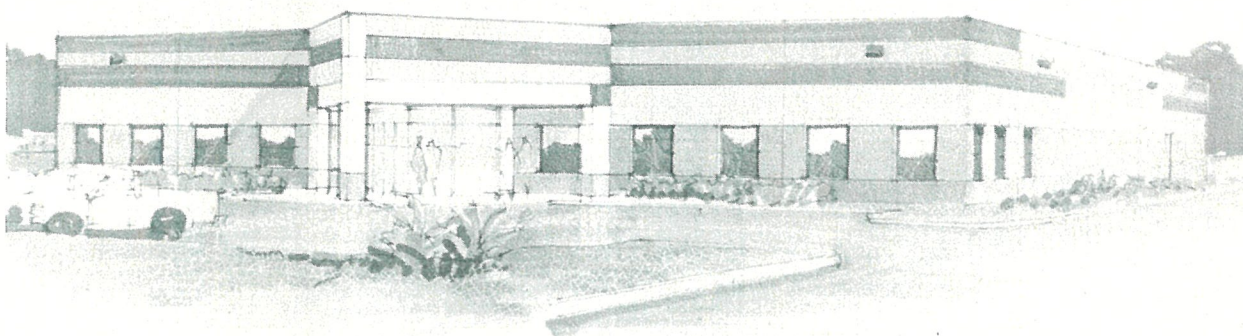




SIERRA MICROWAVE TECHNOLOGY



Sierra Microwave Technology (SMT) was founded in 1985. Since its inception, SMT has been a leading producer of quality microwave components and integrated assemblies. These products are used in space & defense as well as commercial applications and include isolators, circulators, switches, filters, and integrated assemblies.

In 1991, SMT relocated to Georgetown, Texas to take advantage of the lower operating cost in that region. Lower fixed cost and our new 20,000 sq.ft. facility which was designed to optimize productivity has allowed us to decrease cost to our military

and space customers and to be more competitive in the commercial market place.

SMT is committed to excellence in customer service and quality and has been named a superior supplier for space hardware each of the past three years. Our quality program conforms to MIL-45208A and MIL-STD-45662A and is adaptable to program specific quality requirements if needed.

SMT can offer off-the-shelf delivery for many standard products and uncommonly quick delivery for unique products to fit your specific needs.



極東貿易株式会社

特機システム部 3 課

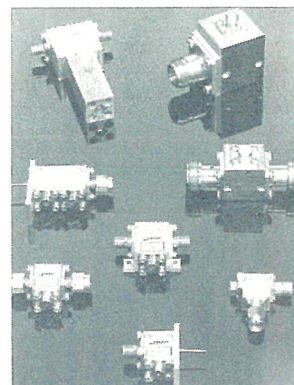
TEL: 03 (3244) 3922

〒100-0004

東京都千代田区大手町二丁目 2 番 1 号新大手町ビル 7 階

CONNECTORIZED ISOLATORS AND CIRCULATORS

- Frequency ranges up to 40 GHz
- Bandwidths up to and exceeding 133%
- Low loss and VSWR
- 2 Watt terminations standard - up to 150 Watt terminations available
- SMA connectors standard — also available with TNC, N, 2.9 mm, and waveguide adaptors
- Space qualified devices available



NARROWBAND ISOLATOR/CIRCULATOR (3 PORT) SPECIFICATIONS

FREQUENCY (GHz)	MODEL NUMBER		MINIMUM ISOLATION (dB)	MAXIMUM INSERTION LOSS (dB)	MAXIMUM VSWR	OUTLINE SIZE (IN) LxWxT	OPERATING TEMPERATURE RANGE (°C)
	ISOLATOR	CIRCULATOR					
0.400- 0.500	SMI-0405	SMC-0405	18	0.5	1.40:1	2.00x2.00x0.75	0 to +60
0.600- 0.700	SMI-0607	SMC-0607	20	0.4	1.25:1	1.50x1.50x0.75	-20 to +65
0.680- 0.870	SMI-0709	SMC-0709	20	0.5	1.22:1	1.50x1.50x0.75	0 to +50
0.750- 0.950	SMI-0810	SMC-0810	17	0.5	1.35:1	1.25x1.25x0.75	-30 to +60
0.950- 1.225	SMI-0913	SMC-0913	20	0.4	1.25:1	1.25x1.25x0.75	-54 to +85
1.200- 1.400	SMI-1214	SMC-1214	20	0.4	1.25:1	1.00x1.00x0.50	-54 to +85
1.400- 1.600	SMI-1416	SMC-1416	20	0.4	1.25:1	1.00x1.00x0.50	-54 to +85
1.700- 2.100	SMI-1721	SMC-1721	20	0.4	1.25:1	1.00x1.00x0.50	-54 to +85
2.000- 2.300	SMI-2023	SMC-2023	20	0.4	1.25:1	1.00x1.00x0.50	-54 to +85
2.300- 2.500	SMI-2325	SMC-2325	20	0.4	1.25:1	1.00x1.00x0.50	-54 to +85
2.500- 2.700	SMI-2527	SMC-2527	20	0.4	1.25:1	1.00x1.00x0.50	-54 to +85
2.700- 3.300	SMI-2733	SMC-2733	20	0.4	1.25:1	1.00x1.00x0.50	-20 to +65
3.300- 3.700	SMI-3337	SMC-3337	20	0.4	1.25:1	1.00x1.00x0.50	-20 to +65
3.400- 4.200	SMI-3442	SMC-3442	20	0.4	1.25:1	1.00x1.00x0.50	-20 to +65
3.600- 4.400	SMI-3644	SMC-3644	20	0.4	1.25:1	1.00x1.00x0.50	-20 to +65
3.700- 4.200	SMI-3742	SMC-3742	26	0.11	1.10:1	1.00x1.00x0.50	-20 to +65
4.200- 4.400	SMI-4244	SMC-4244	23	0.3	1.15:1	1.00x1.00x0.50	-20 to +65
4.300- 5.300	SMI-4353	SMC-4353	20	0.4	1.25:1	0.75x0.75x0.50	-20 to +65
4.400- 5.000	SMI-4450	SMC-4450	23	0.3	1.15:1	0.75x0.75x0.50	-20 to +65
5.300- 6.500	SMI-5365	SMC-5365	20	0.4	1.25:1	0.75x0.75x0.50	-20 to +65
5.400- 5.900	SMI-5459	SMC-5459	23	0.3	1.15:1	0.75x0.75x0.50	-20 to +65
5.800- 7.800	SMI-5878	SMC-5878	20	0.4	1.25:1	0.75x0.75x0.50	-20 to +65
5.900- 6.400	SMI-5964	SMC-5964	23	0.3	1.15:1	0.75x0.75x0.50	-20 to +65
6.000- 7.500	SMI-6075	SMC-6075	20	0.4	1.25:1	0.75x0.75x0.50	-20 to +65
7.000-10.000	SMI-7010	SMC-7010	20	0.4	1.25:1	0.63x0.50x0.50	-54 to +125
8.000-10.000	SMI-8010	SMC-8010	23	0.3	1.15:1	0.63x0.50x0.50	-54 to +85
8.500- 9.600	SMI-8596	SMC-8596	23	0.3	1.15:1	0.63x0.50x0.50	-54 to +85
9.000-12.000	SMI-9012	SMC-9012	20	0.4	1.25:1	0.63x0.50x0.50	-54 to +125
11.700-12.200	SMI-1112	SMC-1112	23	0.3	1.15:1	0.63x0.50x0.50	-54 to +85
11.000-14.000	SMI-1114	SMC-1114	20	0.4	1.25:1	0.63x0.50x0.50	-54 to +125
13.000-16.000	SMI-1316	SMC-1316	20	0.4	1.25:1	0.63x0.50x0.50	-54 to +125
14.000-14.500	SMI-1415	SMC-1415	23	0.3	1.15:1	0.63x0.50x0.50	-54 to +85
15.000-18.000	SMI-1518	SMC-1518	20	0.4	1.25:1	0.63x0.50x0.50	-54 to +125
18.000-22.000	SMI-1822	SMC-1822	20	0.4	1.25:1	0.63x0.50x0.50	-54 to +85
22.000-26.500	SMI-2226	SMC-2226	20	0.4	1.25:1	0.63x0.50x0.50	-54 to +85
26.000-30.000	SMI-2630	SMC-2630	16	0.6	1.40:1	0.63x0.50x0.50	-54 to +85 (1)
30.000-35.000	SMI-3035	SMC-3035	16	0.8	1.40:1	0.63x0.50x0.50	-54 to +85 (1)
35.000-40.000	SMI-3540	SMC-3540	16	1.0	1.40:1	0.63x0.50x0.50	-54 to +85 (1)

