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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

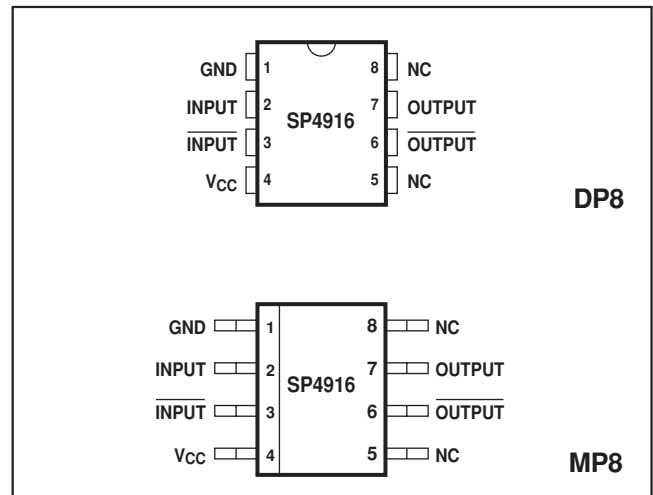


Fig 1. Pin connections - top view

ABSOLUTE MAXIMUM RATINGS

Supply voltage, V _{CC}	+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

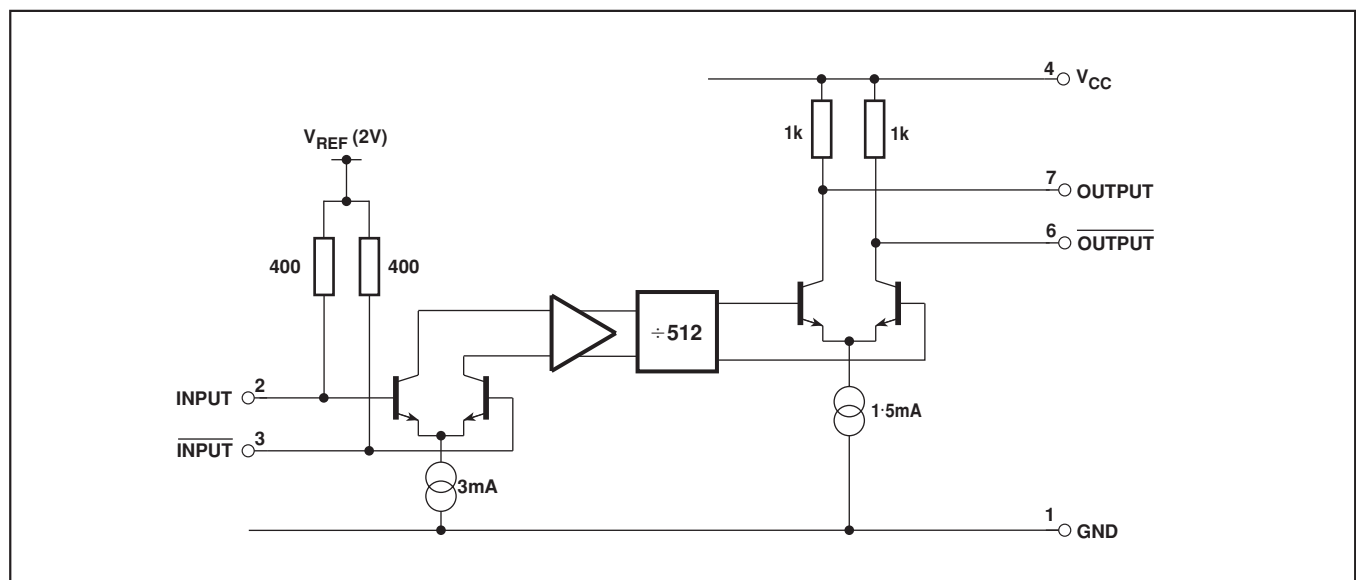


Fig. 2 SP4916 block diagram

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			50	mV	RMS sinewave, measured in 50Ω system, see Figs 3 and 4. See Fig. 5
500MHz to 1800MHz				100	mV	
2500MHz					Ω	
Input impedance (series equivalent)	2,3		50		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

