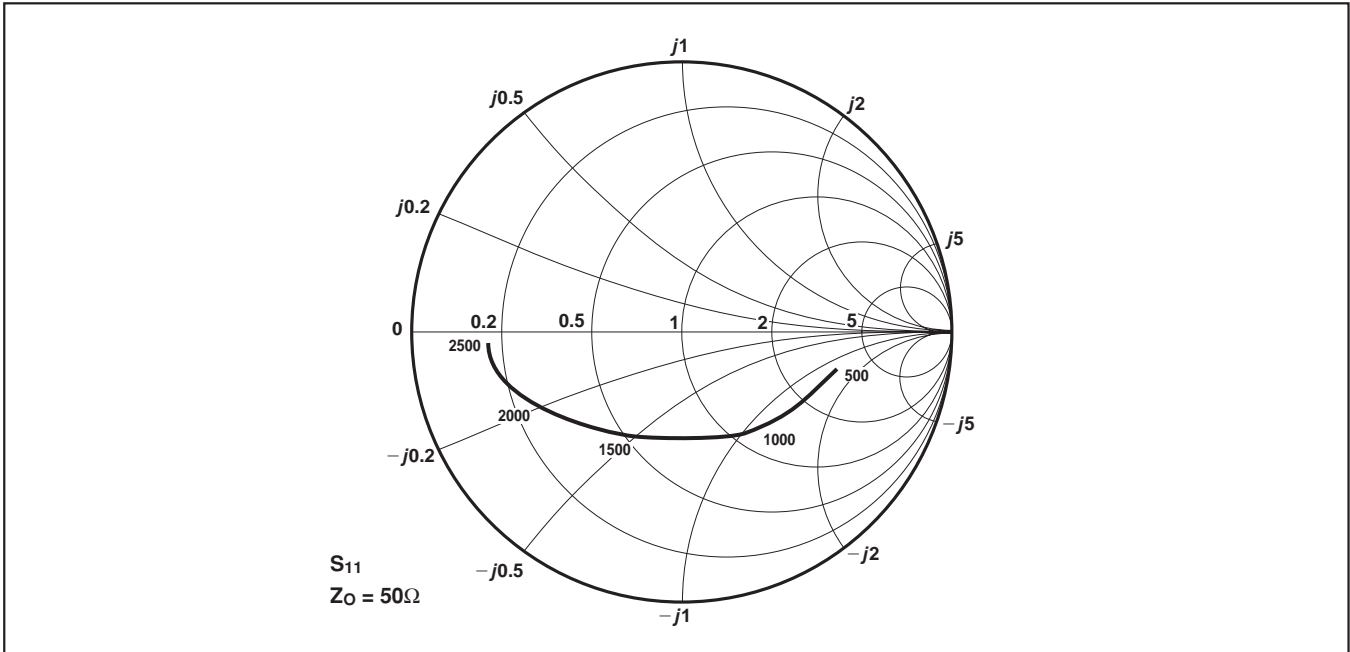


Fig. 5 Typical input impedance (frequencies in MHz)



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