

Coaxial Switch

ZFSWA-2-46

50Ω SPDT, Absorptive DC to 4.6 GHz

Maximum Ratings

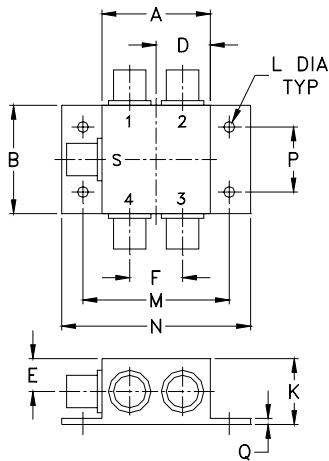
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 150°C
Input Power	see Note 1
Control V	see Note 2

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

Coaxial Connections

RF IN	S
RF OUT 1	3
RF OUT 2	2
CONTROL 1	4
CONTROL 2	1

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	
1.25	1.25	--	.63	.38	.61	--	--	
31.75	31.75	--	16.00	9.65	15.49	--	--	
J	K	L	M	N	P	Q	wt	
--	.76	.125	1.688	2.18	.75	.07	grams	
--	19.30	3.18	42.88	55.37	19.05	1.78	85.0	

Features

- wideband, DC to 4.6 GHz
- high isolation, 50 dB typ.
- low video leakage, 30 mVp-p typ.
- excellent VSWR, 1.3:1 typ.

Applications

- instrumentation
- communication systems
- laboratory



CASE STYLE: G144

Connectors	Model	Price	Qty.
SMA	ZFSWA-2-46	\$89.95	(1-9)

Electrical Specifications

FREQ. (GHz)	INSERTION LOSS (dB)						1dB COMPR. (dBm)			IN-OUT ISOLATION (dB)					
	DC-200 MHz	200-1000 MHz	1000-4600 MHz	DC-200 MHz	200-1000 MHz	1000-4600 MHz	DC-200 MHz	200-1000 MHz	1000-4600 MHz	DC-200 MHz	200-1000 MHz	1000-4600 MHz	DC-200 MHz	200-1000 MHz	1000-4600 MHz
f _L f _U	Typ. Max.	Typ. Max.	Typ. Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.	Typ.
DC 4.6	0.8 1.1	0.9 1.3	1.5 2.6	10	17	27	60	45	50	40	30	25			

Additional Specifications

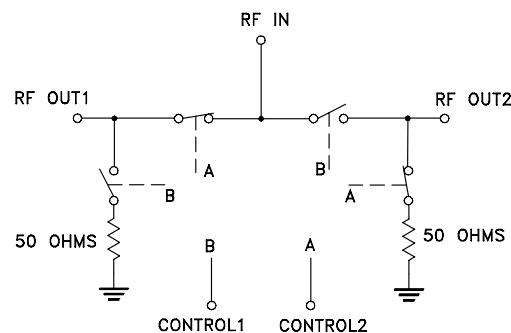
Control Voltage, volts	
Low State	-0.2 to 0
High State (negative) for compression specs for other specs	-8 -5 to -8
Control Current, mA	2.5 typ. at -8V
VSWR(:1)	1.3 typ.
Rise/Fall time (10%-90%), ns	2 typ.
Switching time, 50% of Control to 90% RF(Turn-on), ns	4 typ.
10% RF(Turn-off), ns	2.5 typ.
Video Leakage, mVp-p 0/-5V Control	30 typ.

CONTROL LOGIC

Control Ports		RF outputs	
1	2	1	2
-V	0	On	Off
0	-V	Off	On

1. Max Input RF power, +30 dBm except 100-500 MHz +27 dBm, and DC-100 MHz +24 dBm
2. Control voltage (-10V) maximum.
3. Video leakage or break through is defined as leakage of switching signal to RF output ports.
4. OFF state at RF output is low impedance.
5. All RF connections must be DC blocked or held at 0V DC.

Electrical Schematic



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

Typical Performance Data

FREQ. (MHz)	ON INSERTION LOSS (dB) CONTROL @ 0V/-5V IN-OUT		OFF ISOLATION (dB) CONTROL @ 0V/-5V IN-OUT		VSWR IN	VSWR ON	VSWR OUT OFF
	\bar{x}	σ	\bar{x}	σ			
3.00	0.55	0.01	82.53	2.67	1.12	1.12	1.02
5.00	0.55	0.02	85.42	4.39	1.12	1.12	1.02
10.00	0.55	0.02	84.71	7.84	1.13	1.13	1.02
20.00	0.63	0.04	74.57	2.52	1.13	1.12	1.02
50.00	0.62	0.02	64.87	0.76	1.12	1.12	1.02
100.00	0.67	0.02	58.56	0.45	1.12	1.12	1.02
200.00	0.72	0.02	54.29	0.36	1.12	1.11	1.02
500.00	0.80	0.02	51.52	0.42	1.13	1.12	1.02
911.55	0.90	0.02	48.87	1.18	1.16	1.11	1.04
1000.00	0.90	0.03	48.56	1.23	1.17	1.10	1.05
1581.00	1.01	0.04	44.26	1.63	1.20	1.04	1.11
2107.00	1.10	0.03	39.70	1.28	1.30	1.09	1.14
2370.00	1.15	0.05	37.89	1.12	1.31	1.11	1.15
2489.55	1.26	0.06	37.25	0.97	1.32	1.14	1.17
2752.55	1.32	0.07	35.59	0.62	1.41	1.22	1.23
3278.55	1.26	0.04	31.74	1.06	1.44	1.35	1.29
3804.55	1.63	0.09	28.75	0.72	1.39	1.41	1.38
4330.55	1.52	0.06	25.75	0.41	1.49	1.78	1.65
4474.00	1.47	0.09	25.51	0.36	1.57	1.94	1.73
4600.00	1.98	0.06	25.42	0.32	1.55	1.87	1.67

