

# Coaxial Switch

# ZMSW-1111

## 50Ω SPST Pin Diode Reflective 10 to 2500 MHz

### Maximum Ratings

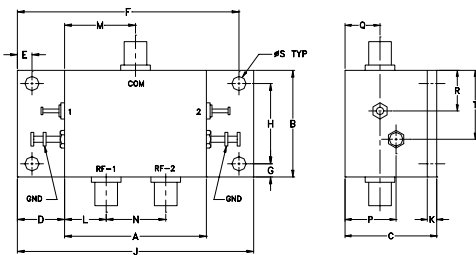
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power	+20 dBm
Control Current	5mA

Permanent damage may occur if any of these limits are exceeded.

### Coaxial/Pin Connections

RF IN	COM
RF OUT 2	RF-2
CONTROL 1	1
CONTROL 2	2

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	
1.50	1.13	.97	.50	.155	2.345	.14	.850	2.50	
38.10	28.70	24.64	12.70	3.94	59.56	3.56	21.59	63.50	
K	L	M	N	P	Q	R	S	T	wt
.10	.44	.75	.63	.54	.37	.43	.150	.73	grams
2.54	11.18	19.05	16.00	13.72	9.40	10.92	3.81	18.54	50.0

### Features

- wideband, 10 to 2500 MHz
- good isolation, 35 dB typ.

### Applications

- UHF/VHF
- satellite communications
- antenna switching
- test set-ups



CASE STYLE: JJ77

Connectors	Model
SMA	ZMSW-1111

### Electrical Specifications

MODEL NO.	FREQ. (MHz)		INSERTION LOSS (dB)				IN-OUT ISOLATION (dB)					
			Low band lw		Upper band U		Frequency Band					
			Typ.	Max.	Typ.	Max.	L		M		U	
ZMSW-1111	10	2500	1.1	1.9	1.9	2.7	50	45	35	28	28	22

L= low range( $f_L$  to  $10 f_L$ )

M=mid range( $10 f_L$  to  $f_U/2$ )  
lw=low band ( $f_L$  to  $f_L/2$ )

U=upper range ( $f_U/2$  to  $f_U$ )

### Additional Specifications

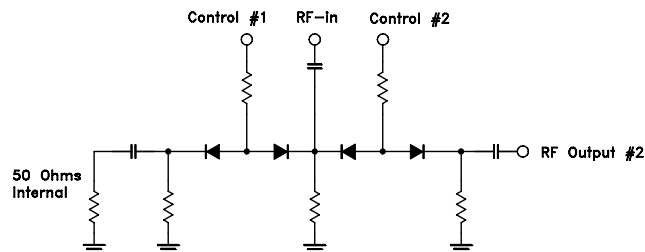
VSWR ("ON" STATE)	1.7 Max.
SWITCHING TIME (μSEC)	4 Max.
RISE TIME (μSEC)	2 Typ.
CONTROL VOLTAGE	
ON condition	+5V
OFF condition	0V
1 dB COMPRESSION	
10 to 200 MHz	+6 increasing to +19 dBm
Above 200 MHz	+19 dBm min.

