

GaAs IC Transfer Switch DC–2 GHz



AS126-62

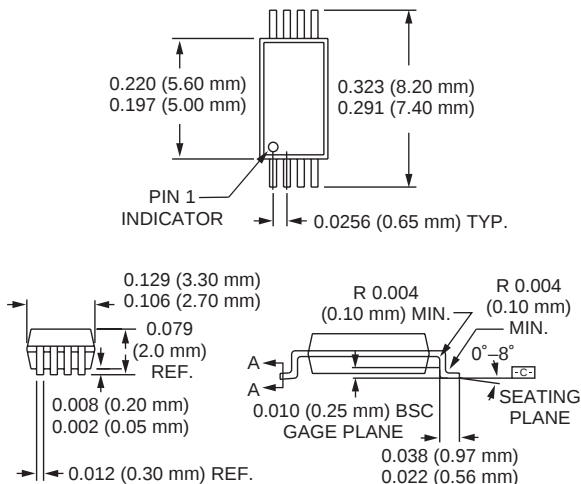
Features

- High Linearity (IP3 45 dBm @ 0.9 GHz)
- Low Insertion Loss (0.6 dB @ 0.9 GHz)
- Simultaneous T/R Switching

Description

The AS126-62 is a 4 port switch designed to combine T/R and antenna changeover switching capability within one device. This switch has two DC voltage controls and is ideal for -5 V applications having low power consumption requirements. The AS126-62 is suitable for cellular wireless communication applications.

SSOP-8



Electrical Specifications at 25°C (0, -5 V)

Parameter ¹	Frequency ²	Min.	Typ.	Max.	Unit
Insertion Loss ³	DC–0.5 GHz		0.55	0.6	dB
	DC–1.0 GHz		0.6	0.7	dB
	DC–2.0 GHz		1.3	1.6	dB
Isolation ⁴	DC–0.5 GHz	19	26		dB
	DC–1.0 GHz	13	15		dB
	DC–2.0 GHz	8	11		dB
VSWR ⁵	DC–1.0 GHz		1.1:1	1.5:1	
	DC–2.0 GHz		1.3:1	1.8:1	

Operating Characteristics at 25°C (0, -5 V)

Parameter	Condition	Frequency	Min.	Typ.	Max.	Unit
Switching Characteristics ⁶	Rise, Fall (10/90% or 90/10% RF)			20		ns
	On, Off (50% CTL to 90/10% RF)			40		ns
	Video Feedthru			50		mV
Intermodulation Intercept Point (IP3)	For Two-tone Input Power +0 dBm	0.5–2.0 GHz		+45		dBm
Input Power For 1 dB Compression (T _X)		0.5–2.0 GHz		+33		dBm
Control Voltages	V _{Low} = 0 to -0.2 V @ 10 μ A Max. V _{High} = -5 V @ 25 μ A to -10 V @ 100 μ A Max.					

1. All measurements made in a 50 ohm system, unless otherwise specified.

2. DC = 300 kHz.

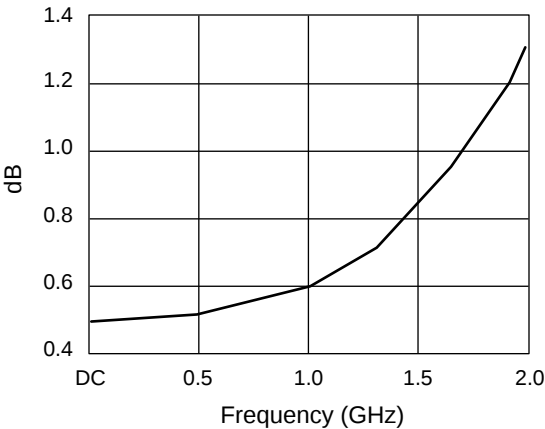
3. Insertion loss changes by 0.003 dB/°C.

4. Any state.

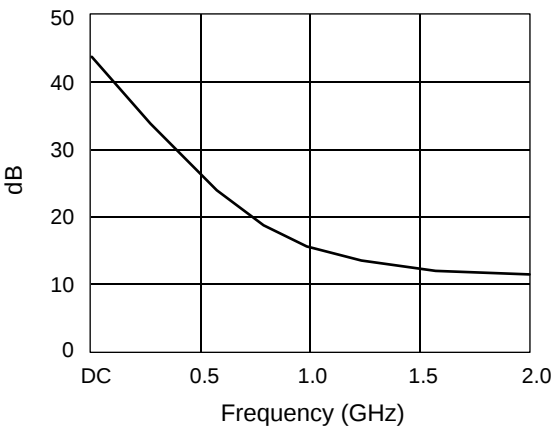
5. Insertion loss state.

6. Video feedthru measured with 1 ns risetime pulse and 500 MHz bandwidth.

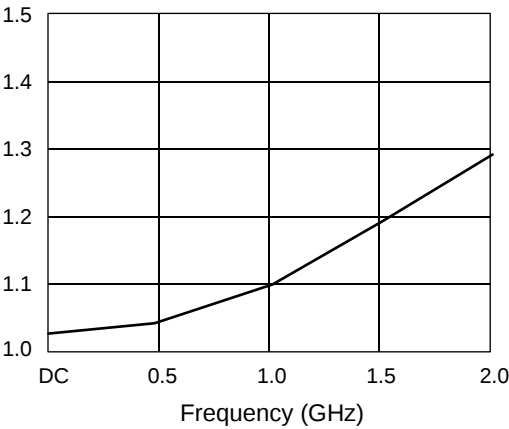
Typical Performance Data (0, -5 V)



Insertion Loss vs. Frequency



Isolation vs. Frequency



VSWR vs. Frequency

Truth Table

V ₁	V ₂	T _X -J ₂ R _X -J ₁	T _X -J ₁ R _X -J ₂
0	-5	Insertion Loss	Isolation
-5	0	Isolation	Insertion Loss

Absolute Maximum Ratings

Characteristic	Value
RF Input Power	4 W > 0.5 GHz 0/-5 V Control
Control Voltage	+0.2 V, -10 V
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to 150°C
Θ _{JC}	25°C/W

Note: Exceeding these parameters may cause irreversible damage.

Pin Out

