

FEATURES

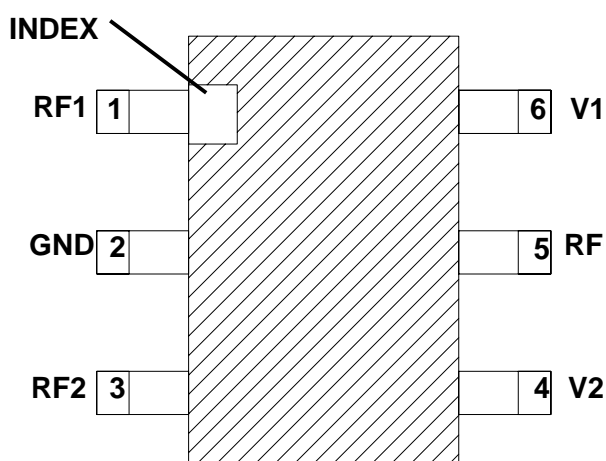
- Low Insertion Loss: 0.45 dB at 2GHz
- Low voltage operation: 2.5 V
- Low Harmonics: -70 dBc at +34 dBm
- High Isolation: 20 dB at 2 GHz
- Miniature SC-70 plastic package
- GaAs PHEMT technology



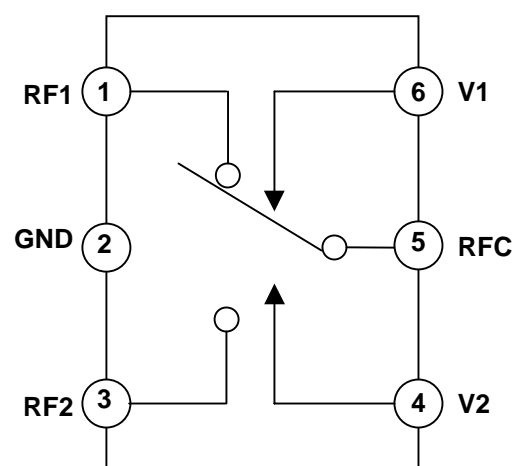
**2.0 mm x 2.1 mm x 1.0 mm
Lead (Pb) Free Package**

DESCRIPTION

ES/FMM5320ZW is a high power single-pole double-throw (SP2T) GaAs PHEMT switch designed for transmit / receive switching applications in the 0.5 GHz to 2.0GHz range. The ES/FMM5320ZW is ideally suited for applications where high linearity, low control voltage, low insertion loss, high isolation, small size, and low cost are required. Typical applications include UMTS, GSM, and CDMA handset systems. The device is in a low-cost miniature 6 pin SOT-363 / SC-70 package.



**Pin Configuration
(Top view)**



Function Block Diagram

TARGET SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature $T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Rating	Unit
DC Input Voltage	V1, V2	+6	V
Input Power	Pin	+38	dBm
Storage Temperature	Tstg	-40 to +85	$^{\circ}\text{C}$
Operating Case Temperature	Top	-40 to +85	$^{\circ}\text{C}$

ELECTRICAL SPECIFICATIONS (Case Temperature $T_c=25^{\circ}\text{C}$)

Parameter	Symbol	Condition/comments	Min	Typ	Max	Unit
Frequency range	F		0.5		2.0	GHz
Control Voltage for V1 & V2	Vhigh Vlow	High Low	2.5 -0.2	2.8 0	5.3 +0.2	V
Control Current (per line)	Icontrol	No RF, V1 or V2 = 2.8 V		20	40	uA
Input P-0.1dB	P0.1dB	0.9 GHz, 2.8/0V		35		dBm
2 nd Harmonic	2HD	0.9 GHz, Pin=+34 dBm Vhigh=2.8V, Vlow=0V		75		dBc
3 rd Harmonic	3HD			70		dBc
Insertion Loss	I.L.	DC - 1.0 GHz DC - 2.0 GHz		0.40 0.45		dB
Isolation	ISO	DC - 1.0 GHz DC - 2.0 GHz		26 20		dB
Return Loss	RL	Freq = 0.5 to 2.0GHz		22		dB
Switching Speed	Ton	50% Vcontrol to 90% RF		50		nsec
	Toff	50% Vcontrol to 10% RF		50		

(Unless otherwise specified Zsource=Zload=50 Ω System, $T_c=25^{\circ}\text{C}$)

