

GaAs Very Small 1bit Control SPDT Switch for 0.8~3.0GHz

□ **Applications**

SPDT for General Purpose

□ **Features**

- Positive Voltage Control.....+1.5Vmin.
- Low Insertion Loss.....0.28dBtyp. @1.0GHz
- High Isolation26.0dBtyp. @1.0GHz
- Small / Thin Package6 pin Leadless Package (1mm×1mm×0.4mm max,RoHS Compliant)
- MSL3

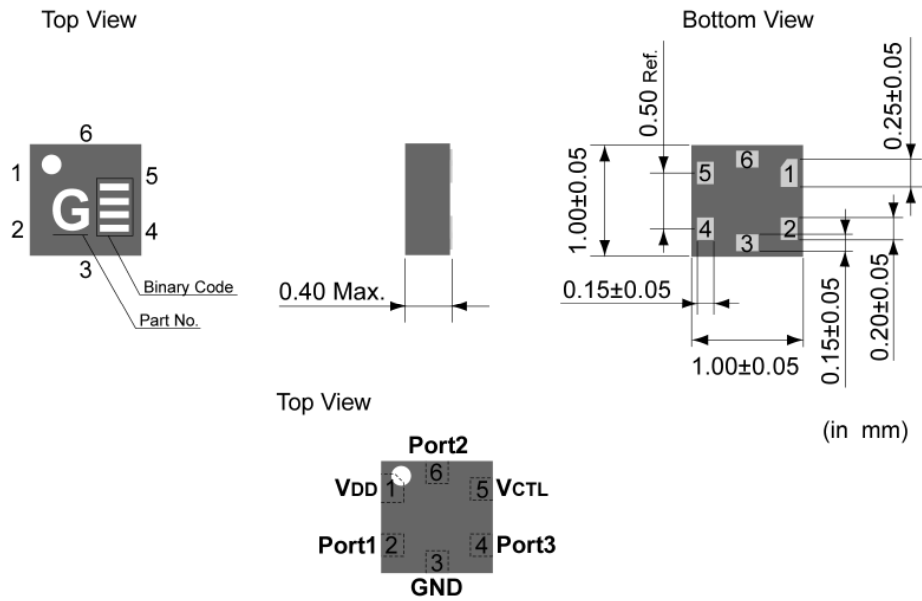
□ **Absolute Maximum Ratings**

Symbol	Parameter	Conditions	Rating	Unit
VDD	Supply Voltage	Ta = 25°C	2.0 to 4.0	V
VCTL(H)	Control Voltage (High)	Ta = 25°C, VCTL ≤ VDD	1.5 to 4.0	V
VCTL(L)	Control Voltage (Low)		-0.2 to 0.2	V
Pin	RF Input Power	Ta = 25°C VCTL(H) = 1.8V, VCTL(L) = 0V	+23dBm	dBm
Top	Operating Temperature	-	-40 to 85	°C
Tstg	Storage Temperature	-	-55 to 150	°C

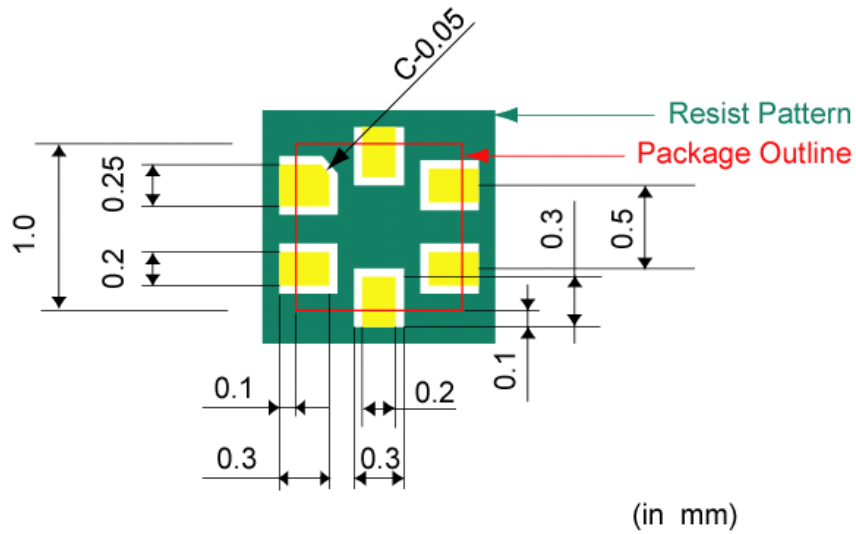
□ **Electrical Specifications (Ta=25°C, VDD=2.6V, VCTL(H)=1.5V, VCTL(L)=0V)**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
fo	Operation Frequency	-	0.8	-	3.0	GHz
IL	Insertion Loss	1.0GHz	-	0.25	0.50	dB
		2.0GHz	-	0.30	0.55	dB
		3.0GHz	-	0.38	0.55	dB
ISO	Isolation	1.0GHz	24.5	26.0	-	dB
		2.0GHz	18.5	21.0	-	dB
		3.0 GHz	16.0	18.0	-	dB

