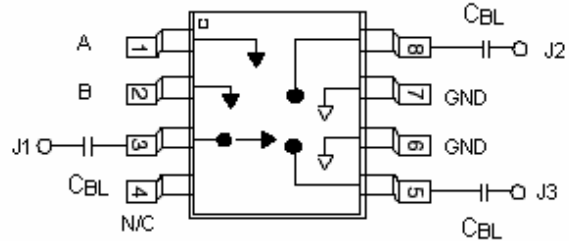


➤ **Features ver2.04**

- Two-way Control Voltage
- High Isolation (50dB@0.9GHz)
- Low Insertion Loss (0.7dB@0.9GHz)
- High Reliability and static Protection
- Reflective Switch
- MSOP-8 package.

➤ **Description**

**K107** is a GaAs MMIC SPDT switch in a low-cost SOIC-8 plastic package. The switch makes features with high isolation and low insertion loss with +5V control voltage operation. The switch is used in many various telecommunication applications include mobile telephone and GSM/CDMA base station.



DC blocking Capacitors (C<sub>BL</sub>) must be supplied for positive operation.  
C<sub>BL</sub>=100pF for operation >500MHz

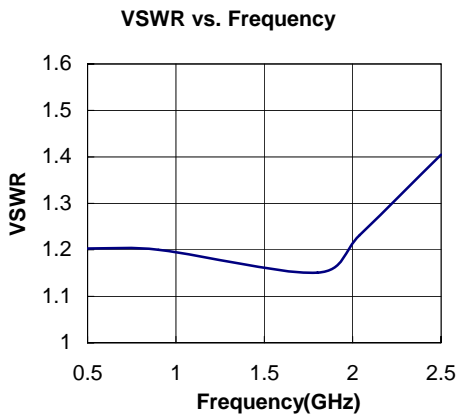
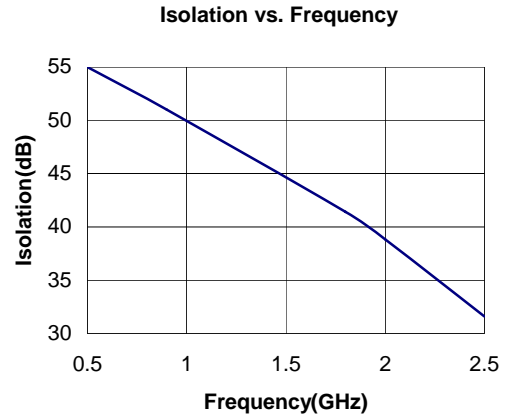
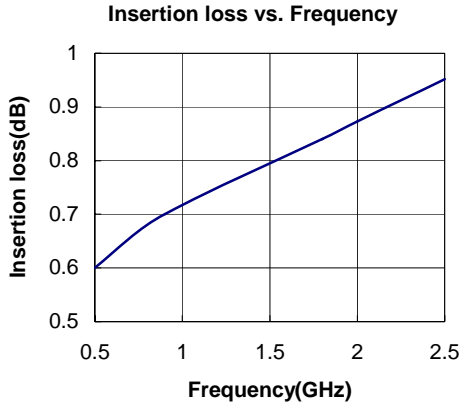
➤ **Typical Electrical Specification at 25°C (0, +5V)**

Characteristic		Frequency	Min.	Typ.	Max.	Unit
Insertion Loss		DC-1.0GHz		0.7	0.9	dB
		DC-2.0GHz		0.8	1.0	dB
		DC-2.5GHz		0.9	1.1	dB
Isolation		DC-1.0GHz	48	52		dB
		DC-2.0GHz	38	40		dB
		DC-2.5GHz	27	30		dB
VSWR <sup>4</sup>		DC-2.0GHz		1.2:1	1.4:1	
		DC-2.5GHz		1.4:1	1.6:1	
Witch Characteristic	Rise or Fall(10/90%or90/10 RF)			20		ns
	On or Off(10/90%or90/10 RF)			40		ns
IP <sub>3</sub>	Two-tone, input power +5dBm	0.5-2.0GHz		40		dBm
P <sub>-1</sub>	0/+5V Control Voltage	0.5-2.5GHz		23		dBm

1. All measurements in a 50-Ω system, unless otherwise specified.
2. DC=300kHz.
3. Insertion Loss changes 0.3dB at 85°C.
4. Insertion Loss state

➤ Typical Performance Curves

(0, +5V)



➤ Truth Table

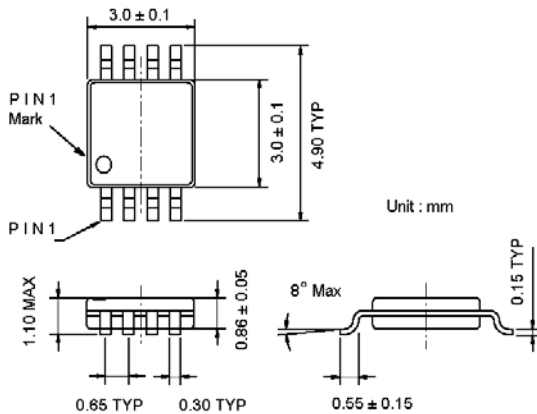
A	B	J <sub>1</sub> -J <sub>2</sub>	J <sub>1</sub> -J <sub>3</sub>
V <sub>HIGH</sub>	0	ON	OFF
0	V <sub>HIGH</sub>	OFF	ON

V<sub>HIGH</sub>=+5 to +7V (V<sub>S</sub>=V<sub>HIGH</sub>±0.2V).

➤ Absolute Maximum Ratings

Item	Value
RF Input Power	2W, >500MHz 0/+8V
Control Voltage	-0.2V, +8V
Operation Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
θ <sub>JC</sub>	25°C/W

➤ MSOP-8 Outline Dimension



- 1, Operation of this device above any one of these parameters may cause permanent damage.