Coaxial

Switch GaAs

50Ω SP4T, TTL Driver, Absorptive DC to 3 GHz

ZSWA-4-30DR+
ZSWA-4-30DR

CASE STYLE: CV665

Connectors	Model	Price	Qty.
SMA	ZSWA-4-30DR(+)	$119.95	(1-9)

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-30°C to 85°C
Storage Temperature	-55°C to 100°C
Input Power	see Table
Vcontrol	(V+) +0.4V

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

Features

- wideband, DC to 3 GHz
- low video leakage, 30 mVp-p typ.
- high isolation, 37 dB typ. @ 2 GHz
- integral TTL driver

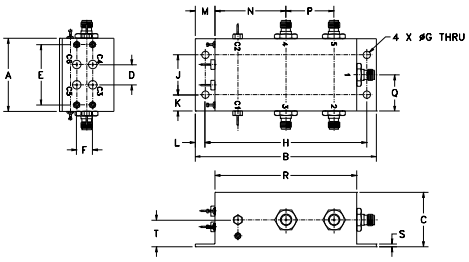
Applications

- transmitter/receiver isolation
- automated switching networks
- cellular
- PCN

Coaxial/Pin Connections

RF IN	1
RF OUT 1	2
RF OUT 2	3
RF OUT 3	4
RF OUT 4	5
CONTROL 1	C5
CONTROL 2	C3
CONTROL 3	C4
CONTROL 4	C6
+5V (V+)	C2
-5V (V-)	C1

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K
1.61	4.00	1.20	.45	1.33	.35	.161	3.560	.880	.36
40.89	101.60	30.48	11.43	33.78	8.89	4.09	90.42	22.35	9.14

L	M	N	P	Q	R	S	T	wt
.22	.44	1.56	1.06	.80	3.12	.06	.59	grams
5.59	11.18	39.62	26.92	20.32	79.25	1.52	14.99	150.0

Electrical Specifications

FREQ. (GHz)		INSERTION LOSS (dB)						1dB COMPR. (dBm)			IN-OUT ISOLATION (dB)					
		DC-500 MHz		500-2000 MHz		2000-3000 MHz		DC-500 MHz	500-2000 MHz	2000-3000 MHz	DC-500 MHz		500-2000 MHz		2000-3000 MHz	
f_L	f_U	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Typ.	Typ.	Typ.	Min.	Typ.	Min.	Typ.	Min.
DC	3	1.0	1.8	1.5	3.0	2.0	3.9	23*	25	25	50	40	37	32	31	26

*1dB compression gradually decreases to 10 dBm at 1 MHz

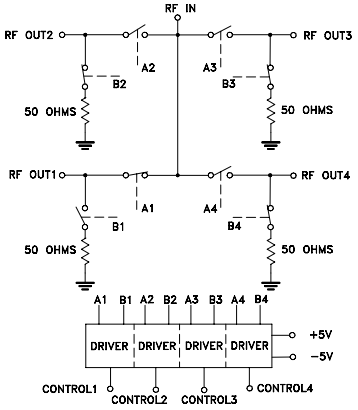
Additional Specifications			
*TTL Control Voltage Low Threshold, V High Threshold, V	0/V+ 0.8 max. 3.5 min.		
TTL Control Current, mA High V, mA Low V, mA	 0.2 max. 0.02 max.		
Positive Supply V. (V+)	+5±0.5		
Negative Supply V. (V-)	-5±0.25		
Positive Supply Current, mA	4 max		
Negative Supply Current, mA	20 max.		
VSWR(:1)	1.28 typ., ON 1.24 typ.,OFF DC-2GHz		
Rise/Fall time (10%-90%), ns Switching time, 50% of Control to 90% RF (Turn-on), ns 10% RF (Turn-off), ns	25 typ. 45 typ.		
**Video Leakage, mVp-p 0/+5V Control	30 typ.		
MTBF, hrs @85°C case	$30X10^6$		
Max. Input Power, dBm Steady state control As Modulator	DC-100 MHz +20 +8	100-500 MHz +24 +14	500-3000 MHz +30 +20

*** Do not apply control voltage high prior to applying V+**

** Video leakage or break through is defined as leakage of TTL switching signal to RF output ports. All RF pins must be DC blocked or held at 0V DC.

CONTROL LOGIC							
Control Ports				RF outputs			
1	2	3	4	1	2	3	4
Low	High	High	High	On	Off	Off	Off
High	Low	High	High	Off	On	Off	Off
High	High	Low	High	Off	Off	On	Off
High	High	High	Low	Off	Off	Off	On

Electrical Schematic



REV. D
M139071
ED-7188/1
ZSWA-4-30DR
WP/CP
121012

Typical Performance Data

FREQ. (MHz)	ON INSERTION LOSS (dB) TTL Low @ 0V IN-OUT		OFF ISOLATION (dB) TTL High @ 5V IN-OUT		VSWR IN	VSWR OUT ON	VSWR OUT OFF
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	$\bar{x}$	$\bar{x}$
1.00	0.59	0.007	94.53	1.66	1.05	1.07	1.29
125.75	0.87	0.008	62.61	0.49	1.14	1.08	1.26
250.50	0.97	0.007	57.54	0.31	1.10	1.14	1.26
375.25	1.02	0.011	54.64	0.24	1.22	1.19	1.27
500.00	1.09	0.012	52.17	0.23	1.26	1.24	1.28
687.50	1.28	0.011	49.37	0.19	1.46	1.31	1.30
875.00	1.35	0.010	47.33	0.26	1.53	1.34	1.35
1062.50	1.47	0.013	45.96	0.26	1.49	1.37	1.38
1250.00	1.47	0.017	44.64	0.20	1.45	1.35	1.37
1437.50	1.51	0.021	44.41	0.25	1.37	1.34	1.41
1625.00	1.50	0.022	44.27	0.34	1.24	1.35	1.41
1812.50	1.63	0.036	43.69	0.29	1.35	1.31	1.41
2000.00	1.73	0.040	44.05	0.31	1.25	1.29	1.42
2333.33	1.80	0.042	42.78	0.29	1.66	1.30	1.37
2444.44	1.89	0.058	43.76	0.34	1.38	1.34	1.35
2555.56	1.90	0.055	42.68	0.34	1.54	1.38	1.31
2666.67	2.03	0.062	41.94	0.29	1.60	1.33	1.31
2777.78	2.07	0.069	42.93	0.42	1.27	1.45	1.25
2888.89	2.18	0.072	41.51	0.36	1.51	1.40	1.29
3000.00	2.28	0.078	41.43	0.38	1.65	1.47	1.22