

CMOS DP4T Switch for Wireless Communication

Applications

DP4T Switch for Rx portion.

Features

- Small Package10 pin Leadless Package
(1.55mm×1.15mm×0.4mm|max, RoHS Compliant)
- MSL3

Absolute Maximum Ratings

Symbol	Parameter	Conditions	Rating	Unit
Vdd	Supply Voltage	Ta = 25°C	4	V
CTL	Control Voltage	Ta = 25°C	4	V
Pin	RF Input Power	Ta = 25°C VDD = 2.7V CTL(H) = 1.8V, CTL(L) = 0V	20	dBm
Top	Operating Temperature	-	-40 to 85	°C
Tstg	Storage Temperature	-	-55 to 150	°C

DC Electrical Specifications

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit	
Vdd	Supply Voltage		1.6		3.8	V	
Idd	Supply Current	Ta = 25°C, Vdd = 2.7V CTL(H) = 1.8V, CTL(L) = 0V	-	0.6	2	uA	
CTL(H)	Control Voltage (High)	Ta = -40~85°C, VDD = 1.6~3.8V	1.3	1.8	3.8	V	
CTL(L)	Control Voltage (Low)	Ta = -40~85°C	1.6V ≤ Vdd < 2.3V	-0.2	0	0.3	V
			2.3V ≤ Vdd ≤ 3.8V	-0.2	0	0.45	V
Ictl	Control Current	Ta = 25°C, Vdd = 2.7V CTL(H) = 1.8V, CTL(L) = 0V	-	0.01	0.2	uA	

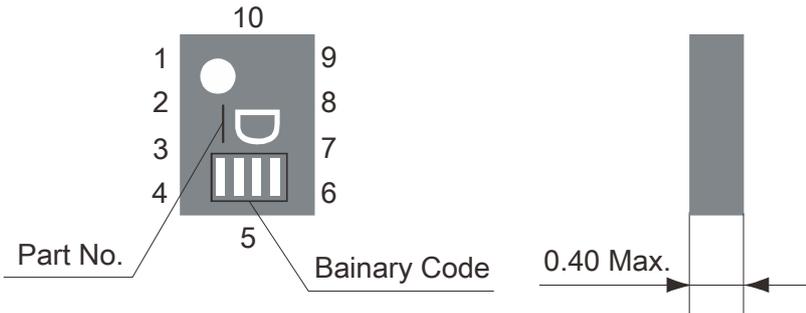
Electrical Specifications

(Ta=25°C, VDD=2.7V, VCTL(H)=1.8V, VCTL(L)=0V, Pin=0dBm)

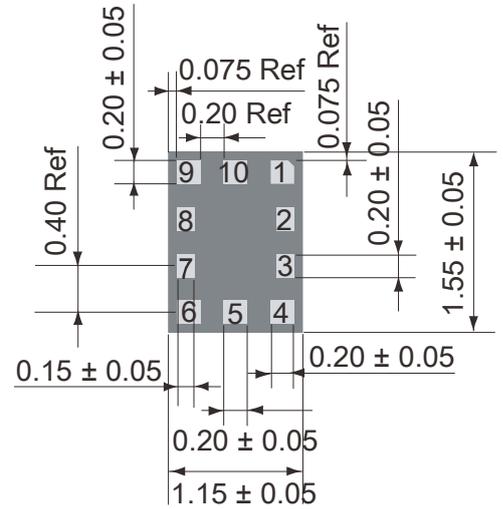
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
IL	Port1 ± to Port2,3 ± Pin=0dBm (Differential Mode)	0.1-1GHz		0.23	0.40	dB
		2GHz		0.26	0.50	dB
		2.7GHz		0.28	0.50	dB
ISO	Port1 ± to Port2,3 ± Pin=0dBm (Differential Mode)	0.1-1GHz	40	42		dB
		2GHz	34	36		dB
		2.7GHz	31	33		dB

