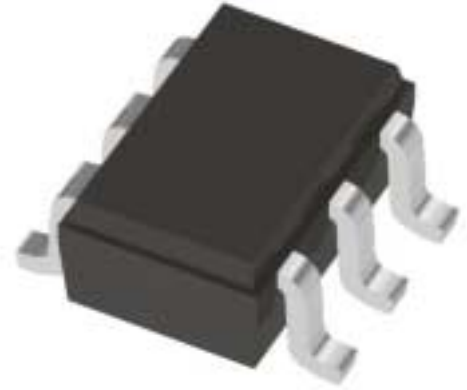


**FEATURES**

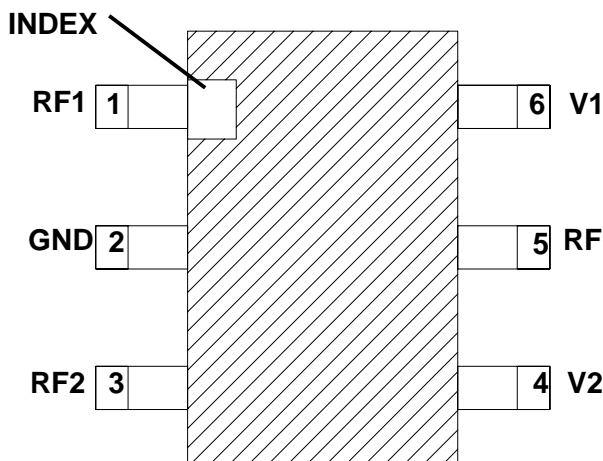
- Low Insertion Loss: 0.45 dB at 2GHz
- Low voltage operation: 2.5 V
- Low Harmonics: -70 dBc at +34 dBm
- High Isolation: 20 dB at 2 GHz
- Miniature SC-70 plastic package
- GaAs PHEMT technology



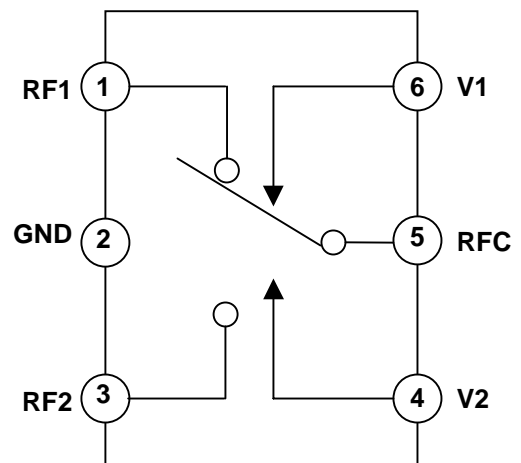
**2.0 mm x 2.1 mm x 1.0 mm  
Lead (Pb) Free Package**

**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 Ta=25°C)**

Parameter	Symbol	Rating	Unit
DC Input Voltage	V1, V2	+6	V
Input Power	Pin	+38	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		0.5		2.0	GHz
Control Voltage for V1 & V2	Vhigh	High	2.5	2.8	5.3	V
	Vlow	Low	-0.2	0	+0.2	
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 <sup>nd</sup> Harmonic	2HD	0.9 GHz, Pin=+34 dBm Vhigh=2.8V, Vlow=0V		75		dBc
3 <sup>rd</sup> Harmonic	3HD			70		dBc
Insertion Loss	I.L.	DC - 1.0 GHz		0.40		dB
		DC - 2.0 GHz		0.45		
Isolation	ISO	DC - 1.0 GHz		26		dB
		DC - 2.0 GHz		20		
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=50Ω System, Tc=25°C)

**TRUTH TABLE**

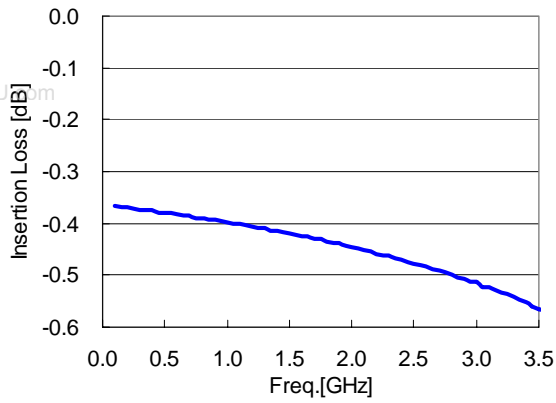
V1	V2	RF1-RFC	RF2-RFC
LOW	HIGH	OFF	ON
HIGH	LOW	ON	OFF

Specifications and pin assignment may be changed without notice.