Note: 1. 1 Watt termination and 2.9 mm connectors.



OTHER PRODUCTS AVAILABLE:
PIN Diode Switches, Integrated Assemblies, Filters

BROADBAND ISOLATORS/CIRCULATORS (3 PORT)

SPECIFICATIONS

FREQUENCY (GHz)	MODEL NUMBER		MINIMUM ISOLATION (dB)	MAXIMUM INSERTION LOSS (dB)	MAXIMUM VSWR	OUTLINE SIZE (IN) LxWxT	OPERATING TEMPERATURE RANGE (°C)
	ISOLATOR	CIRCULATOR					
1.0- 2.0	SMI-1020	SMC-1020	18	0.5	1.30:1	2.75x2.60x1.00	+10 to +40
1.5- 3.0	SMI-1530	SMC-1530	18	0.5	1.30:1	2.00x2.00x0.75	+10 to +40
2.0- 4.0	SMI-2040	SMC-2040	20	0.4	1.25:1	1.60x1.65x0.75	-10 to +65
2.0- 6.0	SMI-2060	SMC-2060	10	1.0	1.50:1	1.60x1.65x0.75	-20 to +65
2.0- 8.0	SMI-2080	N/A	20(1)	1.1(1)	1.35:1(1)	3.23x2.08x1.08	0 to +50
2.0-10.0	SMI-2010	N/A	20(1)	1.1(1)	1.35:1(1)	3.23x2.08x1.08	0 to +50
2.6- 5.2	SMI-2652	SMC-2652	18	0.5	1.30:1	1.38x1.25x0.75	-30 to +70
3.0- 6.0	SMI-3060	SMC-3060	18	0.5	1.30:1	1.00x1.00x0.50	-30 to +70
3.5- 7.0	SMI-3570	SMC-3570	18	0.5	1.30:1	1.00x1.00x0.50	-30 to +70
3.7- 8.3	SMI-3783	SMC-3783	18	0.5	1.30:1	1.00x1.00x0.50	-30 to +70
4.0- 8.0	SMI-4080	SMC-4080	20	0.4	1.25:1	1.00x1.00x0.50	-54 to +85
4.0-12.4	SMI-4012	SMC-4012	14	1.0	1.50:1	1.20x1.10x0.50	0 to +60
5.0-10.0	SMI-5010	SMC-5010	18	0.5	1.30:1	1.00x1.00x0.50	-30 to +70
6.0-12.0	SMI-6012	SMC-6012	18	0.5	1.30:1	0.80x0.63x0.50	-54 to +85
6.0-18.0	SMI-6018	SMC-6018	14	1.0	1.50:1	0.88x0.75x0.50	-40 to +100
6.0-20.0	SMI-6020	SMC-6020	12	1.2	1.65:1	0.88x0.75x0.50	-20 to +95
7.0-12.4	SMI-7012	SMC-7012	20	0.4	1.25:1	1.00x0.85x0.63	-54 to +85
8.0-16.0	SMI-8016	SMC-8016	18	0.5	1.30:1	0.80x0.63x0.50	-54 to +85
8.0-18.0	SMI-8018	SMC-8018	16	0.6	1.45:1	0.80x0.63x0.50	-54 to +85
8.0-20.0	SMI-8020	SMC-8020	14	1.0	1.50:1	0.68x0.51x0.56	-20 to +85
11.0-18.0	SMI-1118	SMC-1118	20	0.5	1.25:1	0.80x0.63x0.50	-54 to +100
12.0-24.0	SMI-1224	SMC-1224	16	0.8	1.40:1	0.63x0.50x0.50	-54 to +95
18.0-26.5	SMI-1826	SMC-1826	18	0.6	1.30:1	0.63x0.50x0.50	-54 to +85
26.5-40.0	SMI-2640	SMC-2640	14	1.0	1.50:1	0.63x0.50x0.50	-54 to +85(2)

Notes:

1. Typical data. Ask for data sheet.
2. 1 Watt termination and 2.9 mm connectors.

HIGH-RATIO ISOLATORS/CIRCULATORS (4 PORT)

