

Coaxial Switch

50Ω SP4T Pin Diode, TTL Driver 10 to 2500 MHz

ZSDR-425

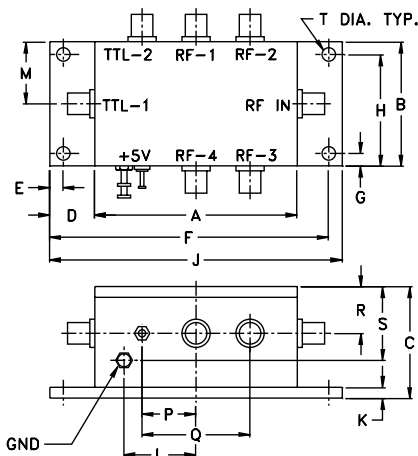
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power	L(+20 dBm), M(+28 dBm), U(+30 dBm)
Supply V	+6V max.

Coaxial/Pin Connections

RF IN	RF-IN
RF OUT 1	RF-1
RF OUT 2	RF-2
RF OUT 3	RF-3
RF OUT 4	RF-4
TTL-1	TTL-1
TTL-2	TTL-2
+5V	+5V

Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K
2.25	1.38	1.24	.50	.150	3.100	.138	1.238	3.25	.12
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45	82.55	3.05

L	M	N	P	Q	R	S	T	wt
.80	.69	—	.60	1.200	.52	.82	.150	grams
20.32	17.53	—	15.24	30.48	13.21	20.83	3.81	80.0

Features

- wideband, 10 to 2500 MHz
- high isolation, 40 dB typ.

Applications

- test set-ups
- antenna switching
- satellite communication

Switch Electrical Specifications

MODEL NO.	FREQ. (MHz)	INSERTION LOSS (dB)				IN-OUT ISOLATION (dB)						
		Low band Lw		Upper band U		L		Frequency Band M		U		
		f _L	f _U	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	
ZSDR-425	10	2500	1.1	1.7	1.5	2.5	60	40	40	30	35	22

L= low range(f_L to 10 f_L)

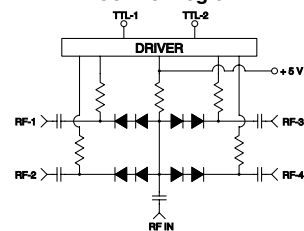
M=mid range(10 f_L to $f_U/2$)
lw=low band (f_L to $f_U/2$)

U=upper range ($f_U/2$ to f_U)

Additional Specifications

VSWR ("ON" STATE)	1.3 Typ., 1.9 Max.
SWITCHING TIME (μ SEC)	2.0 Typ., 4.0 Max.
SUPPLY VOLTAGE	+5V
SUPPLY CURRENT	10mA Max.
TTL INPUT HIGH THRESHOLD	2V Min.
TTL INPUT LOW THRESHOLD	0.8V Max.
1 dB COMPRESSION	10 to 100 MHz Above 100 MHz
	+6 increasing to +19 dBm +19 dBm min.

Control Logic



	TTL-1	TTL-2
RF-1	1	0
RF-2	1	1
RF-3	0	1
RF-4	0	0

Typical Performance Data

Freq. (MHz)	ON (TTL LOW @ 0V)				INSERTION LOSS (dB)				OFF (TTL HIGH @ 5V)				ISOLATION (dB)				VSWR			
	IN-OUT		AMP. UNBAL		IN-OUT		DELTA		IN		ON		OUT(RF 1)		OFF					
	\bar{X}	σ	\bar{X}	σ	\bar{X}	σ	\bar{X}	σ	\bar{X}	σ	\bar{X}	σ	\bar{X}	σ	\bar{X}	σ				
10.00	1.22	0.16	0.18	0.15	74.41	4.10	9.64	5.24	1.35	1.40	27.25									
20.00	1.06	0.12	0.15	0.12	70.64	2.69	8.25	4.56	1.19	1.22	27.08									
50.00	0.97	0.09	0.13	0.09	61.72	2.10	8.97	7.88	1.11	1.13	27.42									
100.00	0.94	0.09	0.12	0.09	56.09	1.46	6.48	2.94	1.10	1.11	26.82									
200.00	0.90	0.08	0.12	0.08	49.80	1.51	6.32	3.03	1.13	1.12	26.58									
408.40	1.01	0.07	0.11	0.07	45.66	1.36	5.61	1.32	1.21	1.18	26.03									
500.00	1.06	0.08	0.12	0.09	44.93	1.43	5.49	1.62	1.25	1.20	24.98									
669.85	1.10	0.07	0.12	0.07	44.06	1.59	5.94	1.86	1.30	1.24	24.36									
856.60	1.30	0.07	0.13	0.08	43.15	1.93	6.13	2.01	1.35	1.25	22.45									
1000.00	1.39	0.05	0.11	0.07	44.52	3.69	8.35	2.97	1.37	1.24	20.59									
1118.05	1.48	0.05	0.13	0.07	42.72	2.91	8.56	3.40	1.37	1.23	19.44									
1250.00	1.37	0.06	0.13	0.06	42.75	2.61	10.05	4.95	1.36	1.22	19.15									
1391.95	1.51	0.09	0.16	0.07	44.07	3.21	10.73	3.71	1.34	1.20	18.57									
1578.70	1.47	0.05	0.15	0.05	40.41	2.62	9.61	3.27	1.31	1.16	17.15									
1777.90	1.52	0.05	0.17	0.05	37.07	2.87	9.43	3.26	1.30	1.14	16.04									
2002.00	1.66	0.12	0.20	0.08	34.27	3.55	9.08	1.82	1.30	1.16	13.88									
2176.30	1.81	0.09	0.20	0.08	30.64	3.24	7.16	1.46	1.30	1.21	12.25									
2363.05	1.82	0.07	0.19	0.04	26.86	2.95	5.63	1.07	1.28	1.28	9.41									
2437.75	2.08	0.14	0.24	0.05	25.66	2.78	5.42	1.03	1.29	1.30	7.81									
2500.00	2.14	0.16	0.25	0.05	25.03	2.28	5.15	1.27	1.30	1.31	7.10									