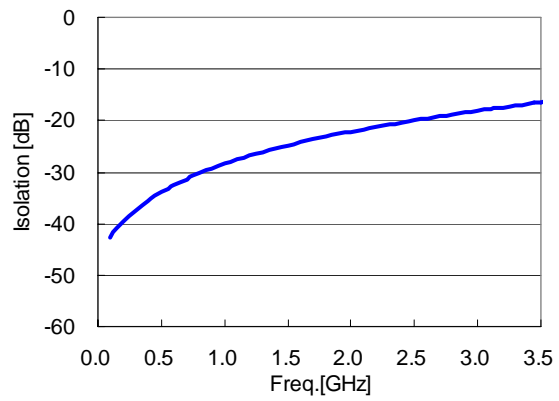


**TYPICAL PERFORMANCE CURVES**

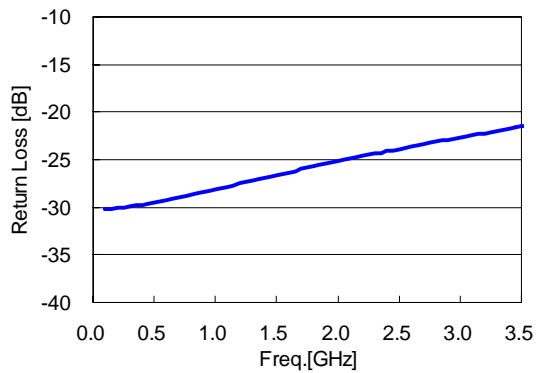
**Insertion Loss vs. Frequency**



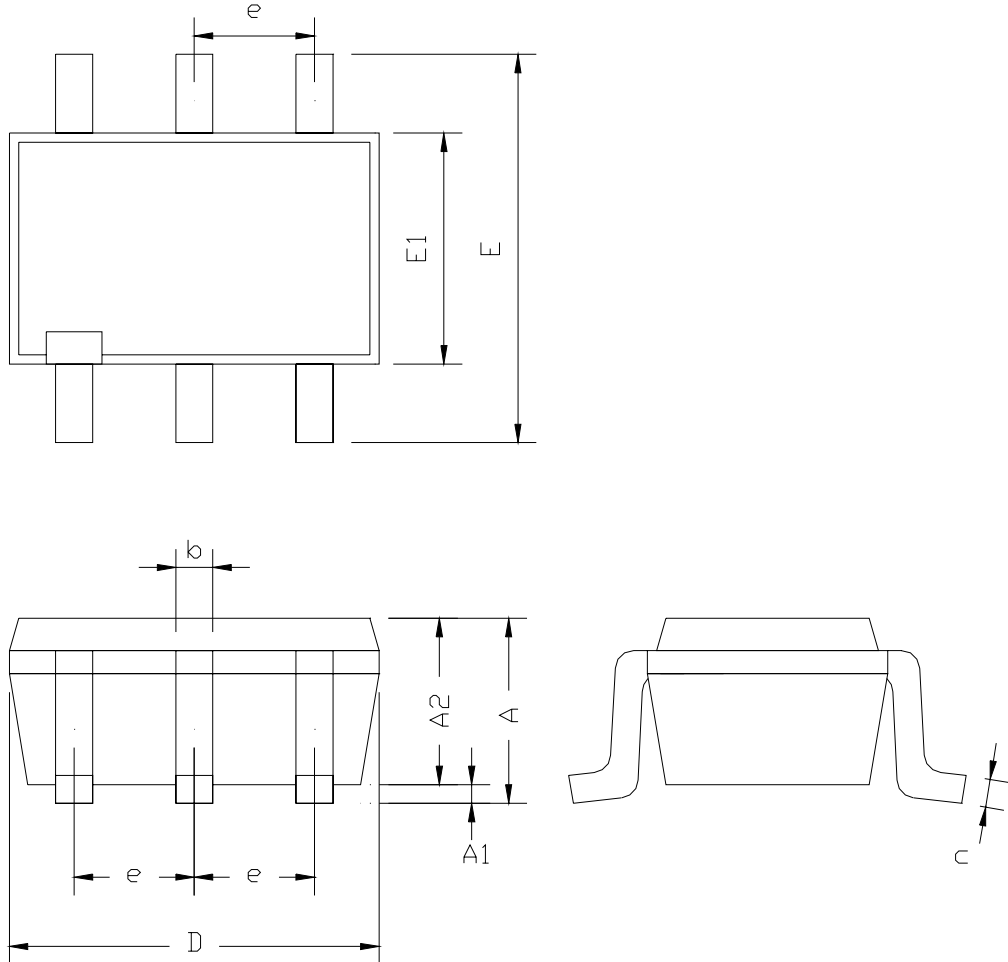
**Isolation vs. Frequency**



**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		