

NARROWBAND SP7T SWITCH

REFLECTIVE AND ABSORPTIVE 0.02-18 GHz

GENERAL INFORMATION:

Series TF-7 and TN-7-A switches are medium power devices that operate over commonly used frequency ranges. Carefully selected diodes placed in either series, series-shunt, or shunt configurations produce excellent electrical performance from UHF through KU bands.

GENERAL SPECIFICATIONS:

- Frequency Coverage:** 0.02 to 18.0 GHz.
RF Impedance: 50 OHMS.
RF Power: +20 dBm operational.
 Consult factory for high power options.
DC Requirements: For switches without drivers, each path requires +60 mA for the "off" condition and -60 mA for the "on" condition. Switches with drivers require +5 volts at +420 mA and -5 volts at -140 mA supplies. Logic is TTL "0" when "on" and "1" when "off". Different supply voltages and logic available if specified at time of order. Operating temperature from -55°C to +85°C.
Temperature Information: Operating temperature from -55°C to +85°C.
Switching Speed: 10% to 90% or 90% to 10% of RF. There is an additional 30 nanosec of driver delay.
Environment: MIL-E-5400
Connectors: RF connectors are SMA. Other connectors available (when specified at time of order) include types N, TNC, and BNC. Mating connector supplied for all units with multipin connector; ITT Cannon MDB1-15SSL or equiv.

NOTES:

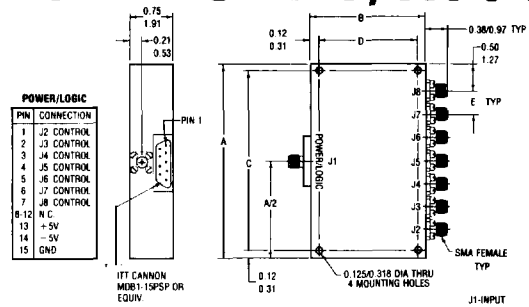
- All switches, with drivers, are available with either solder pins, or a multi-pin connector for the drive connection, when specified at time of order. (See "outlines with driver")
- When ordering, add suffix for configuration desired to the model number. ('S' for rectangular, 'R' for eight sided) i.e. TF-711R.
- If driver is required, add 'D' to the model number when ordering, i.e. Model TF-711R, with driver, becomes TF-711RD.
- When ordering, the complete model number should be given. The model number consists of the model number for a standard switch plus the dash number for any options, i.e. Model TF-720RD-1 is a eight sided SP7T reflective switch with driver whose frequency range is 0.7 to 0.8 GHz and a switching speed of 100 nanosec.
- Any unit listed can be supplied with pins instead of RF connectors. (Consult factory.)

MECHANICAL OUTLINES

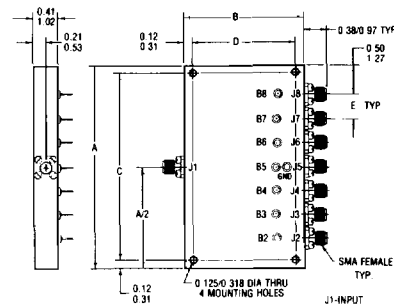
Outline	A Inches cm.	B Inches cm.	C Inches cm.	D Inches cm.	E Inches cm.
1	3.40 8.64	2.00 5.08	3.150 8.001	1.750 4.450	0.40 1.02
2	4.00 10.16	3.00 7.62	3.750 9.525	2.750 6.985	0.50 1.27
3	0.85 2.16	1.600 4.064	—	—	—
4	1.15 2.92	2.260 5.740	—	—	—
5	4.00 10.16	3.50 8.89	3.750 9.525	3.250 8.255	0.50 1.27
6	4.00 10.16	2.35 5.97	3.750 9.525	2.100 5.334	0.50 1.27