SPECIFICATIONS

FREQUENCY (GHz)	MODEL NUMBER		MINIMUM ISOLATION (dB)	MAXIMUM INSERTION LOSS (dB)	MAXIMUM VSWR	OUTLINE SIZE (IN) LxWxT	OPERATING TEMPERATURE RANGE (°C)
	ISOLATOR	CIRCULATOR					
1.0- 2.0	SMI-1020H	SMC-1020H	36	1.0	1.30:1	2.75x5.20x1.00	+10 to +40
2.0- 4.0	SMI-2040H	SMC-2040H	36	0.8	1.30:1	1.65x3.20x0.75	-10 to +65
3.5- 7.0	SMI-3570H	SMC-3570H	36	1.0	1.30:1	1.00x2.00x0.50	-30 to +70
3.7- 8.3	SMI-3783H	SMC-3783H	34	1.0	1.30:1	1.00x2.00x0.50	-30 to +70
4.0- 8.0	SMI-4080H	SMC-4080H	40	0.8	1.25:1	1.00x2.00x0.50	-54 to +85
6.0-18.0	SMI-6018H	SMC-6018H	28	2.0	1.50:1	0.88x1.50x0.50	-40 to +100
6.0-20.0	SMI-6020H	SMC-6020H	24	2.4	1.65:1	0.88x1.50x0.50	-20 to +95
7.0-10.0	SMI-7010H	SMC-7010H	40	0.8	1.25:1	0.63x1.00x0.50	-54 to +125
7.0-12.4	SMI-7012H	SMC-7012H	40	0.8	1.25:1	1.00x1.70x0.63	-54 to +85
8.0-18.0	SMI-8018H	SMC-8018H	32	1.2	1.45:1	0.80x1.26x0.50	-54 to +85
9.0-12.0	SMI-9012H	SMC-9012H	40	0.8	1.25:1	0.63x1.00x0.50	-54 to +85
11.0-14.0	SMI-1114H	SMC-1114H	40	0.8	1.25:1	0.63x1.00x0.50	-54 to +125
11.0-18.0	SMI-1118H	SMC-1118H	40	1.0	1.25:1	0.80x1.26x0.50	-54 to +100
12.4-20.0	SMI-1220H	SMC-1220H	36	1.0	1.30:1	0.63x1.00x0.50	-20 to +65
18.0-22.0	SMI-1822H	SMC-1822H	40	0.8	1.25:1	0.63x1.00x0.50	-54 to +85
18.0-26.5	SMI-1826H	SMC-1826H	36	1.2	1.30:1	0.70x1.00x0.50	-54 to +85
22.0-26.5	SMI-2226H	SMC-2226H	40	0.8	1.25:1	0.63x1.00x0.50	-54 to +85



OTHER PRODUCTS AVAILABLE:
PIN Diode Switches, Integrated Assemblies, Filters

SHIELDED MICROSTRIP DROP-IN ISOLATORS AND CIRCULATORS

- Superior magnetic and RF shielding
- Low profile terminations rated at 4 Watts CW
- Highly temperature stable
- Many units available with internal loads
- Space qualified

NARROWBAND HIGH PERFORMANCE UNITS SPECIFICATIONS⁽¹⁾

FREQUENCY (GHz)	MODEL NUMBER		MINIMUM ISOLATION (dB)	MAXIMUM INSERTION LOSS (dB)	MAXIMUM VSWR	OPERATING TEMPERATURE RANGE (°C)	POWER RATINGS (W)(2)				OUTLINE NO.
	ISOLATOR	CIRCULATOR					ISOLATOR		CIRCULATOR		
							PEAK	CW	PEAK	CW	
0.865- 0.965	SDI-0809	SDC-0809	20	0.4	1.25:1	0 to +50	200	4	1000	100	4
0.960- 1.215	SDI-0913	SDC-0913	20	0.4	1.25:1	-55 to +85	200	4	1000	100	4
1.200- 1.400	SDI-1214	SDC-1214	20	0.5	1.25:1	-30 to +85	200	4	500	50	3
1.400- 1.600	SDI-1416	SDC-1416	20	0.5	1.25:1	-54 to +85	200	4	500	50	2
1.435- 1.535	SDI-0115	SDC-0115	20	0.4	1.25:1	-54 to +85	200	4	1000	100	2
1.700- 1.900	SDI-1719	SDC-1719	20	0.4	1.25:1	-54 to +85	200	4	1000	100	2
1.700- 2.100	SDI-1721	SDC-1721	18	0.5	1.30:1	-54 to +85	200	4	1000	100	2
1.805- 1.880	SDI-1819	SDC-1819	25	0.3	1.15:1	-20 to +65	200	4	1000	100	2
2.000- 2.300	SDI-2023	SDC-2023	20	0.4	1.25:1	-54 to +100	200	4	1000	100	2
2.200- 2.300	SDI-2223	SDC-2223	20	0.4	1.25:1	-54 to +100	200	4	500	100	2
2.300- 2.500	SDI-2325	SDC-2325	20	0.5	1.25:1	-54 to +100	200	4	500	100	2
2.300- 2.700	SDI-2327	SDC-2327	18	0.5	1.30:1	-40 to +85	200	4	500	100	2
2.500- 2.700	SDI-2527	SDC-2527	20	0.4	1.25:1	-54 to +100	200	4	500	100	2
2.700- 3.000	SDI-2730	SDC-2730	20	0.4	1.25:1	-54 to +100	200	4	500	100	2
3.300- 4.300	SDI-3343	SDC-3343	18	0.5	1.30:1	-54 to +100	200	4	500	50	1
3.400- 4.200	SDI-3442	SDC-3442	20	0.4	1.25:1	-20 to +65	200	4	500	50	1
3.700- 4.200	SDI-3742	SDC-3742	23	0.3	1.15:1	-20 to +65	200	4	500	50	1
4.200- 4.400	SDI-4244	SDC-4244	20	0.4	1.25:1	-54 to +100	200	4	500	50	1
4.400- 5.000	SDI-4450	SDC-4450	20	0.4	1.25:1	-54 to +100	200	4	500	50	1
5.000- 5.400	SDI-5054	SDC-5054	20	0.4	1.25:1	-54 to +100	200	4	500	50	1
5.000- 6.000	SDI-5060	SDC-5060	20	0.4	1.25:1	-54 to +85	200	4	500	50	1
5.400- 5.900	SDI-5459	SDC-5459	20	0.4	1.25:1	-54 to +100	200	4	500	50	1
5.900- 6.400	SDI-5964	SDC-5964	20	0.4	1.25:1	-54 to +100	200	4	500	50	1
6.000-10.000	SDI-6010	SDC-6010	16	0.6	1.40:1	-54 to +100	200	4	500	50	1
6.400- 7.200	SDI-6472	SDC-6472	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
6.800- 7.200	SDI-6872	SDC-6872	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
7.000-10.000	SDI-7010	SDC-7010	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
7.000-12.000	SDI-7012	SDC-7012	18	0.5	1.30:1	-54 to +100	200	4	500	50	1
7.200- 7.800	SDI-7278	SDC-7278	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
7.700- 8.400	SDI-7784	SDC-7784	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
8.500- 9.600	SDI-8596	SDC-8596	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
9.000-10.500	SDI-9010	SDC-9010	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
9.000-12.000	SDI-9012	SDC-9012	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
10.000-13.000	SDI-1013	SDC-1013	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
10.700-11.700	SDI-1011	SDC-1011	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
11.700-12.700	SDI-1112	SDC-1112	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
14.000-14.500	SDI-1415	SDC-1415	20	0.5	1.25:1	-54 to +100	200	4	500	50	1
15.500-16.000	SDI-1516	SDC-1516	20	0.5	1.25:1	-54 to +100	200	4	500	50	1