### LOGIC

	CON-TROL 1	CON-TROL 2	RF-2
State 1:	0V	+5V	ON
State 2:	+5V	0V	OFF*

\*Absorptive at RF IN

### Electrical Schematic



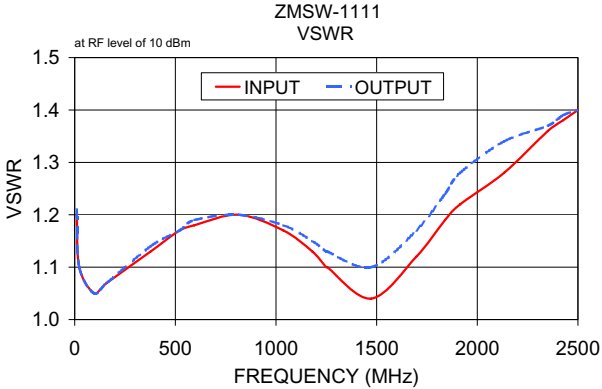
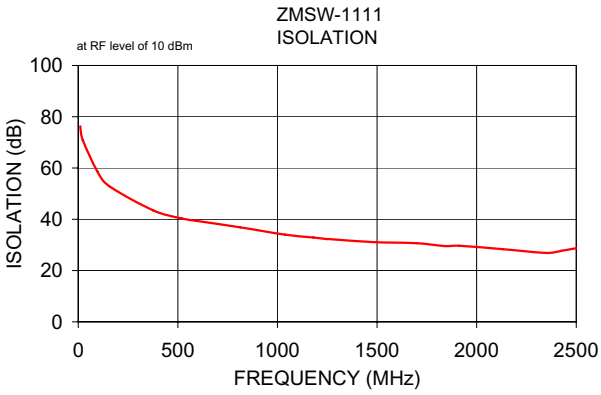
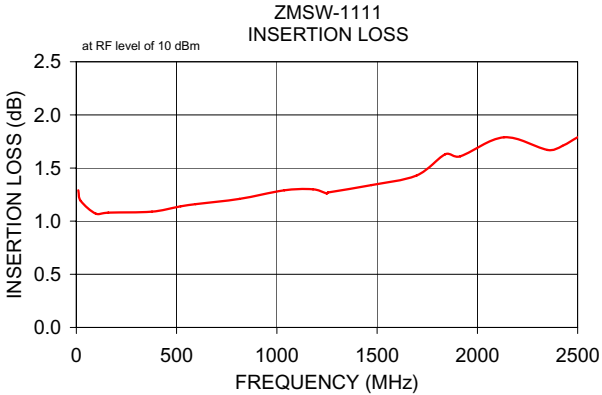
### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)



### Typical Performance Data

FREQ. (MHz)	ON INSERTION LOSS (dB) (Ctrl1 @ 0V, Ctrl2 @ 5V)		OFF ISOLATION (dB) (Ctrl1 @ 5V, Ctrl2 @ 0V)		VSWR		
	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	IN	OUT	OFF
10.00	1.29	0.11	76.25	6.59	1.20	1.21	30.07
22.45	1.19	0.10	70.93	4.23	1.10	1.10	30.07
97.15	1.07	0.07	58.52	1.61	1.05	1.05	27.77
159.40	1.08	0.05	52.73	1.00	1.07	1.07	25.87
377.28	1.09	0.06	43.44	0.67	1.13	1.14	19.20
520.45	1.14	0.05	40.30	0.80	1.17	1.17	15.71
595.15	1.16	0.06	39.39	0.70	1.18	1.19	14.22
813.03	1.21	0.06	36.87	0.68	1.20	1.20	11.58
1037.13	1.29	0.06	34.02	0.70	1.17	1.18	10.27
1180.30	1.30	0.06	32.88	0.61	1.13	1.15	10.35
1248.78	1.26	0.06	32.28	0.66	1.10	1.13	10.47
1255.00	1.27	0.06	32.32	0.69	1.10	1.13	10.50
1472.88	1.34	0.05	31.11	0.62	1.04	1.10	12.99
1696.98	1.43	0.07	30.68	0.62	1.12	1.17	23.96
1840.15	1.63	0.09	29.53	0.60	1.19	1.24	76.42
1914.85	1.61	0.08	29.66	0.67	1.22	1.28	429.47
2132.73	1.79	0.09	28.33	0.92	1.28	1.34	42.78
2350.60	1.67	0.07	26.88	1.15	1.36	1.37	205.26
2425.30	1.71	0.07	27.69	1.12	1.38	1.39	152.56
2500.00	1.79	0.09	28.69	1.09	1.40	1.40	62.42



Notes  
 A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
 C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)