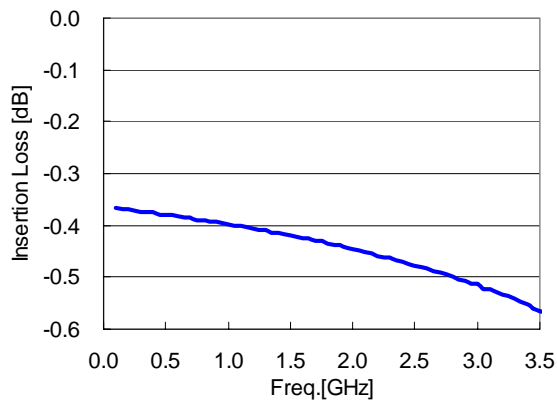
TRUTH TABLE

V1	V2	RF1-RFC	RF2-RFC
LOW	HIGH	OFF	ON
HIGH	LOW	ON	OFF

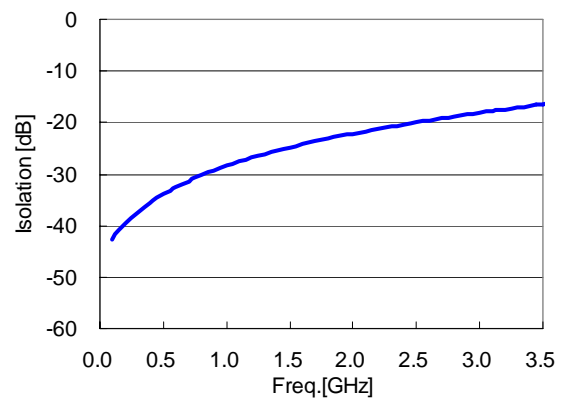
Specifications and pin assignment may be changed without notice.

TYPICAL PERFORMANCE CURVES

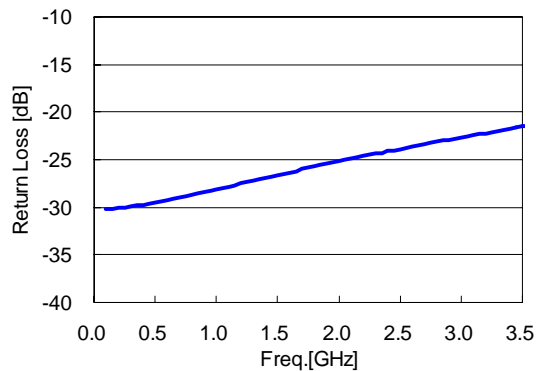
Insertion Loss vs. Frequency



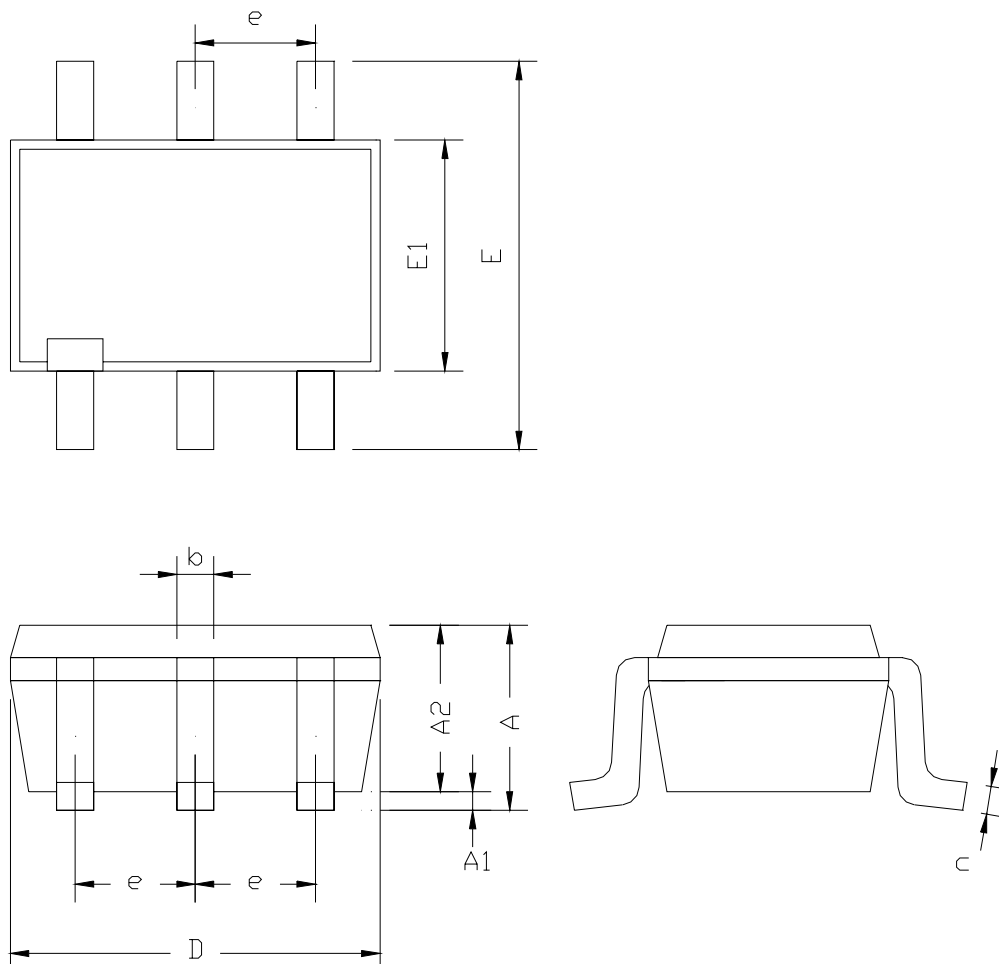
Isolation vs. Frequency



Return Loss vs. Frequency



PACKAGE DIMENSIONS (Top View)



Dimension Symbol	Measurement (mm)		
	Min	Nom	Max
A	-	-	1.00
A1	0.025	0.075	0.10
A2	0.85	0.88	0.90
b	0.15	-	0.30
c	0.10	-	0.20
D	1.90	2.00	2.10
E	2.10 BSC		
E1	1.25	1.30	1.35
e	0.65 BSC		