

Coaxial Switch

50Ω SPDT, Absorptive DC⁵ to 4.6 GHz

ZFSWA-2-46

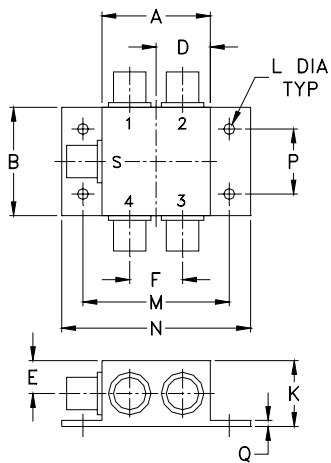
Maximum Ratings

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. ⁵ (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		DC-200 MHz		200-1000 MHz		1000-4600 MHz	
f _L	f _U	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Min.	Typ.	Min.	Typ.	Min.
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

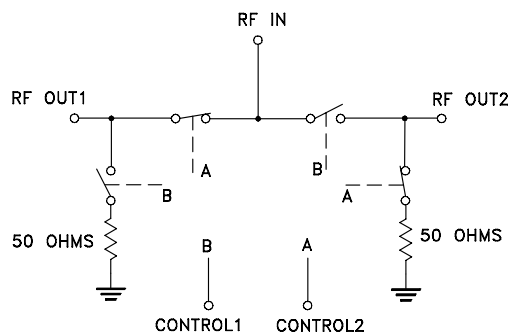
Control Voltage, volts	
Low State	-0.2 to 0
High State (negative)	-8
for compression specs	-5 to -8
for other specs	
Control Current, mA	2.5 typ. at -8V
VSWR(:1)	1.3 typ.
Rise/Fall time (10%-90%), ns	2 typ.
Switching time, 50% of Control to 90% RF(Turn-on), ns	4 typ.
10% RF(Turn-off), ns	2.5 typ.
Video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

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.

CONTROL LOGIC

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

Electrical Schematic



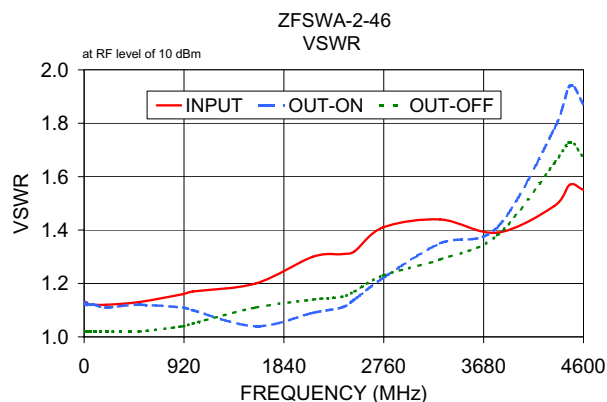
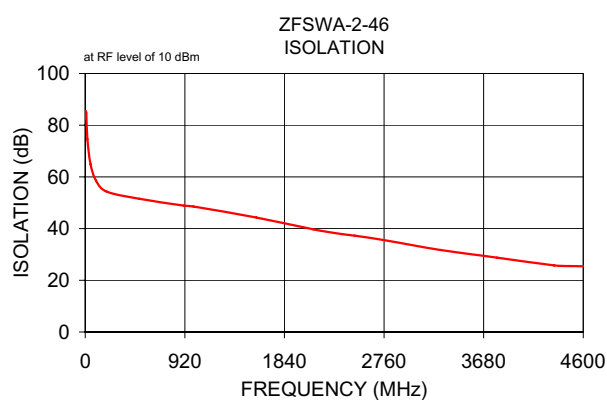
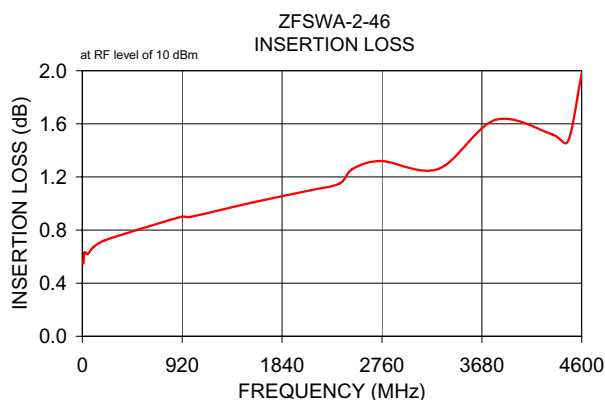
Notes

- 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.
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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	$\bar{x}$	$\bar{x}$	$\bar{x}$
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



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