Inches/Centimeters
 xx ± 0.3 xxx ± .010/ xx ± .08 xxx ± .025

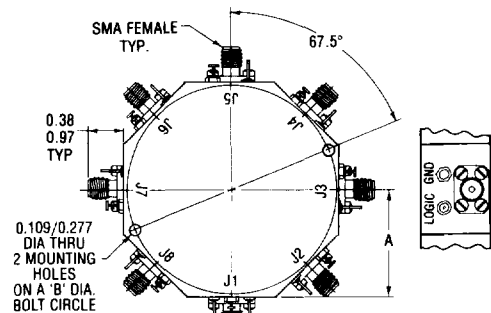
SERIES TF-7/TN-7-A



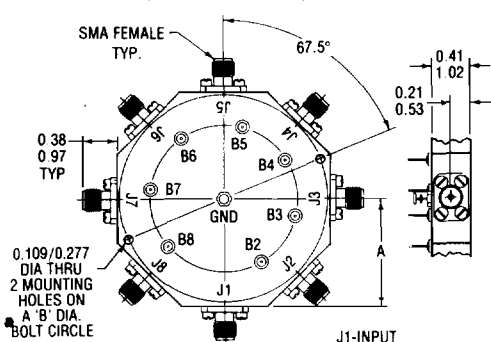
CONFIGURATION S
OUTLINE WITH DRIVER



CONFIGURATION S
OUTLINE WITHOUT DRIVER



CONFIGURATION R
OUTLINE WITH DRIVER



CONFIGURATION R
OUTLINE WITHOUT DRIVER

NARROWBAND

SP7T SWITCH

SERIES TF-7/TN-7-A

REFLECTIVE AND ABSORPTIVE 0.02-18 GHz

ELECTRICAL PERFORMANCE

Power: 1 watt average, 10 watts peak, survival

STANDARD SWITCH							HIGH SPEED OPTION				
Isolation: 30 dB minimum Speed: 2 microsec. maximum							MODEL-1		MODEL-2		
							Speed Nanosec.	Insertion Loss Max. dB Ref. / Abs.	Speed Nanosec.	Insertion Loss Max. dB Ref. / Abs.	
Reflective Model No.	Absorptive Model No.	Frequency Range GHz	Insertion Loss Max. dB Ref. / Abs.	VSWR† Max.	Outline Config. Square Ref. / Abs.		Config. Round Ref. / Abs.	Speed Nanosec.	Insertion Loss Max. dB Ref. / Abs.	Speed Nanosec.	Insertion Loss Max. dB Ref. / Abs.
TF-711	TN-711-A	0.02-0.07	0.80 / 0.90	1.50	2 / 5	4 / 4		500	0.85 / 0.95	N/A	N/A
TF-714	TN-714-A	0.2-0.25	0.80 / 0.90	1.50	2 / 5	4 / 4		500	0.85 / 0.95	N/A	N/A
TF-717	TN-717-A	0.4-0.45	0.90 / 1.00	1.50	2 / 5	4 / 4		200	0.95 / 1.05	N/A	N/A
TF-720	TN-720-A	0.7-0.8	1.00 / 1.10	1.50	1 / 2	3 / 4		100	1.10 / 1.20	20	1.20 / 1.30
TF-723	TN-723-A	0.95-1.22	1.10 / 1.20	1.50	1 / 2	3 / 4		100	1.20 / 1.30	20	1.30 / 1.40
TF-726	TN-726-A	1.02-1.10	1.10 / 1.20	1.50	1 / 2	3 / 4		100	1.20 / 1.30	20	1.30 / 1.40
TF-729	TN-729-A	1.2-1.4	1.10 / 1.20	1.50	1 / 2	3 / 4		100	1.20 / 1.30	20	1.30 / 1.40
TF-732	TN-732-A	1.5-1.6	1.10 / 1.20	1.50	1 / 2	3 / 4		100	1.20 / 1.30	20	1.30 / 1.40
TF-735	TN-735-A	1.7-2.4	1.20 / 1.30	1.50	1 / 2	3 / 4		100	1.30 / 1.40	20	1.40 / 1.50