OTHER PRODUCTS AVAILABLE:
PIN Diode Switches, Integrated Assemblies, Filters

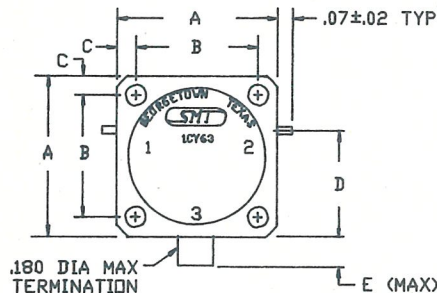
OCTAVE AND BROADBAND UNITS SPECIFICATIONS⁽¹⁾

FREQUENCY (GHz)	MODEL NUMBER		MINIMUM ISOLATION (dB)	MAXIMUM INSERTION LOSS (dB)	MAXIMUM VSWR	OPERATING TEMPERATURE RANGE (°C)	POWER RATINGS (W)(2)				OUTLINE NO.
	ISOLATOR	CIRCULATOR					ISOLATOR		CIRCULATOR		
							PEAK	CW	PEAK	CW	
2.0- 4.0	SDI-2040	SDC-2040	16	0.6	1.40:1	-10 to +70	200	4	100	100	3
3.0- 6.0	SDI-3060	SDC-3060	16	0.6	1.40:1	-20 to +85	200	4	100	50	2
4.0- 8.0	SDI-4080	SDC-4080	16	0.6	1.40:1	-54 to +100	200	4	1000	50	2
5.0-10.0	SDI-5010	SDC-5010	16	0.6	1.40:1	-54 to +100	200	4	1000	50	2
6.0-12.0	SDI-6012	SDC-6012	14	0.6	1.50:1	-54 to +100	200	4	300	50	1
6.0-18.0	SDI-6018	SDC-6018	13	1.2(3)	1.60:1	-40 to +100	200	4	500	50	1A
8.0-12.0	SDI-8012	SDC-8012	18	0.6	1.30:1	-54 to +100	200	4	500	50	1
8.0-16.0	SDI-8016	SDC-8016	15	0.7	1.45:1	-54 to +100	200	4	300	50	1
8.0-18.0	SDI-8018	SDC-8018	14	0.8	1.50:1	-54 to +100	200	4	300	50	1
12.0-18.0	SDI-1218	SDC-1218	18	0.7	1.30:1	-54 to +100	200	4	500	50	1

Notes:

- Measured in a 50 OHM microstrip test fixture with the following substrate:
SD Series, 0.020 thick 5880 RT Duroid
AD Series, 0.025 thick Alumina

- Heat sink temperature must not exceed the maximum operating temperature specified
- Insertion loss is 1.5 dB max. from -55°C to -40°C over 6.0 to 7.0 GHz



Outline #	Mtg. Holes Dia. Thru	Thick.	A	B	C	D ±.010	E
1	.075	.25	.500	.380	.06	.330	.12
1A	.075	.20	.500	.380	.06	.330	.16
2	.075	.25	.750	.570	.09	.505	.12
3	.080	.34	.875	.750	.06	.625	.12
4	.080	.30	1.000	.820	.09	.695	.12

All dimensions are in inches.

TOLERANCES .xx ± .01
.xxx ± .005

* Some models available with internal termination.

4. Tab Width:

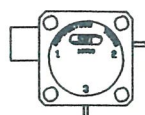
.025 (SD Series), to interface with 50 OHM Microstripline $\geq .041$ wide
.012 (AD Series), to interface with 50 OHM Microstripline $\leq .040$ wide

5. Tab Height (from mounting surface) Outlines 1, 1A and 2 only

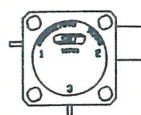
Option No.	Height (nom.)
A	.065
B	.075
C	.090
D	.100
E	.120

6. Alternate Termination Options

Option - 1



Option - 2



(CCW circulation available on special order)

Model Numbering Information

SDI 7784B-2

Frequency Range
(7.7 - 8.4 GHz)

I = Isolator
C = Circulator

.075 Tab
Height Option

SD Series (refer to notes 1 and 4 for guidance in specifying SD or AD Series)

Port 2 terminated (refer to note 6). Omit designator entirely for circulators or for standard isolator layout.

7. Tabs are .005 ± .001 thk. Beryllium copper, gold plated



OTHER PRODUCTS AVAILABLE:

PIN Diode Switches, Integrated Assemblies, Filters

MICROMINIATURE DROP-IN ISOLATORS AND CIRCULATORS

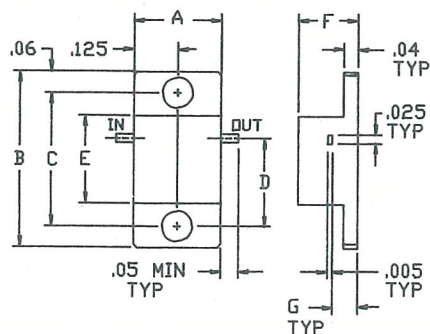
- Rugged, reliable construction
- Magnetically shielded
- Temperature stable
- Easy installation
- Space qualified

SPECIFICATIONS

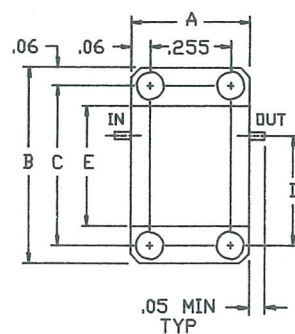
FREQUENCY (GHz)	MODEL NUMBER (2)		MINIMUM ISOLATION (dB)	MAXIMUM INSERTION LOSS (dB)	MAXIMUM VSWR	OPERATING TEMPERATURE RANGE (°C)	POWER RATING (W)(1)		OUTLINE NO.
	ISOLATOR	CIRCULATOR					PEAK	CW	
3.600- 4.200	F3642	S3642C	20	0.4	1.22:1	-20 to +65	50	2	F2/S3
4.200- 4.400	F4244	S4244C	20	0.5	1.25:1	-54 to +95	50	2	F2/S3
5.000- 5.400	F5054	S5054C	20	0.5	1.25:1	-54 to +95	50	1	F2/S2
5.400- 5.900	F5459	S5459C	20	0.5	1.25:1	-54 to +95	50	1	F2/S2
5.875- 6.425	F5964	S5964C	20	0.5	1.25:1	-54 to +95	50	1	F2/S2
7.200- 7.800	F7278	S7278C	20	0.5	1.25:1	-54 to +95	50	1	F2/S2
7.700- 8.400	F7784	S7784C	20	0.5	1.25:1	-54 to +95	50	1	F2/S2
8.000-12.000	F8012	S8012C	16	0.7	1.45:1	-54 to +95	50	1	F2/S2
8.600- 9.300	F8693	S8693C	20	0.4	1.25:1	-54 to +95	50	1	F1/S1
9.000-10.000	F9010	S9010C	20	0.4	1.25:1	-54 to +95	50	1	F1/S1
10.000-13.000	F1013	S1013C	17	0.5	1.35:1	-54 to +95	50	1	F1/S1
11.000-12.000	F1112	S1112C	20	0.4	1.25:1	-54 to +95	50	1	F1/S1
12.000-14.000	F1214	S1214C	17	0.5	1.35:1	-20 to +60	50	1	F1/S1
12.000-20.000	F1220	S1220C	17	0.6	1.35:1	-54 to +100	50	1	F1/S1
14.000-15.500	F1415	S1415C	17	0.5	1.36:1	-54 to +95	50	1	F1/S1
15.000-18.000	F1518	S1518C	17	0.5	1.35:1	-54 to +95	50	1	F1/S1
17.000-19.000	F1719	S1719C	20	0.5	1.25:1	-54 to +95	50	1	F1/S1
17.000-21.000	F1721	S1721C	18	0.6	1.30:1	-20 to +85	50	1	F1A/S1
18.000-22.000	F1822	S1822C	17	0.6	1.35:1	-20 to +85	50	1	F1A/S1
20.000-22.000	F2022	S2022C	18	0.5	1.30:1	-20 to +85	50	1	F1A/S1
21.000-24.000	F2124	S2124C	16	1.0	1.40:1	-54 to +85	50	1	F1A/S1