Package Outline and Pin Connections

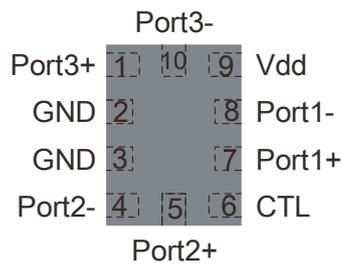
Top View



Bottom View

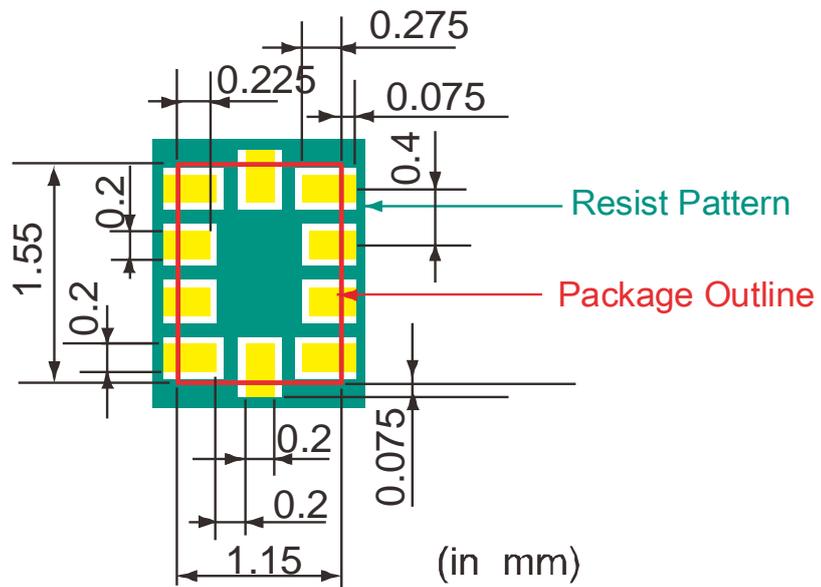


Top View



(in mm)

