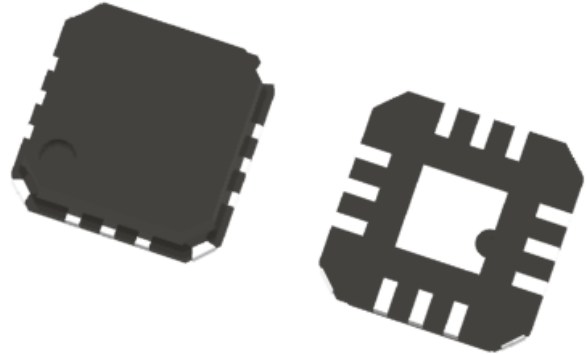


**FEATURES**

- Low Insertion Loss: 0.8 dB at 2.4 GHz
- and 1.0 dB at 4.9 to 6.0 GHz
- High Isolation: 25 dB at 2.4 GHz
- and 20 dB at 4.9 to 6.0 GHz
- GaAs PHEMT technology
- Miniature QFN-12 Plastic Package



**3.0 mm x 3.0 mm x 0.9mm**

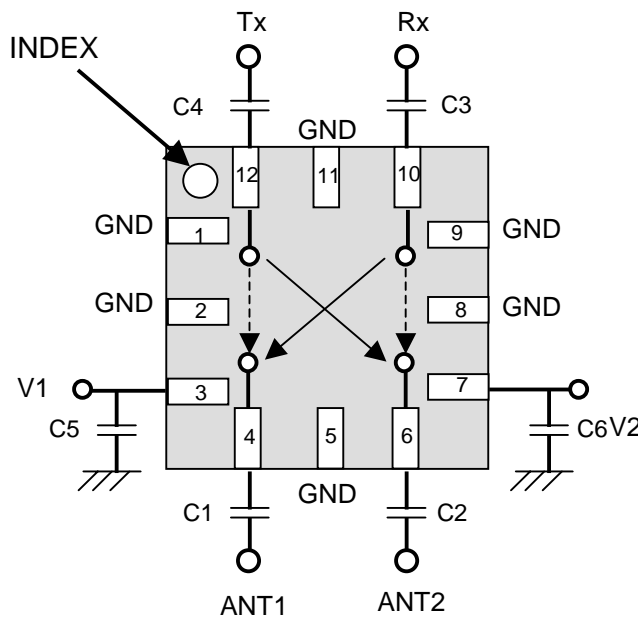
**Lead Free Package**

**APPLICATIONS**

802.11a,b,g Wireless LAN T/R switching

**DESCRIPTION**

ES/EMM5322ZU is a DPDT GaAs PHEMT switch designed for transmit / receive and diversity switching in 0.1GHz to 6 GHz range. ES/EMM5322ZU is ideally suited for applications where low profile and small size are critical. It also features high linearity, low control voltage, low insertion loss, and high isolation. Typical applications are for WLAN IEEE 802.11a/b/g systems that employ two antennas for transmit and receive diversity. The device is in low-cost miniature 12-lead 3.0mm x 3.0mm package.



C1-C4: DC Blocking Capacitors  
C5-C6: Bypass Capacitors

**Function Block Diagram(Top View)**

Pin No.	Pin Name	Description
1	GND	Ground
2	GND	Ground
3	V1	Control 1
4	ANT1	Antenna Port 1
5	GND	Ground
6	ANT2	Antenna Port 2
7	V2	Control 2
8	GND	Ground
9	GND	Ground
10	Rx	Receive Port 1
11	GND	Ground
12	Tx	Transmit Port
13	GND(Paddle)	Ground

**Pin Configuration**

**TARGET SPECIFICATIONS****ABSOLUTE MAXIMUM RATINGS (Ambient Temperature Ta=25°C)**

Parameter	Symbol	Rating	Unit
DC Input Voltage	V1, V2	+6	V
Input Power	Pin	+32	dBm
Storage Temperature	Tstg	-40 to +85	°C
Operating Case Temperature	Top	-40 to +85	°C