Notes:

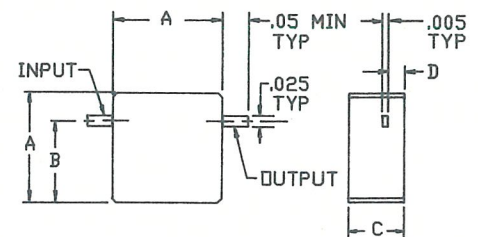
1. Rated at 95°C maximum heat sink temperature. Average power rating for circulators is 5.0 Watts.
2. Isolator models available in both S and F series packages.



F1/F1A



F2



S SERIES

Outline F Series	Mtg. Holes Dia. Thru	A	B	C	D ±.010	E	F (MAX)	G
F1	.087	.250	.50	.380	.250	.25	.18	.070
F1A	.087	.250	.50	.380	.250	.25	.15	.030
F2	.087	.375	.62	.505	.345	.38	.21	.070

Outline S Series	A	B ±.010	C (MAX)	D
S1	.250	.185	.14	.030
S2	.375	.282	.21	.050
S3	.375	.282	.21	.070

All dimensions are in inches. TOLERANCES
 .xx ± .01
 .xxx ± .005



OTHER PRODUCTS AVAILABLE:
 PIN Diode Switches, Integrated Assemblies, Filters

WAVEGUIDE TO COAXIAL ISOLATORS

SPECIFICATIONS

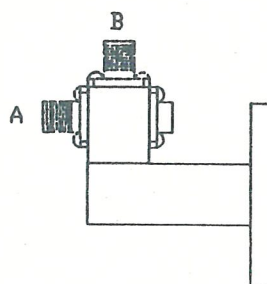
FREQUENCY (GHz)	MODEL NUMBER (1)	MINIMUM ISOLATION (dB)	MAXIMUM INSERTION (dB)	MAXIMUM VSWR	MATING FLANGE WAVEGUIDE PORT (WAVEGUIDE EIA)	OPERATING TEMPERATURE RANGE (°C)
3.400- 4.200	WEI-3442	23	0.15	1.15:1	CMR-229 (WR229)	-40 to +70
3.600- 4.200	WEI-3642	25	0.10	1.10:1	CMR-229 (WR229)	-20 to +65
5.800- 6.800	WEI-5868	23	0.15	1.15:1	UG-441/U (WR137)	-20 to +65
7.100- 8.500	WEI-7185	23	0.30	1.15:1	UG-138/U (WR112)	-20 to +65
7.200- 7.800	WEI-7278	23	0.15	1.15:1	UG-138/U (WR112)	-20 to +65
8.000-12.000	WEI-8012	20	0.40	1.25:1	UG-135/U (WR90)	-20 to +65
10.000-15.000	WEI-1015	20	0.50	1.25:1	WR75 (WR75)	-20 to +65
10.600-13.250	WEI-1113	23	0.30	1.15:1	WR75 (WR75)	-20 to +65
12.600-14.600	WEI-1315	23	0.20	1.15:1	WR75 (WR75)	-20 to +65
12.400-18.000	WEI-1218	18	0.50	1.30:1	UG-1665/U (WR62)	-20 to +65
14.000-15.000	WEI-1415	23	0.30	1.15:1	UG-1665/U (WR62)	-20 to +65
17.600-22.000	WEI-1722	20	0.50	1.25:1	UG-597/U (WR42)	-20 to +65

Notes:

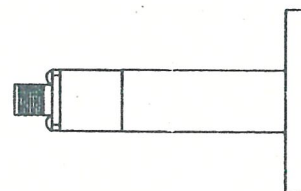
1. Each model number is available in the WEI series and the WHI series.

ORDERING INFORMATION:

Specify the catalog number and options.



WEI SERIES



WHI SERIES

OPTIONS:

1. Specify connector orientation option on WEI Series "A" or "B".
2. Specify if coaxial connector is SMA male or SMA female.
3. Specify whether coaxial port or waveguide port is input.

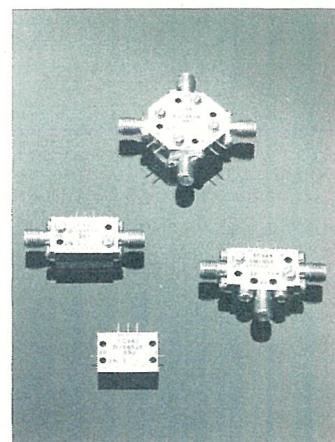


OTHER PRODUCTS AVAILABLE:

PIN Diode Switches, Integrated Assemblies, Filters

MINIATURE PIN DIODE SWITCHES

- 0.5 to 20 GHz
- Connectorized and drop-in
- TTL compatible driver is standard — other logic options are available
- SMA connectors are standard
- Reverse voltage protection is standard



