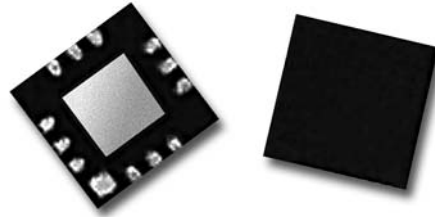


PRELIMINARY DATA SHEET

# SKY12146-321: GaAs IC 25 dB Voltage Variable Attenuator 2.7–4.0 GHz

## Features

- Power control for 3.5 GHz fixed wireless applications
- Minimum 25 dB attenuation
- Positive 0.2–1.2 V control voltage
- QFN-12 3 x 3 mm package
- Low cost
- No external components needed



## Description

The SKY12146-321 is a GaAs IC PHEMT voltage variable attenuator that has been designed for WLAN applications. Operating from 2.7–4.0 GHz, the SKY12146-321 is ideal for low cost applications such as 3.5 GHz fixed wireless LAN power control applications.

## Absolute Maximum Ratings

Characteristic	Value
RF input power	1 W max.
Control voltage	-0.2 V, +6 V
Operating temperature	-40 °C to +85 °C
Storage temperature	-65 °C to +150 °C

1. All measurements made in a 50 Ω system, unless otherwise specified.  
2. For worst case state.

## Electrical Specifications at 25 °C

Parameter	Frequency	Min.	Typ.	Max.	Unit
Insertion loss ( $V_C = 1.2$ V)	2.7–4.0 GHz		1.5	1.8	dB
Maximum attenuation ( $V_C = 0.2$ V)	2.7–4.0 GHz	22	25		dB
VSWR — all ports	2.7–4.0 GHz		1.5	1.8	

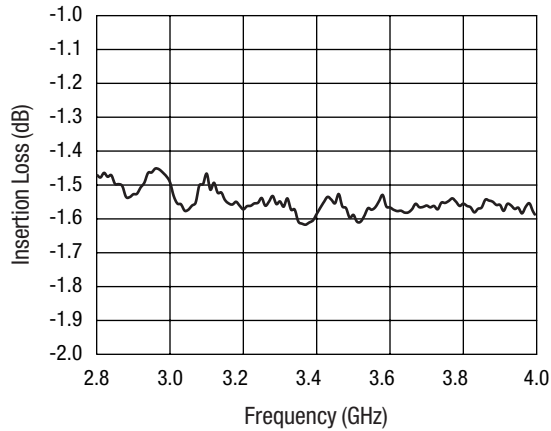
## Operating Characteristics at 25 °C (0, +1.2 V)

Parameter	Condition	Frequency	Min.	Typ.	Max.	Unit
Switching characteristics	Rise, fall (10/90% or 90/10% RF)		80	50		ns
	On, off (50% CTL to 90/10% RF)			150		ns
	Video feedthru			25		mV
Maximum input power for < 1 dB attenuation variation		2.7–4.0 GHz		13		dBm
Input 3rd order intercept point (IIP3)		2.7–4.0 GHz		20		dBm
Control voltage			0.2		1.2	V

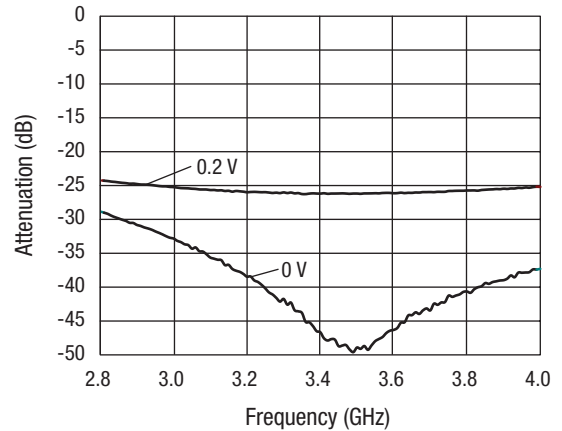
1. All measurements made in a 50 Ω system, unless otherwise specified.  
2. For worst case state.