**ELECTRICAL SPECIFICATIONS (Case Temperature Tc=25°C)**

Parameter	Symbol	Condition/comments	Min	Typ	Max	Unit
Frequency range	F		0.1		6.0	GHz
Insertion Loss	I.L.	2.4 - 2.5 GHz	-	0.80	-	dB
		4.9 – 6.0 GHz	-	1.00	-	dB
Isolation	ISO	2.4 - 2.5 GHz	-	25	-	dB
		4.9 – 6.0 GHz	-	20	-	dB
Return Loss	RL	2.4 - 2.5 GHz	-	23	-	dB
		4.9 – 6.0 GHz	-	15	-	dB
Control Voltage V1 V2	Vhigh	High	2.5	2.8	3.6	V
	Vlow	Low	-0.2	0	+0.2	V
Input P0.1dB	P0.1dB	Vhigh=2.8V, Vlow=0V	-	31	-	dBm
Control Current	Icontrol	Vhigh=2.8V, Vlow=0V	-	15	-	uA

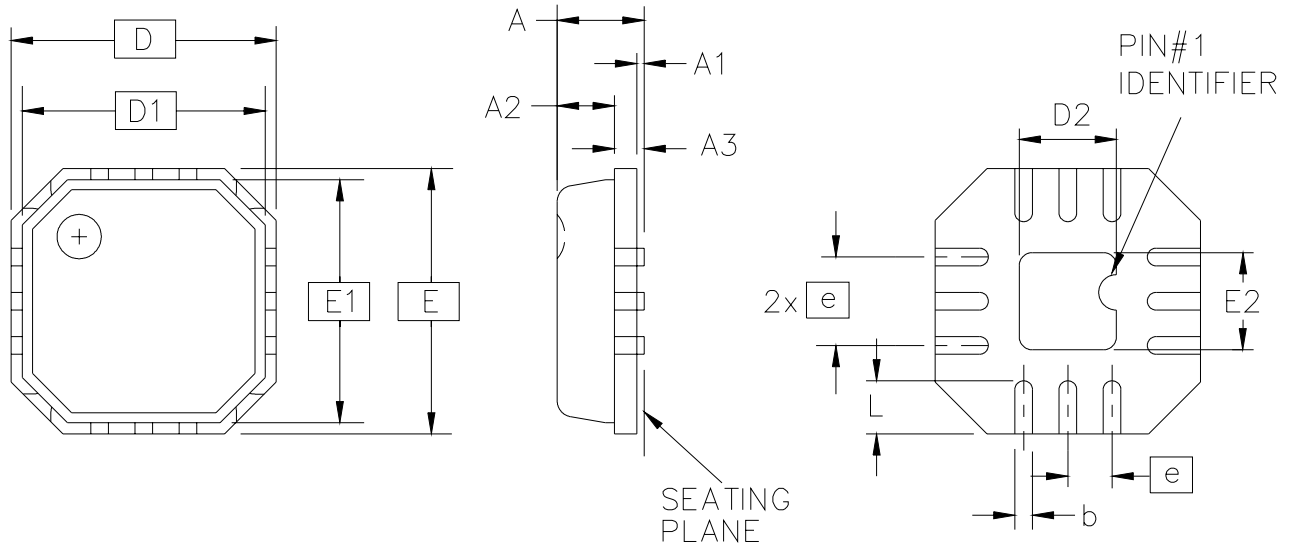
(Unless otherwise specified Zsource=Zload=50Ω System, Tc=25°C)

**TRUTH TABLE**

V1	V2	ANT1 - Rx	ANT1 - Tx	ANT2 - Tx	ANT2 - Rx
High	Low	ON	OFF	ON	OFF
Low	High	OFF	ON	OFF	ON

Specifications are subject to change without notice.

**PACKAGE DIMENSIONS**



Dimension Symbol	Measurement (mm)		
	Min	Nom	Max
A	-	0.85	0.90
A1	0.00	0.01	0.05
A2	-	0.65	0.70
A3	0.20 REF		
b	0.18	0.23	0.30
D	3.00 BSC		
D1	2.75 BSC		
D2	1.15	1.30	1.45
E	3.00 BSC		
E1	2.75 BSC		
E2	1.15	1.30	1.45
e	0.50 BSC		
L	0.50	0.60	0.75