□ **Package Outline and Pin Connections**



□ **Land Pattern**

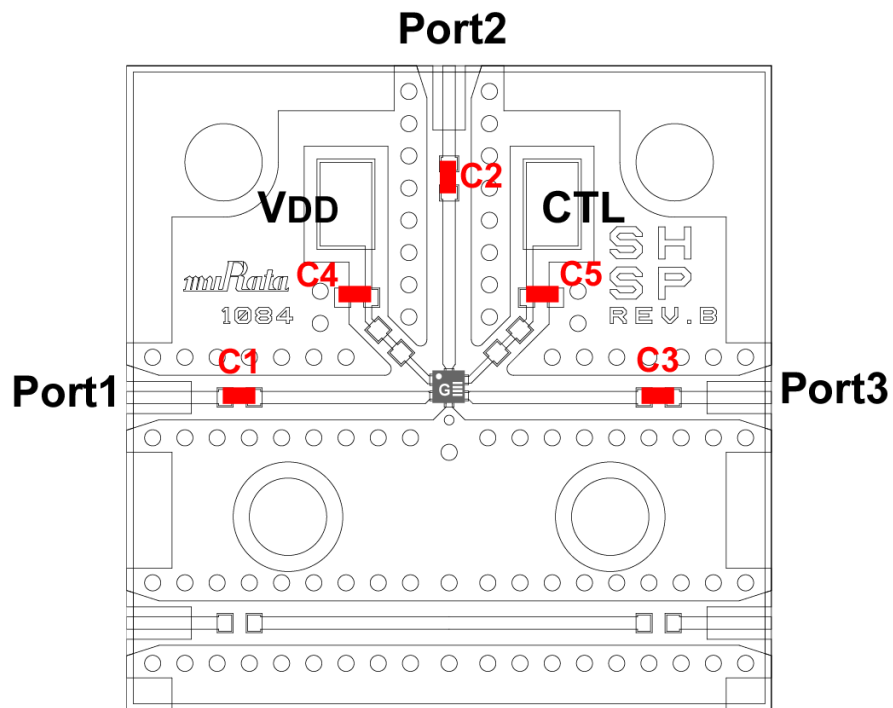


□ **Truth Table**

Path	VDD	CTL
Port2-Port1	H	H
Port2-Port3	H	L

H: 2.0 to 4.0V(VDD), 1.5 to VDDV (CTL)
L: 0V

□ **Evaluation Board**



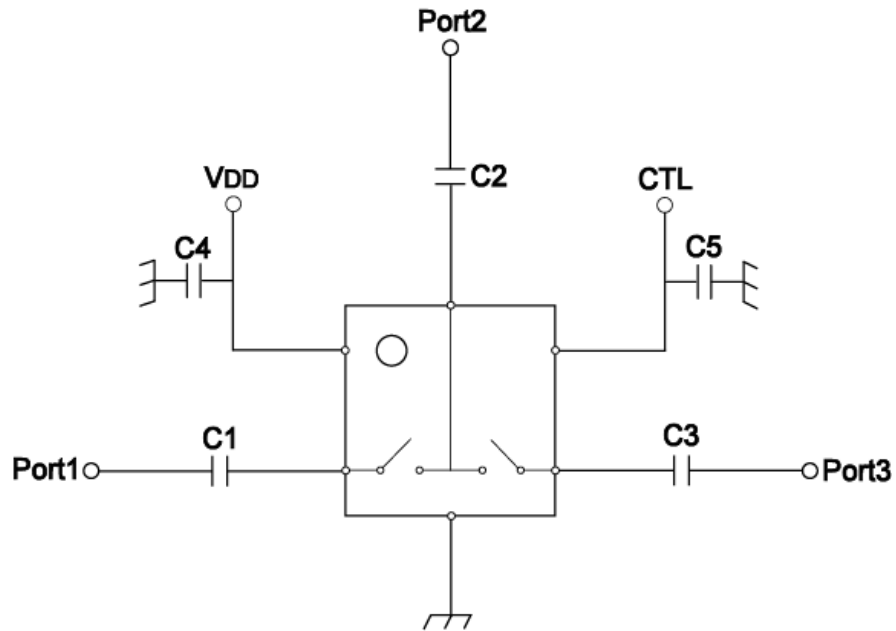
Parts List

Part No.	Products	Value
C1-C3	GRM155(Murata)	330 pF
C4, C5		100 pF

Substrate

FR4,
 $\epsilon_r = 4.4$
 Thickness = 0.2mm + 0.6mm(dummy)
 Metal Thickness: 18um
 Size=20mm x 20mm

□ Evaluation Circuit



*Note: C1,C2,C3: must be supplied as DC blocking cap.

**CAUTION -Limitation of Applications-**

The product is designed and manufactured for consumer application only and is not available for any application listed below which requires especially high reliability for the prevention of such defect as may directly cause damage to the third party's life, body or property.

- Aircraft equipment.
- Aerospace equipment.
- Undersea equipment.
- Medical equipment.
- Transportation equipment (vehicles, trains, ships, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.