

Coaxial

High Isolation Switch

50Ω SPDT, TTL Driver, Absorptive DC to 5000 MHz

NON-CATALOG

ZASWA2-50DR-FT+



CASE STYLE: CY1481

RF Connectors Model
SMA ZASWA2-50DR-FT+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Maximum Ratings

Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 150°C
Input Power	see Table & Note 2
Supply V	see Table
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

RF IN (SMA Female)	1
RF OUT 1 (SMA Female)	3
RF OUT 2 (SMA Female)	6
TTL IN (feed-through-pin)	4
+5V (feed-through-pin)	2
-5V (feed-through-pin)	5
GROUND	Ground Port

Features

- wideband, DC to 5 GHz
- integral TTL driver
- high isolation, 82 dB typ at 2GHz

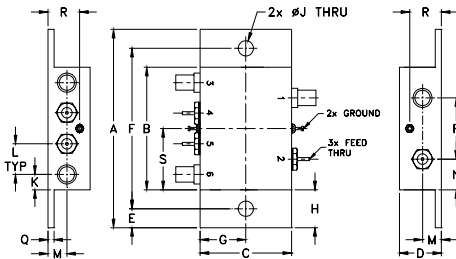
Applications

- transmitter receiver isolation
- automated switching networks

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		5000	MHz
Insertion Loss	DC-100	—	1.1	1.8	dB
	100-1000	—	1.3	2.0	
	1000-3000	—	1.7	2.5	
	3000-5000	—	3.0	4.0	
1 dB Compression	DC-100	—	17	—	dBm
	100-1000	—	22	—	
	1000-3000	—	23	—	
	3000-5000	—	19	—	
IN-OUT Isolation	DC-100	75	100	—	dB
	100-1000	70	90	—	
	1000-3000	60	82	—	
	3000-5000	48	63	—	
VSWR	ON, all ports	—	1.3	—	:1
	OFF, Input	—	1.3	—	
	OFF, Output	—	1.3	—	

Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J
3.24	2.00	1.50	.69	.31	2.620	.75	.62	.250
82.30	50.80	38.10	17.53	7.87	66.55	19.05	15.75	6.35
K	L	M	N	P	Q	R	S	wt
.25	.50	.31	.50	1.00	.10	.52	1.00	grams
6.35	12.70	7.87	12.70	25.40	2.54	13.21	25.40	80.0

Additional Specifications

Low Threshold, V	0 Min., 0.8 Max.
High Threshold, V	2 Min., 5 Max.
Control Current, mA	High V, 5 Max. Low V, 0.2 Max.
Positive Supply, V	+5±0.5/-0.1
Negative Supply, V	-5-0.5/+0.1
Positive Supply Current, mA	22 Typ., 60 Max.
Negative Supply Current, mA	22 Typ., 60 Max.
Video Leakage ¹ , mVp-p	140 Typ.
RF Power Input ²	250mW
VSWR (:1)	
ON, all ports	1.3 Typ.
OFF, Input	1.3 Typ.
OFF, Output	1.3 Typ.
Rise/Fall Time (10%-90%), ns	5 Typ., 15 Max.
Switching Time, 50% of control to 90% RF (Turn-on), ns	10 Typ., 20 Max.
10% RF (Turn-off), ns	10 Typ., 20 Max.

1. Video leakage or break through is defined as leakage of TTL switching signal to RF output ports.

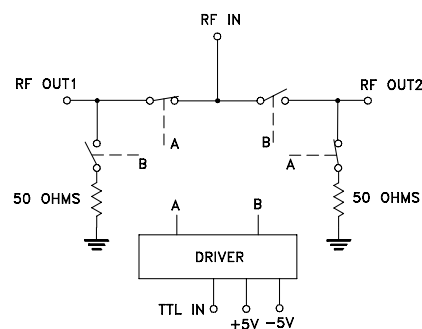
2. Above 20° derate power linearly to zero at 150°C