SPECIFICATIONS⁽¹⁾

FREQUENCY GHz	MODEL NUMBER	MAXIMUM INSERTION LOSS (dB) @ FREQUENCY					MAXIMUM VSWR	MINIMUM ISOLATION (dB)	SWITCHING SPEED (nsec) (2)
		0.5-4.0	4.0-8.0	8.0-12.0	12.0-18.0	18.0-20.0			
Single Throw (SPST)									
0.5- 4.0	DJS0540-XXX	1.1	—	—	—	—	1.8:1	60	25
0.5- 8.0	DJS0580-XXX	1.1	1.4	—	—	—	1.8:1	60	25
0.5-12.0	DJS0512-XXX	1.1	1.4	1.4	—	—	1.8:1	60	25
0.5-18.0	DJS0518-XXX	1.1	1.4	1.4	1.9	—	1.8:1	55	25
0.5-20.0	DJS0520-XXX	1.1	1.4	1.4	1.9	2.4	1.8:1	50	25
Double Throw (SPDT)									
0.5- 4.0	DJD0540-XXX	1.3	—	—	—	—	1.8:1	60	75
0.5- 8.0	DJD0580-XXX	1.3	1.8	—	—	—	1.8:1	60	75
0.5-12.0	DJD0512-XXX	1.3	1.8	1.8	—	—	1.8:1	60	75
0.5-18.0	DJD0518-XXX	1.3	1.8	1.8	2.3	—	1.8:1	55	75
0.5-20.0	DJD0520-XXX	1.3	1.8	1.8	2.3	2.8	1.8:1	50	75
Triple Throw (SP3T)									
0.5- 4.0	DJT0540-XXX	1.4	—	—	—	—	2.0:1	60	75
0.5- 8.0	DJT0580-XXX	1.4	2.0	—	—	—	2.0:1	60	75
0.5-12.0	DJT0512-XXX	1.4	2.0	2.0	—	—	2.0:1	60	75
0.5-18.0	DJT0518-XXX	1.4	2.0	2.0	2.5	—	2.0:1	55	75
0.5-20.0	DJT0520-XXX	1.4	2.0	2.0	2.5	3.0	2.0:1	50	75
Four Throw (SP4T)									
0.5- 4.0	DJQ0540-XXX	1.5	—	—	—	—	2.0:1	60	75
0.5- 8.0	DJQ0580-XXX	1.5	2.1	—	—	—	2.0:1	60	75
0.5-12.0	DJQ0512-XXX	1.6	2.1	2.1	—	—	2.0:1	60	75
0.5-18.0	DJQ0518-XXX	1.5	2.1	2.1	2.8	—	2.0:1	55	75
0.5-20.0	DJQ0520-XXX	1.5	2.1	2.1	2.8	3.3	2.0:1	50	75
Five Throw (SP5T)									
0.5- 4.0	DJF0540-XXX	1.6	—	—	—	—	2.0:1	60	75
0.5- 8.0	DJF0580-XXX	1.6	2.2	—	—	—	2.0:1	60	75
0.5-12.0	DJF0512-XXX	1.6	2.2	2.2	—	—	2.0:1	60	75
0.5-18.0	DJF0518-XXX	1.6	2.2	2.2	3.0	—	2.0:1	55	75
0.5-20.0	DJF0520-XXX	1.6	2.2	2.2	3.0	3.5	2.0:1	50	75

Notes:

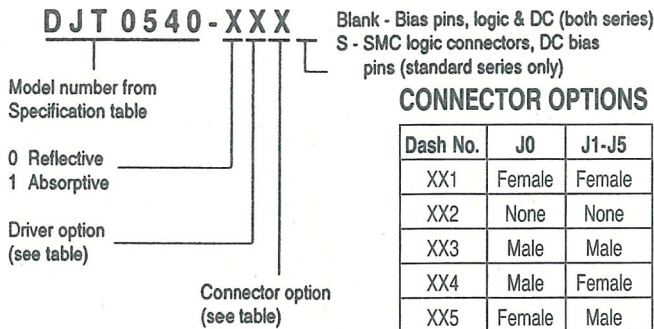
1. Apply to reflective switches at 25° C temperature with +10 dBm RF input power. Operating temperature range is -55° C to +100° C. Maximum input is +30 dBm.
2. Defined as 50% TTL input to 90% detected RF change including SMT driver delay. Rise and fall times typically less than 10 nsec (20 nsec max.). Measured using detected video with +10 dBm input at 10 GHz.



OTHER PRODUCTS AVAILABLE:

Isolators, Circulators, Integrated Assemblies, Filters

DJ AND STANDARD SERIES MODEL NUMBER DESCRIPTION



CONNECTOR OPTIONS

Dash No.	J0	J1-J5
XX1	Female	Female
XX2	None	None
XX3	Male	Male
XX4	Male	Female
XX5	Female	Male

TRUTH TABLES FOR DECODED DRIVERS (X2X)

THREE THROW

Low Loss Port	TTL Input Level ¹	
	A0	A1
J1	0	0
J2	1	0
J3	0	1

FOUR THROW

Low Loss Port	TTL Input Level ¹	
	A0	A1
J1	0	0
J2	1	0
J3	0	1
J4	1	1

FIVE THROW

Low Loss Port	TTL Input Level ¹			
	A0	A1	A2	E
J1	1	0	0	1
J2	0	1	0	1
J3	1	1	0	1
J4	0	0	1	1
J5	1	0	1	1
All Off	X	X	X	0

1. TTL Lo: 0 to 0.8V @ 1.6 uA max sink.
TTL Hi: 2.0 to 5.0 V @ 40 uA max source.

DRIVER OPTIONS

Dash No.	Driver	Insertion Loss	Isolation	Switch Type* (Throws)
X0X	Standard	TTL Lo	TTL Hi	1,2,3,4
X1X	Inverted	TTL Hi	TTL Lo	1,2,3,4
X2X	Decoded	See Truth Tables		3,4,5
X3X	Toggle	J1 C1,C2 Lo J2 C1,C2 Hi	J1 C1,C2 Hi J2 C1,C2 Lo	2
X4X	Toggle	J1 C1,C2 Hi J2 C1,C2 Lo	J1 C1,C2 Lo J2 C1,C2 Hi	2
X5X	None	-25 mA/ARM	+25 mA/ARM	1,2,3,4,5

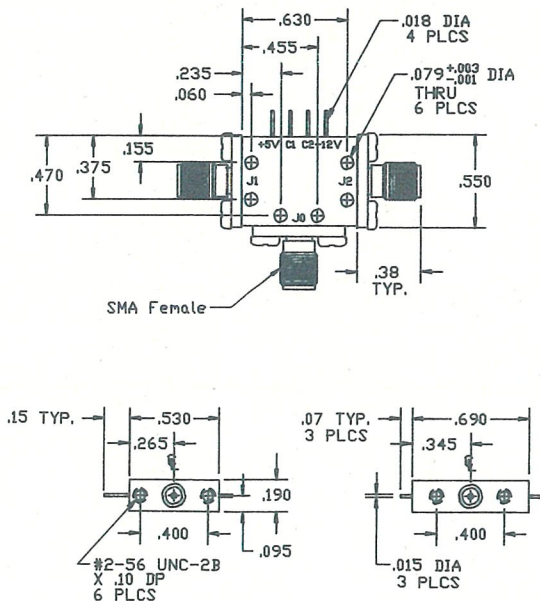
*Option available only on indicated switch type.