[查询"SKY12146-321"供应商](#)

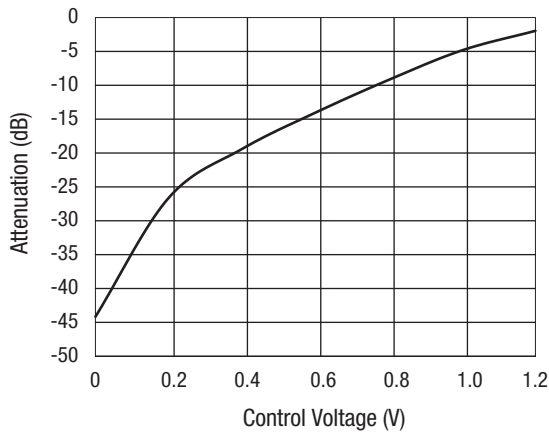
**Typical Performance Data at 25 °C**



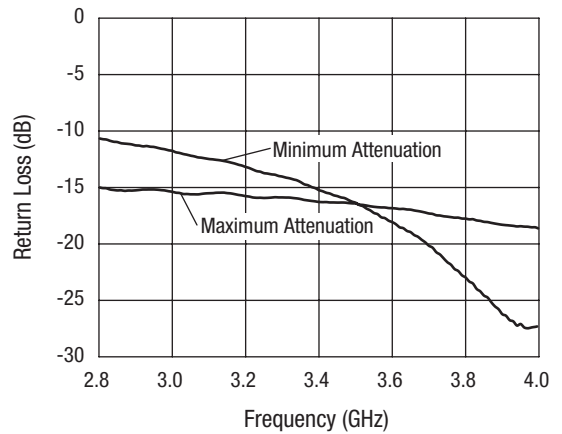
**Insertion Loss vs. Frequency**



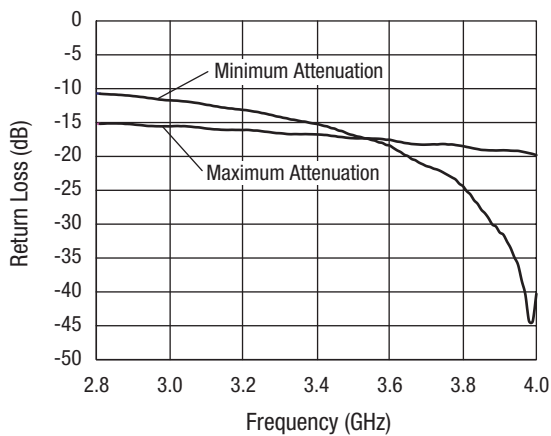
**Maximum Attenuation vs. Frequency**



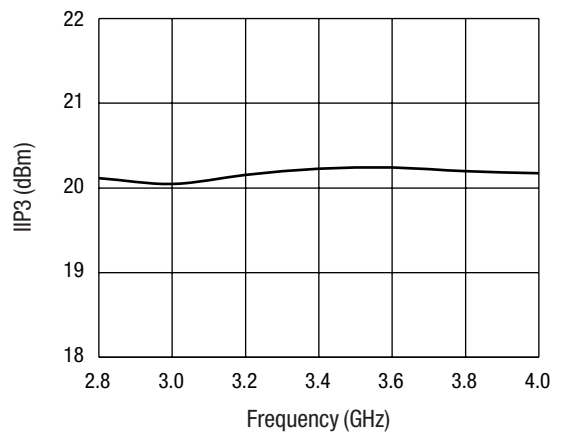
**Attenuation vs. Control Voltage**



**Input Return Loss vs. Frequency**



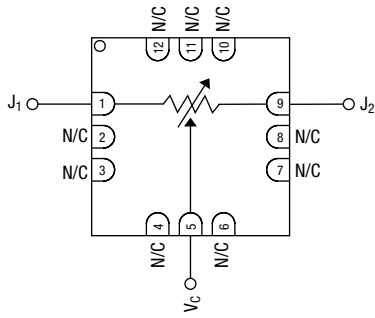
**Output Return Loss vs. Frequency**



**Input IP3 vs. Frequency**

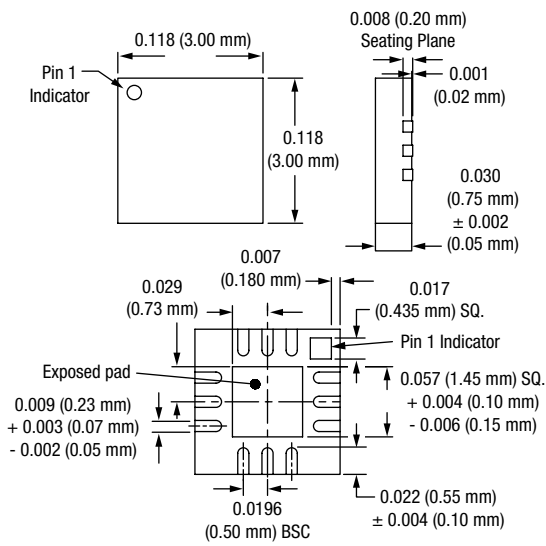
[查询"SKY12146-321"供应商](#)

**Pin Out**



Ground is connected to paddle on bottom.

**QFN-12**



**Evaluation Board Layout**

