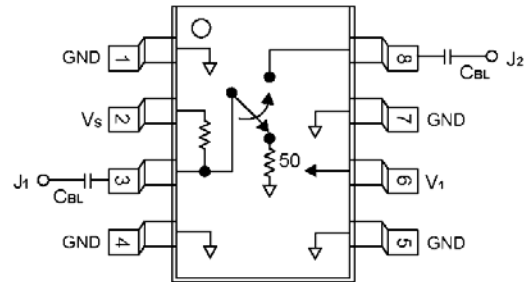


➤ **Features ver3.06**

- Positive Control Voltage
- High Isolation (45dB@0.9GHz, 47dB@1.8GHz)
- Low Insertion Loss (0.7dB@0.9GHz, 0.9dB@1.8GHz)
- J1 Port Non-Reflective
- SOIC- 8 Plastic Package
- High reliability, good antistatic
- Lead (Pb)-free, RoHS-compliant packaging



➤ **Description**

K104 is a GaAs MMIC SPST 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.

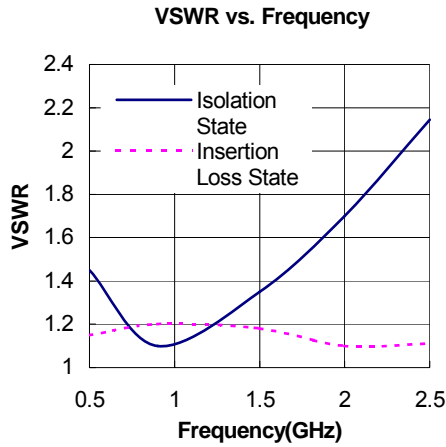
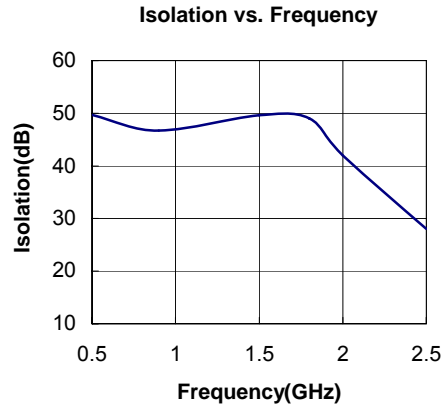
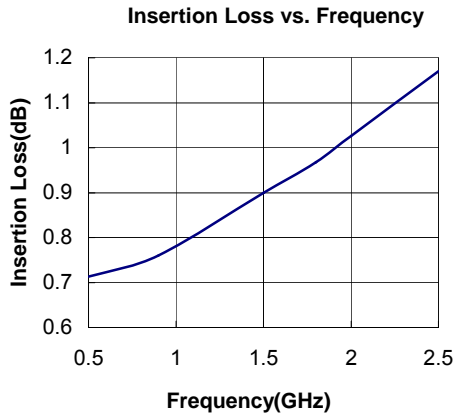
DC blocking Capacitors (C_{BL}) must be supplied for positive operation.
 $C_{BL}=100\text{pF}$ for operation $>500\text{MHz}$.

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

Parameter ¹	Frequency	Min.	Typ.	Max.	Units.
Insertion Loss ²	0.5-1.0GHz		0.7	0.9	dB
	1.0-2.0GHz		0.8	1.0	dB
	2.0-2.5GHz		1.2	1.3	dB
Isolation	0.5-1.0GHz	39	45		dB
	1.0-2.0GHz	42	47		dB
	2.0-2.5GHz	28	35		dB
VSWR ³	0.5-1.8GHz		1.5:1	1.7:1	
	1.8-2.5GHz		1.7:1	2.2:1	
Trise, Tfall	10%-90% or 90%-10 %RF		100		ns
Ton, Toff	50%CTL to 90/10% RF)		200		ns
IP ₃	Two-tone, input power +5dBm	0.5-2.0GHz	40		dBm
P ₋₁		0.5-2.0GHz	28		dBm
Control Voltages	$V_{LOW}=0-0.2V@20\mu A$ Max. $V_{HIGH}=+5V@20\mu A$ Max. to $+7V@100\mu A$ Max. $V_S=V_{HIGH}\pm 0.2V$				

1. All measurements in a 50-Ω system, unless otherwise specified.
2. Insertion Loss changes 0.3dB at 85°C.
3. Insertion Loss state and J1 port.

➤ **Typical Performance Curves**
(0, +5V)



➤ **Truth Table**

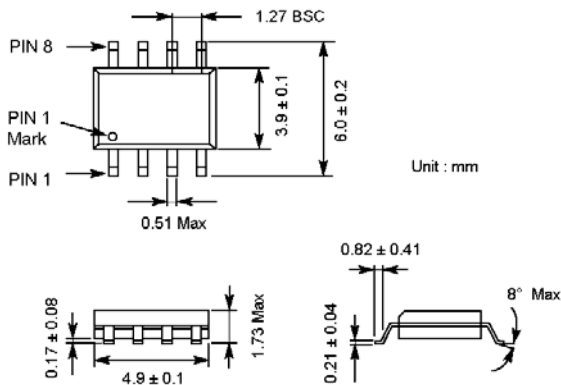
V ₁	J ₁ -J ₂
0	ON
V _{HIGH}	OFF

V_{HIGH}=+5 to +7V (V_s= V_{HIGH} ± 0.2V)

➤ **Absolute Maximum Ratings**

Characteristic	Value
Maximum Input Power	2 W Max. > 500 MHz, 0/+7V Control
Supply Voltage	+8V
Control Voltage	-0.2V, +8V
Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C
θ _{JC}	25°C/W

➤ **SOIC-8 Outline Dimension**



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