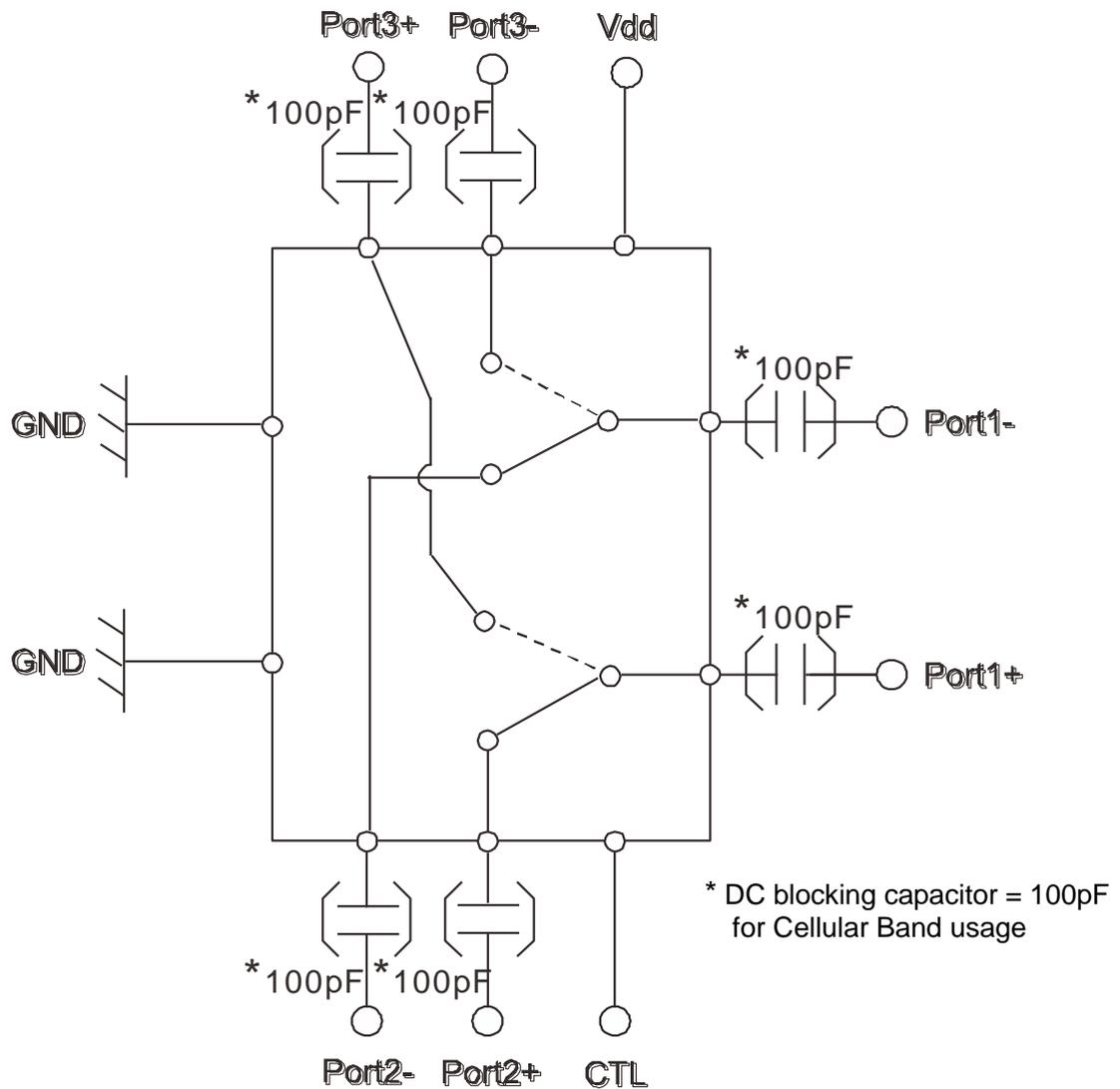
Land Pattern



Truth Table

Mode	Vdd	CTL
Port1-Port3	H	H
Port1-Port2	H	L

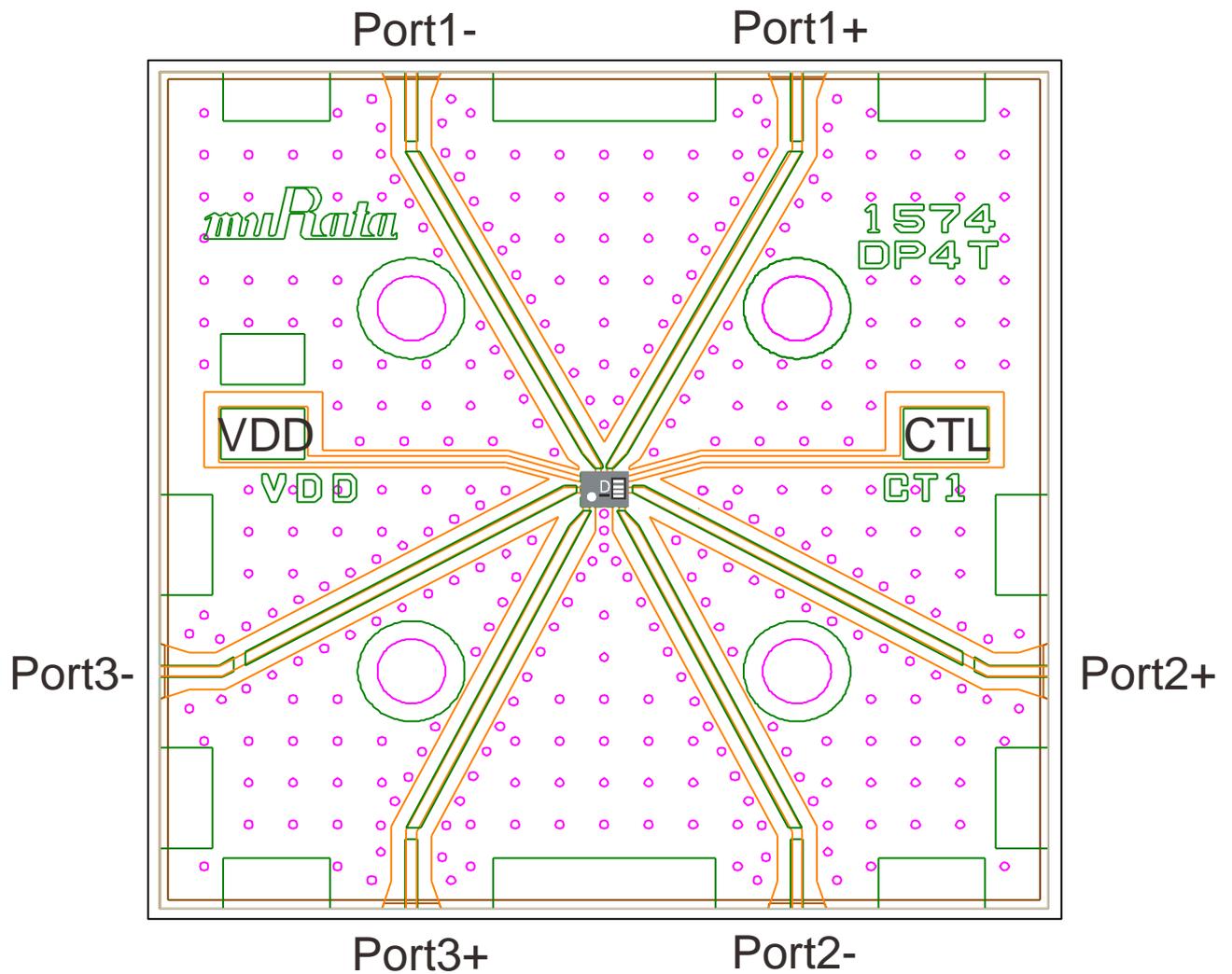
Evaluation Circuit



These additional parts below are NOT required.

1. DC blocking capacitors on RF ports can be removed if DC Voltage from external = 0V.
2. DC bypass capacitors on Vdd & control lines are not required.

Evaluation Board



Substrate

Material : FR4 ($\epsilon_r=4.4$)

Size : 30mm \times 30mm

Thickness : 0.2mm + Dummy 0.4mm



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- Burning / explosion control equipment
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