DRIVER BIAS REQUIREMENTS (Reflective)

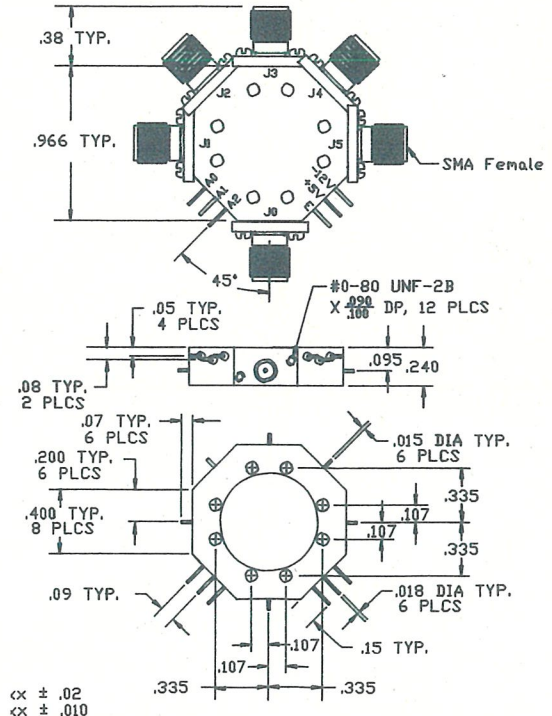
	SPST	SPDT	SP3T	SP4T	SP5T
+5±0.5V	50 mA max	75 mA max	100 mA max	125 mA max	150 mA max
-11.5V to -15.5V	50 mA max	50 mA max	50 mA max	50 mA max	50 mA max

DJ SERIES TYPICAL PACKAGE SPECIFICATIONS (Switches with Integral Drivers)

SPDT (SPST SIMILAR)



SP5T (SP3T, SP4T SIMILAR)



All dimensions are in inches.

TOLERANCES .xx ± .02
.xxx ± .010

<.x ± .02
<.x ± .010



OTHER PRODUCTS AVAILABLE:
Isolators, Circulators, Integrated Assemblies, Filters

STANDARD PIN DIODE SWITCHES

- Broadband designs: 0.5 to 26.5 GHz and 18 to 40 GHz
- Rugged, reliable design
- TTL compatible driver is standard — Other logic options are available
- SMA connectors are standard
- Reverse voltage protection is standard

SFX SERIES — FAST SPEED SMX SERIES — MEDIUM SPEED(3) SPECIFICATIONS(1)

FREQUENCY GHz	MODEL NUMBER(3)	MAXIMUM INSERTION LOSS (dB) @ FREQUENCY							MAXIMUM VSWR	MINIMUM ISOLATION (dB)	SWITCHING SPEED (nsec) (2,3)
		0.5-4.0	4.0-8.0	8.0-12.0	12.0-18.0	18.0-22.0	20.0-24.0	24.0-26.5			
Single Throw (SPST)											
0.5- 4.0	SFS0540-XXX	1.1	—	—	—	—	—	—	1.5:1	60	25
0.5- 8.0	SFS0580-XXX	1.1	1.4	—	—	—	—	—	1.6:1	60	25
0.5-12.0	SFS0512-XXX	1.1	1.4	1.6	—	—	—	—	1.8:1	60	25
0.5-18.0	SFS0518-XXX	1.1	1.4	1.6	2.0	—	—	—	1.8:1	60	25
0.5-26.5	SFS0526-XXX	1.1	1.4	1.6	2.0	2.4	2.7	3.0	1.8:1(5)	60(4)	25
18.0-40.0	SFS1840-XXX	SEE BELOW FOR SPECIFICATIONS									
Double Throw (SPDT)											
0.5- 4.0	SFD0540-XXX	1.3	—	—	—	—	—	—	1.5:1	65	25
0.5- 8.0	SFD0580-XXX	1.3	1.6	—	—	—	—	—	1.6:1	65	25
0.5-12.0	SFD0512-XXX	1.3	1.6	1.8	—	—	—	—	1.8:1	60	25
0.5-18.0	SFD0518-XXX	1.3	1.6	1.8	2.3	—	—	—	1.8:1	60	25
0.5-26.5	SFD0526-XXX	1.3	1.6	1.8	2.5	2.8	3.2	3.6	2.0:1	50	25
Triple Throw (SP3T)											
0.5- 4.0	SFT0540-XXX	1.4	—	—	—	—	—	—	1.8:1	65	25
0.5- 8.0	SFT0580-XXX	1.4	1.8	—	—	—	—	—	1.8:1	65	25
0.5-12.0	SFT0512-XXX	1.4	1.8	2.2	—	—	—	—	1.8:1	65	25
0.5-18.0	SFT0518-XXX	1.4	1.8	2.2	2.5	—	—	—	2.0:1	60	25
0.5-26.5	SFT0526-XXX	1.4	1.8	2.2	2.5	3.0	3.4	3.8	2.0:1	60(4)	25
Four Throw (SP4T)											
0.5- 4.0	SFQ0540-XXX	1.4	—	—	—	—	—	—	1.8:1	65	25
0.5- 8.0	SFQ0580-XXX	1.4	1.8	—	—	—	—	—	1.8:1	65	25
0.5-12.0	SFQ0512-XXX	1.4	1.8	2.3	—	—	—	—	1.8:1	65	25
0.5-18.0	SFQ0518-XXX	1.4	1.8	2.3	2.6	—	—	—	2.0:1	60	25
0.5-26.5	SFQ0526-XXX	1.4	1.8	2.3	2.6	3.1	3.5	3.9	2.0:1	60(4)	25
Five Throw (SP5T)											
0.5- 4.0	SFF0540-XXX	1.4	—	—	—	—	—	—	1.8:1	65	25
0.5- 8.0	SFF0580-XXX	1.4	1.9	—	—	—	—	—	1.8:1	65	25
0.5-12.0	SFF0512-XXX	1.4	1.9	2.3	—	—	—	—	1.8:1	65	25
0.5-18.0	SFF0518-XXX	1.4	1.9	2.3	2.7	—	—	—	2.0:1	60	25
0.5-26.5	SFF0526-XXX	1.4	1.9	2.3	2.7	3.3	3.6	4.0	2.0:1	60(4)	25

18.0-40.0	SFS1840-XXX	FREQUENCY (GHz)	MAXIMUM INSERTION LOSS (dB)	MAXIMUM VSWR	MINIMUM ISOLATION (dB)	SWITCHING SPEED (nsec) (2,3)
		18.0-26.0	1.7	1.8:1	35	25
		26.0-40.0	2.5	2.2:1	25	25

