

Coaxial Switch

ZFSW-2-46

50Ω SPDT, Reflective DC⁵ to 4.6 GHz

Maximum Ratings

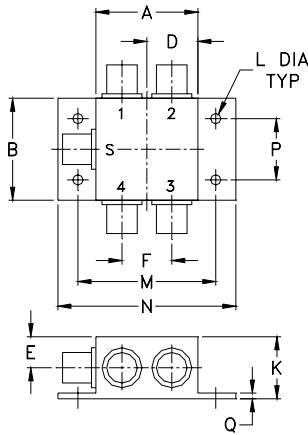
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 150°C
Input Power	see Note 1
Control V	see Note 2

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.
- excellent VSWR, 1.3:1 typ

Applications

- instrumentation
- communication systems
- laboratory



Generic photo used for illustration purposes only

CASE STYLE: G144

Connectors	Model
SMA	ZFSW-2-46

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	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.	Min.	Typ.	Min.	Typ.	Min.
DC	4.6	0.9	1.1	1.0	1.3	1.3	1.8*	10	17	27	60	50	50	40	40	28

*1.8 dB max up to 3 GHz, 2.8 dB max 3-4.6 GHz

Additional Specifications

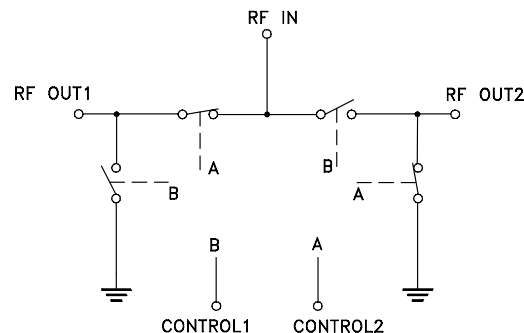
Control Voltage, volts	
Low State	-0.2 to 0
High State (negative)	
for compression specs	-8
for other specs	-5 to -8
Control Current, mA	2.5 typ. at -8V
VSWR(:1)	1.3 typ.
Rise/Fall time (10%-90%), ns	2 typ.
Switching time, 50% of Control to 90% RF (Turn-on), ns	4 typ.
10% RF (Turn-off), ns	2.5 typ.
Video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

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



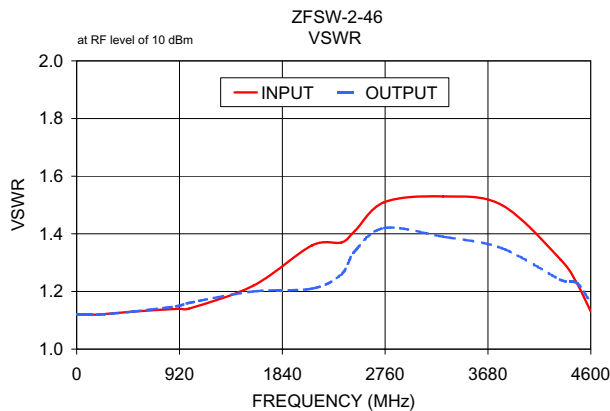
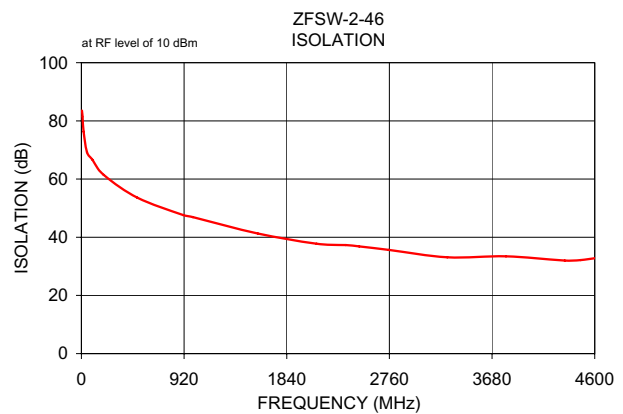
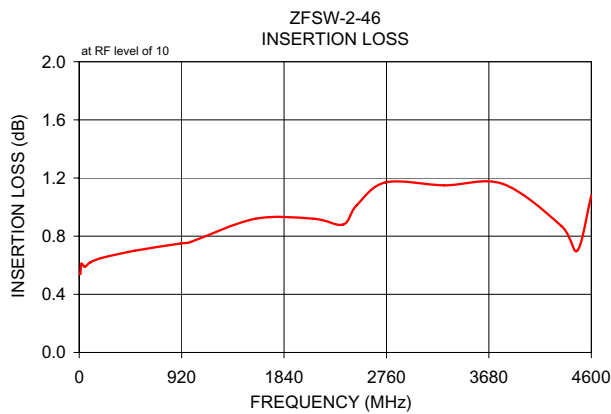
Notes

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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			
3.00	0.54	0.04	83.44	4.68	1.12	1.12	16.46
5.00	0.54	0.04	83.46	2.97	1.12	1.12	16.21
10.00	0.54	0.04	81.44	2.66	1.12	1.12	16.21
20.00	0.61	0.06	76.29	2.13	1.12	1.12	16.04
50.00	0.59	0.04	69.27	0.92	1.12	1.12	15.37
100.00	0.62	0.04	66.59	1.42	1.12	1.12	14.63
200.00	0.65	0.04	61.43	0.74	1.12	1.12	14.00
500.00	0.70	0.04	53.61	0.93	1.13	1.13	12.83
911.55	0.75	0.04	47.64	0.59	1.14	1.15	11.86
1000.00	0.76	0.04	46.91	0.61	1.14	1.16	11.79
1581.00	0.92	0.05	41.27	0.47	1.22	1.20	11.85
2107.00	0.92	0.06	37.77	0.41	1.36	1.21	11.91
2370.00	0.88	0.06	37.33	0.42	1.37	1.26	9.64
2489.55	1.01	0.07	36.86	0.43	1.41	1.34	9.98
2752.55	1.17	0.09	35.65	0.39	1.51	1.42	9.70
3278.55	1.15	0.11	33.10	0.42	1.53	1.39	13.14
3804.55	1.16	0.08	33.46	0.37	1.50	1.35	13.37
4330.55	0.87	0.05	31.99	0.42	1.31	1.24	15.41
4474.00	0.70	0.04	32.16	0.40	1.23	1.23	17.84
4600.00	1.08	0.04	32.78	0.42	1.13	1.16	14.40



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