Coaxial Switch

50Ω SPDT, Absorptive DC to 4.6 GHz

ZFSWA-2-46

CASE STYLE: G144

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

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

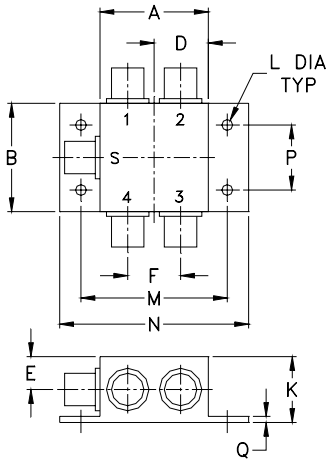
Features

- 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

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

Electrical Specifications

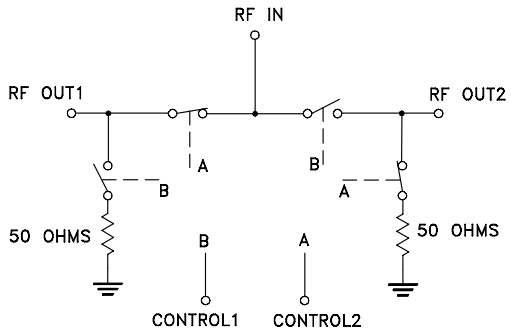
FREQ. (GHz)		INSERTION LOSS (dB)						1dB COMPR. (dBm)			IN-OUT ISOLATION (dB)					
		DC-200 MHz		200-1000 MHz		1000-4600 MHz		DC-200 MHz	200-1000 MHz	1000-4600 MHz	DC-200 MHz		200-1000 MHz		1000-4600 MHz	
f_L	f_U	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Typ.	Typ.	Typ.	Min.	Typ.	Min.	Typ.	Min.
DC	4.6	0.8	1.1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

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



REV. A
M120398
ZFSWA-2-46
WP/CP/AM
081223

Typical Performance Data

FREQ. (MHz)	ON CONTROL @ 0V/-5V IN-OUT INSERTION LOSS (dB) $\bar{x}$	σ	OFF CONTROL @ 0V/-5V IN-OUT ISOLATION (dB) $\bar{x}$	σ	VSWR IN $\bar{x}$	VSWR ON $\bar{x}$	VSWR OUT OFF $\bar{x}$
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