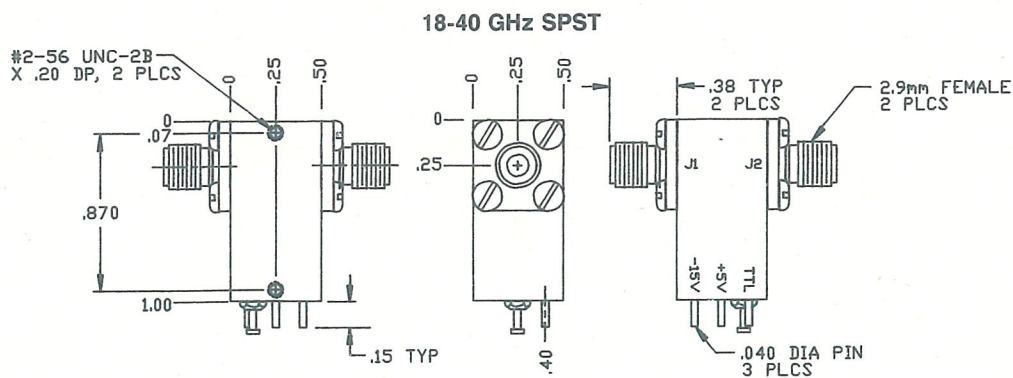
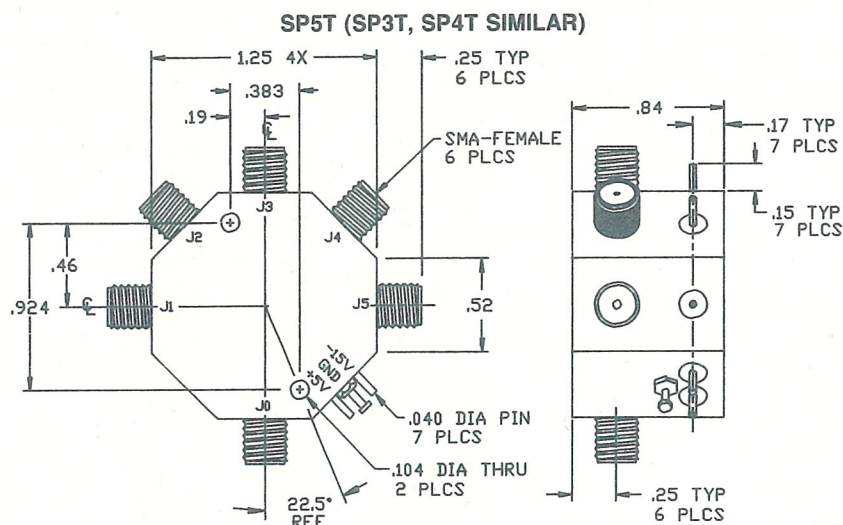
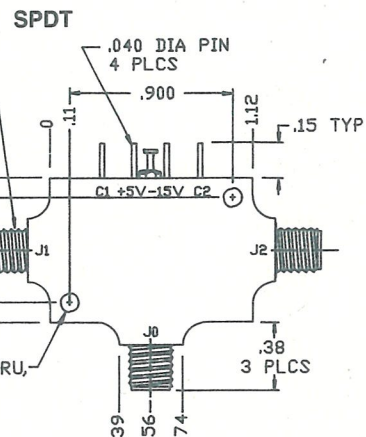
Notes:

1. Apply to reflective switches at 25° C temperature with +10 dBm RF input power. Operating temperature range is -55° C to +100° C. Maximum input is +30 dBm.
2. Defined as 50% TTL input to 90% detected RF change including SMT driver delay. Rise and fall times typically less than 10 nsec (20 nsec max.). Measured using detected video with +10 dBm input at 10 GHz.
3. Switching speed for medium speed option is 100 nsec max. Replace "F" in model number with "M".
4. Isolation 55 dB minimum from 20.0 to 26.5 GHz.
5. VSWR 2.0:1 maximum from 20.0 to 26.5 GHz.



OTHER PRODUCTS AVAILABLE:
Isolators, Circulators, Integrated Assemblies, Filters

(Switches with Integral Drivers)



OTHER PRODUCTS AVAILABLE:
Isolators, Circulators, Integrated Assemblies, Filters



STANDARD BAND SPECIFICATIONS⁽¹⁾

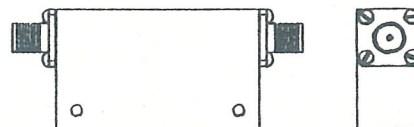
FREQUENCY (GHz)	MODEL NUMBER	ATTENUATION @ F1 (dB) (2)	MAXIMUM INSERTION LOSS @ F2 (dB)	LINEARITY (+dB)	MAXIMUM VSWR	OUTLINE SIZE (IN.) LxWxT
0.500- 1.000	SME-0510	2.0	0.50	0.25	2.0:1	2.30x1.40x0.50
1.000- 2.000	SME-1020	3.0	0.50	0.25	2.0:1	2.30x1.40x0.50
2.000- 4.000	SME-2040	4.5	0.75	0.50	2.0:1	2.30x1.40x0.50
4.000- 8.000	SME-4080	6.5	1.00	0.50	2.0:1	2.30x1.40x0.50
8.000-12.000	SME-8012	5.5	1.00	0.50	2.0:1	1.50x0.65x0.45
12.000-18.000	SME-1218	8.0	1.50	0.75	2.0:1	1.50x0.65x0.45

WIDE BAND SPECIFICATIONS⁽¹⁾

FREQUENCY (GHz)	MODEL NUMBER	ATTENUATION @ F1 (dB) (2)	MAXIMUM INSERTION LOSS @ F2 (dB)	LINEARITY (+dB)	MAXIMUM VSWR	OUTLINE SIZE (IN.) LxWxT
0.500- 2.000	SME-0520	2.5	0.50	0.50	2.0:1	2.30x1.40x0.50
2.000- 6.000	SME-2060	2.5	0.75	0.50	1.7:1	2.30x1.40x0.50
8.000-16.000	SME-8016	10.0	1.50	0.85	1.5:1	1.50x0.65x0.45
8.000-18.000	SME-8018	10.0	1.50	0.75	1.8:1	1.50x0.65x0.45
6.000-18.000	SME-6018	7.5	1.50	0.75	1.7:1	1.50x0.65x0.45

Notes:

1. Measured at 25° C.
2. Attenuation at F1 is relative to insertion loss at F2.
3. Standard connectors are SMA female in and out.



STANDARD

COAXIAL SPECIFICATIONS⁽¹⁾

FREQUENCY (GHz)	MODEL NUMBER	ATTENUATION @ F1 (dB) (2)	MAXIMUM INSERTION LOSS @ F2 (dB)	LINEARITY (+dB)	MAXIMUM VSWR	OUTLINE SIZE (IN.) LxDIA
2.000- 4.000	SCE-2040	5.0	1.00	0.50	1.5:1	1.13x0.35
2.000- 8.000	SCE-2080	8.0	1.50	0.50	1.7:1	1.13x0.35
2.000-18.000	SCE-2018	10.0	2.00	1.00	2.0:1	1.13x0.35
8.000-18.000	SCE-8018	10.0	2.00	0.75	2.0:1	1.13x0.35

Notes:

1. Measured at 25° C.
2. Attenuation at F1 is relative to insertion loss at F2.
3. Standard connectors are SMA male in, SMA female out.



COAXIAL

Ordering Information

ORDERING: Please give product name, model number, frequency range and full shipping instructions when ordering from this catalog.

SPECIFICATIONS: Specifications and information contained herein are subject to change without notice.

PRICING: Prices are FOB Georgetown, TX. Terms are Net 30 days.

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WARRANTY: Sierra Microwave Technology products are warranted to be free of manufacturing and material defects for a period of one year from date of original delivery. SMT's obligation under this warranty is limited to repairing or replacing, at its option, products returned to the factory with transportation prepaid.



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