3. All RF connections must be DC blocked or held at 0V DC.

CONTROL LOGIC

TTL Control Port	RF outputs	
	1	2
HIGH	OFF	ON
LOW	ON	OFF

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.
 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.
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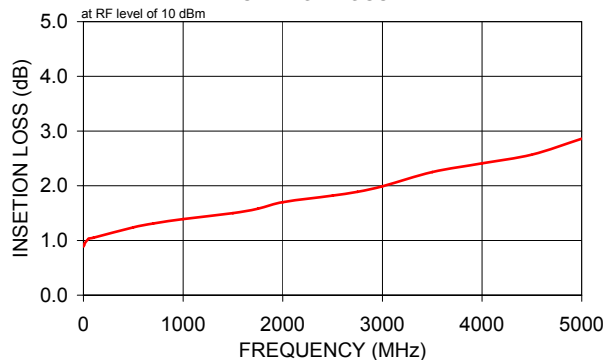
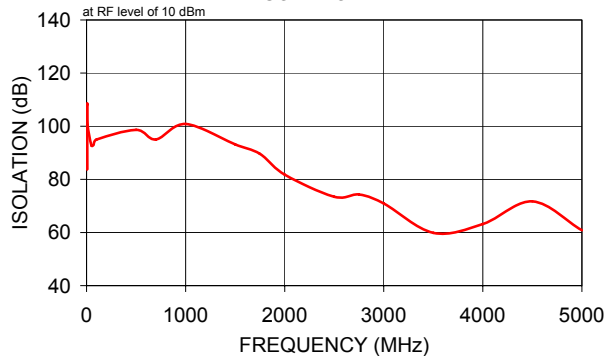
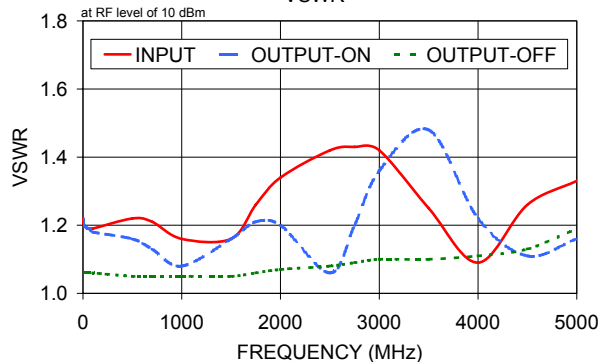


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Typical Performance Data

FREQ. (MHz)	ON	INSERTION LOSS (dB)	OFF	ISOLATION (dB)	VSWR IN	VSWR ON	VSWR OUT OFF
	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	$\bar{X}$	$\bar{X}$
1.00	0.89	0.00	106.76	16.07	1.22	1.22	1.06
5.00	0.91	0.00	83.79	0.16	1.21	1.21	1.06
7.00	0.92	0.00	108.04	3.89	1.21	1.21	1.06
10.00	0.94	0.00	100.56	4.13	1.20	1.20	1.06
50.00	1.03	0.00	92.67	0.19	1.19	1.19	1.06
70.00	1.04	0.00	92.95	3.93	1.19	1.19	1.06
100.00	1.05	0.00	94.98	2.22	1.19	1.18	1.06
500.00	1.24	0.02	98.65	1.31	1.22	1.16	1.05
700.00	1.31	0.03	95.02	3.53	1.21	1.13	1.05
1000.00	1.39	0.03	100.87	5.77	1.16	1.08	1.05
1500.00	1.50	0.03	93.19	4.35	1.16	1.16	1.05
1750.00	1.58	0.03	89.60	5.94	1.26	1.21	1.06
2000.00	1.70	0.03	81.79	0.85	1.34	1.20	1.07
2500.00	1.82	0.07	73.46	1.48	1.42	1.06	1.08
2750.00	1.89	0.09	74.32	0.48	1.43	1.20	1.09
3000.00	1.99	0.09	70.93	0.22	1.42	1.36	1.10
3500.00	2.25	0.04	59.87	0.47	1.25	1.48	1.10
4000.00	2.41	0.03	63.20	1.11	1.09	1.22	1.11
4500.00	2.57	0.02	71.72	14.06	1.26	1.11	1.13
5000.00	2.86	0.00	60.84	4.95	1.33	1.16	1.19

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INSERTION LOSSZASWA2-50DR-FT+
ISOLATIONZASWA2-50DR-FT+
VSWR

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