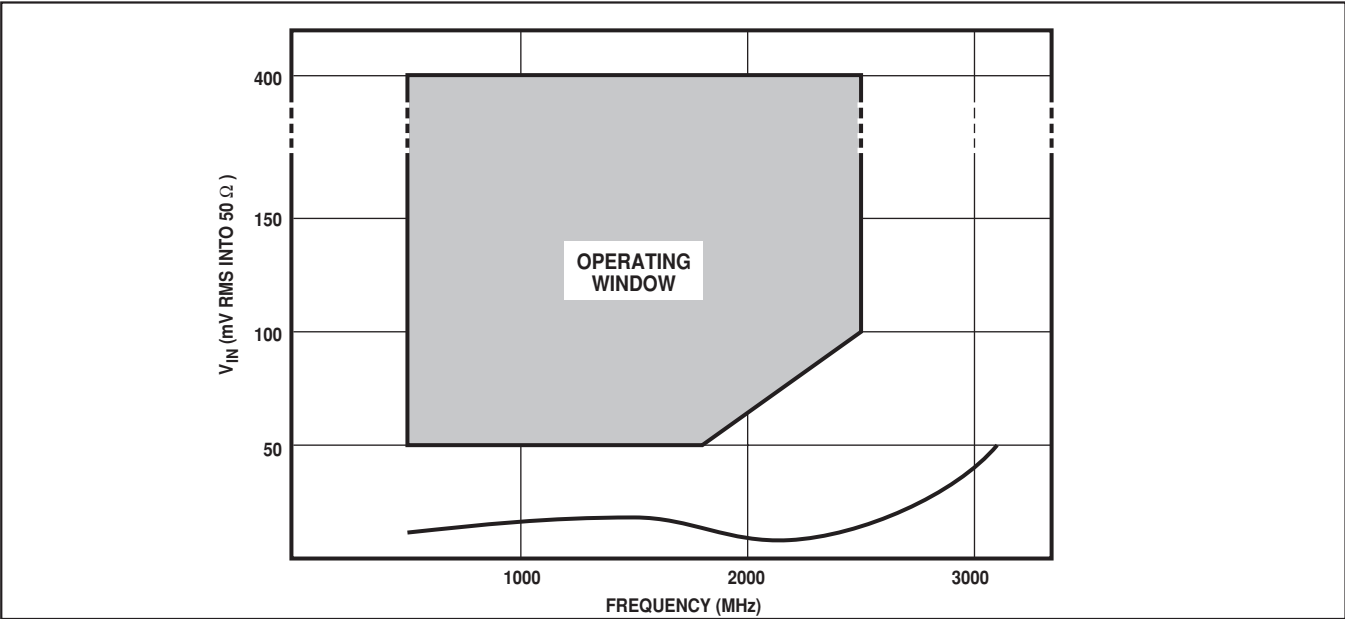


Fig. 3 Typical input sensitivity

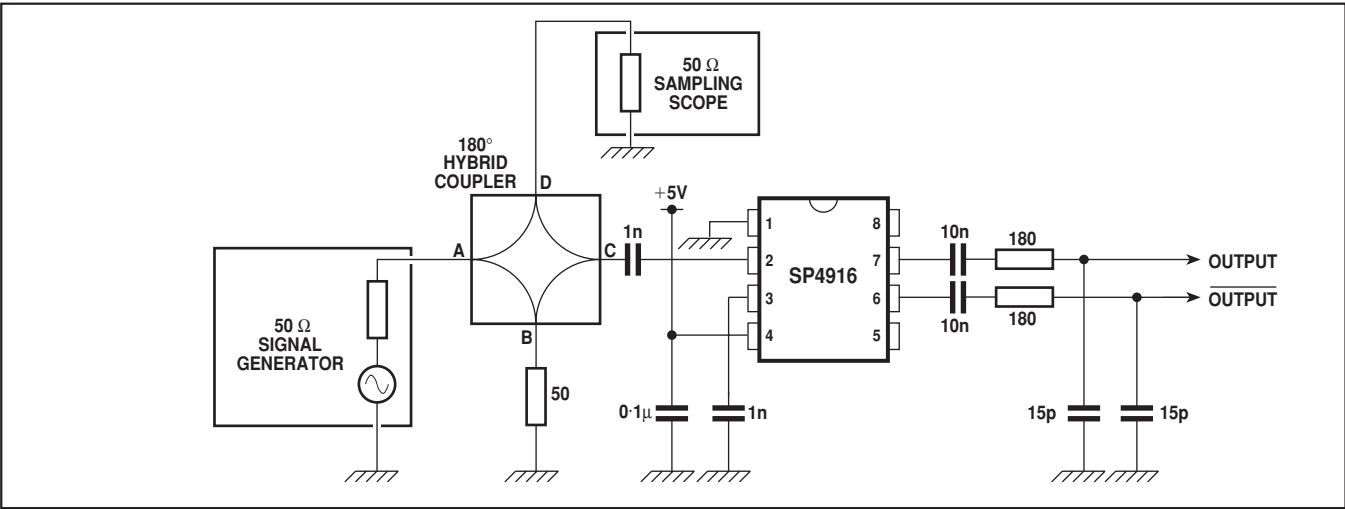


Fig. 4 Test circuit

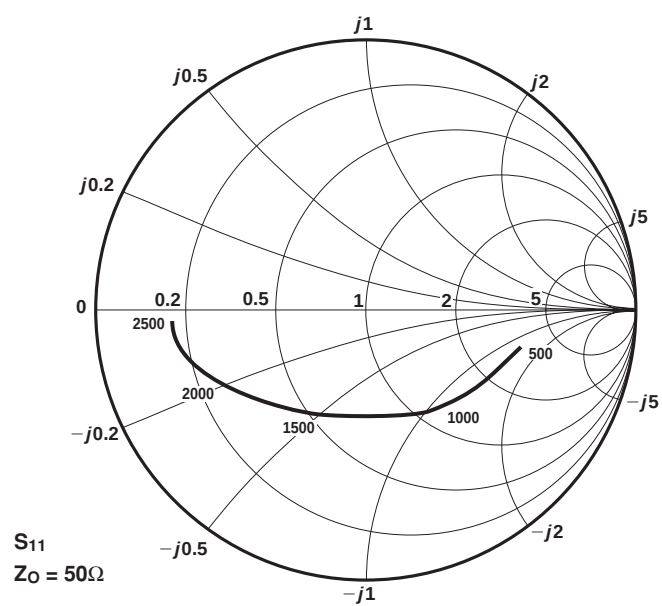


Fig. 5 Typical input impedance (frequencies in MHz)



HEADQUARTERS OPERATIONS
GEC PLESSEY SEMICONDUCTORS
Cheney Manor, Swindon,
Wiltshire SN2 2QW, United Kingdom.
Tel: (0793) 518000
Fax: (0793) 518411

GEC PLESSEY SEMICONDUCTORS
P.O. Box 660017
1500 Green Hills Road,
Scotts Valley, California 95067-0017,
United States of America.
Tel: (408) 438 2900
Fax: (408) 438 5576

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