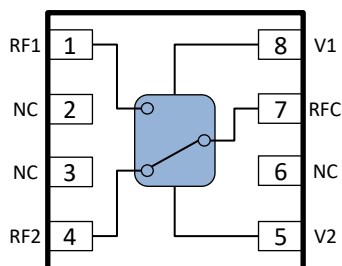


Description

YC402 is a high power single-pole, double-throw RF switch for cellular infrastructure applications in 100MHz to 6000MHz with low insertion loss and high linearity.

YC402 is manufactured in a GaAs pHEMT process, 2.0 x 2.0 mm, 8-pin Dual Flat No-Lead (DFN) package.



Applications

- ◆ Cellular infrastructure
- ◆ Wireless Access Points
- ◆ ISM Band Transmitter
- ◆ Customer Equipment

Features

- ◆ 3.3V to 5.0V
- ◆ 36dBm input P0.1dB
- ◆ 45dB isolation at 900MHz
- ◆ two control voltage inputs

Electrical Specification

Parameter	Specification			Conditions	Unit
	Min.	Typ.	Max.		
Operational Frequency Range	100		6000		MHz
Insertion Loss		0.9			dB
Input P0.1dB		36		3500MHz, pulsed CW(10uS, 0.1%)	dBm
IIP3 ²⁾		60		3500MHz, Pin=30dBm	dBm
Isolation		-40		Input=0dBm, 1800MHz	dB
Harmonics (2 nd , 3 rd)		-90		Input=0dBm, 2600MHz	dBc
Input Return Loss		-17		Input=0dBm	dB
Output Return Loss		-17		Input=0dBm	dB
Switching Speed High		300		50% CTL to 90/10% RF	nS
Switching Speed Low		100		90/10% RF to 10/90% RF	nS
Control Voltage		5			V

Notes:

1) Test conditions unless otherwise noted : V1, V2 = 5V, Temp. = 25°C, Z₀ = 50Ω.

2) 2-tone 1MHz spacing at Pin=27dBm/tone.

Recommended Operating Condition

Parameter	Min	Typ	Max	Units
Device Voltage		5.0		V
Operating Temperature	-40	25	85	°C
Storage Temperature	-55		150	°C

Absolute Maximum Ratings

Parameter	Rating	Units
Device Voltage	5.5	V
Supply Current	10	mA
Junction Temperature	180	°C
RF Input Power (CW)	36	dBm

Truth Table

Control		Status	
V1	V2	RFC to RF1	RFC to RF2
High	Low	ON	OFF
Low	High	OFF	ON

Notes:

1) Status is off for other cases.

MSL Rating

MSL Rating : TBD

Test : TBD

Standard : TBD

ESD Sensitivity Ratings

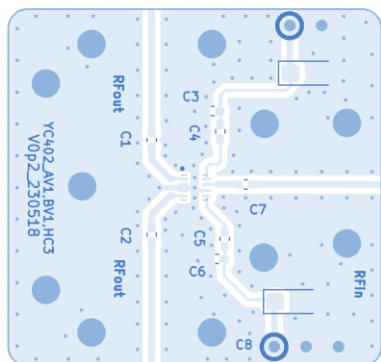
ESD Rating : TBD

Test : TBD

Standard : TBD



Evaluation Board PCB Information



Note:

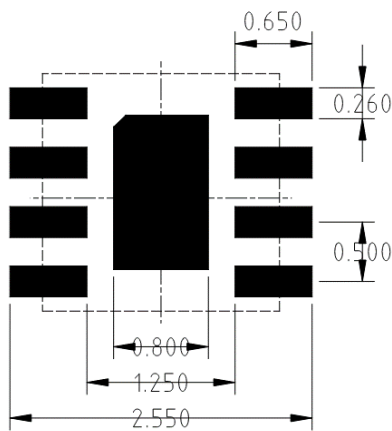
- 1) Transmission Line Width : 0.535 mm
- 2) PCB Thickness : 1.576 mm

Layer		Material	Layer Thickness (mm)	Note
Top	Copper	RO4350B	0.018	½ oz
Core	Core		0.254	10 mil
Inner 1	Copper		0.018	½ oz
Prepreg	Prepreg	FR4	0.200	
Inner 2	Copper	FR4	0.018	½ oz
Core	Core		1.050	
Bottom	Copper		0.018	½ oz

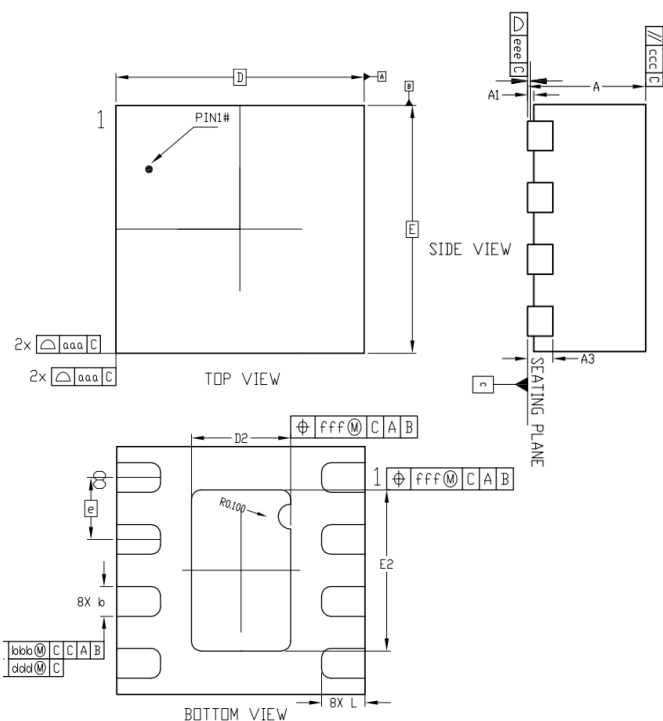
Package Marking



PCB Land Pattern



Package Outline Drawing



DIM SYMBOL	MIN.	NOM.	MAX.
A	0.80	0.85	0.90
	0.70	0.75	0.80
A1	0	0.02	0.05
A3	-	0.20 REF	-
b	0.19	0.24	0.29
D	2.00BSC		
E	2.00BSD		
E2	1.25	1.30	1.35
D2	0.75	0.80	0.85
e	0.50BSC		
L	0.30	0.35	0.40
K	0.20		
aaa	0.15		
bbb	0.10		
ccc	0.10		
ddd	0.05		
eee	0.08		
fff	0.10		