

# Coaxial Switch

## ZSDR-425

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



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

### 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

### Features

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

### Applications

- test set-ups
- antenna switching
- satellite communication

CASE STYLE: GGG126

Connectors	Model	Price	Qty.
SMA	ZSDR-425	\$109.95	(1-9)

### Electrical Specifications (T<sub>AMB</sub>=25°C)

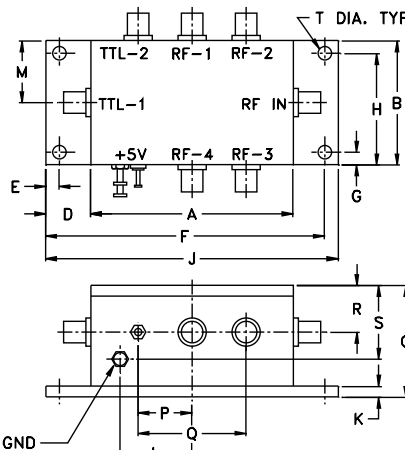
MODEL NO.	FREQ. (MHz)		INSERTION LOSS (dB)				IN-OUT ISOLATION (dB)					
			Low band		Upper band		Frequency Band					
			l <sub>w</sub>	U	L	M	U					
ZSDR-425	f <sub>L</sub>	f <sub>U</sub>	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.
	10	2500	1.1	1.7	1.5	2.5	60	40	40	30	35	22

L=low range(f<sub>L</sub> to 10 f<sub>L</sub>)

M=mid range(10 f<sub>L</sub> to f<sub>U</sub>/2)  
l<sub>w</sub>=low band (f<sub>L</sub> to f<sub>U</sub>/2)

U=upper range (f<sub>U</sub>/2 to f<sub>U</sub>)

### Outline Drawing



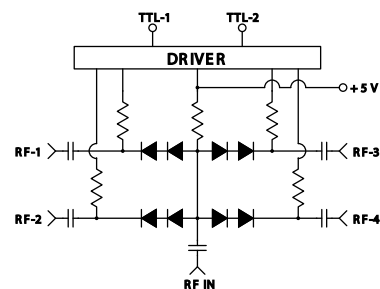
### Outline Dimensions (Inch/mm)

A	B	C	D	E	F	G	H	J	K
2.25	1.38	1.24	.50	.150	3.100	.138	1.238	.30	.12
57.15	35.05	31.50	12.70	3.81	78.74	3.51	31.45	7.62	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	

### Additional Specifications

VSWR ("ON" STATE)	1.3 Typ., 1.9 Max.
SWITCHING TIME (μSEC)	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 LOGIC	
	TTL-1	TTL-2
RF-1	1	0
RF-2	1	1
RF-3	0	1
RF-4	0	0

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IF/RF MICROWAVE COMPONENTS

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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

REV. OR  
M97979  
ZSDR-425  
WP/CP/AM  
071113

## Typical Performance Data

FREQ. (MHz)	ON (TTL LOW @ 0V) IN-OUT		INSERTION LOSS (dB) AMP. UNBAL.				OFF (TTL HIGH @ 5V) IN-OUT		ISOLATION (dB) DELTA		VSWR	
	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	$\bar{x}$	$\sigma$	IN	OUT (RF 1) ON OFF
											$\bar{x}$	$\bar{x}$
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	