TF-738	TN-738-A	2.2-2.3	1.20 / 1.30	1.50	1 / 2	3 / 4		100	1.30 / 1.40	20	1.40 / 1.50
TF-741	TN-741-A	2.9-3.1	1.20 / 1.30	1.50	1 / 2	3 / 4		100	1.30 / 1.40	20	1.40 / 1.50
TF-744	TN-744-A	3.1-3.5	1.20 / 1.30	1.50	1 / 2	3 / 4		100	1.30 / 1.40	20	1.40 / 1.50
TF-747	TN-747-A	3.3-3.7	1.20 / 1.30	1.50	1 / 2	3 / 4		100	1.30 / 1.40	20	1.40 / 1.50
TF-750	TN-750-A	3.7-4.2	1.20 / 1.30	1.50	1 / 2	3 / 4		100	1.30 / 1.40	20	1.40 / 1.50
TF-753	TN-753-A	4.2-4.4	1.30 / 1.40	1.50	1 / 2	3 / 4		100	1.40 / 1.50	20	1.50 / 1.60
TF-756	TN-756-A	4.4-5.0	1.40 / 1.50	1.50	1 / 2	3 / 4		100	1.50 / 1.60	20	1.60 / 1.70
TF-759	TN-759-A	5.0-5.25	1.40 / 1.50	1.60	1 / 2	3 / 4		100	1.50 / 1.60	20	1.60 / 1.70
TF-762	TN-762-A	5.4-5.9	1.40 / 1.50	1.60	1 / 2	3 / 4		100	1.50 / 1.60	20	1.60 / 1.70
TF-765	TN-765-A	5.9-6.4	1.40 / 1.50	1.60	1 / 2	3 / 4		100	1.50 / 1.60	20	1.60 / 1.70
TF-768	TN-768-A	6.7-7.4	1.60 / 1.70	1.60	1 / 2	3 / 4		100	1.70 / 1.80	20	1.80 / 1.90
TF-771	TN-771-A	7.1-7.7	1.60 / 1.70	1.60	1 / 2	3 / 4		100	1.70 / 1.80	20	1.80 / 1.90
TF-774	TN-774-A	8.5-9.6	1.70 / 1.80	1.60	1 / 6	3 / 4		100	1.80 / 1.90	20	1.90 / 2.00
TF-777	TN-777-A	9.0-9.2	1.70 / 1.80	1.60	1 / 6	3 / 4		100	1.80 / 1.90	20	1.90 / 2.00
TF-780	TN-780-A	9.3-9.7	1.70 / 1.80	1.70	1 / 6	3 / 4		100	1.80 / 1.90	20	1.90 / 2.00
TF-783	TN-783-A	9.8-10.4	1.90 / 2.00	1.70	1 / 6	3 / 4		100	2.00 / 2.10	20	2.10 / 2.20
TF-786	TN-786-A	10.0-10.5	1.90 / 2.00	1.70	1 / 6	3 / 4		100	2.00 / 2.10	20	2.10 / 2.20
TF-789	TN-789-A	12.0-12.4	2.00 / 2.10	1.70	1 / 6	3 / 4		100	2.10 / 2.20	20	2.20 / 2.30
TF-792	TN-791-A	13.1-13.5	2.10 / 2.20	1.70	1 / 6	3 / 4		100	2.20 / 2.30	20	2.30 / 2.40
TF-795	TN-794-A	14.5-15.5	2.10 / 2.20	1.70	1 / 6	3 / 4		100	2.20 / 2.30	20	2.30 / 2.40
TF-796	TN-796-A	15.0-17.0	2.10 / 2.20	1.70	1 / 6	3 / 4		100	2.20 / 2.30	20	2.30 / 2.40
TF-799	TN-799-A	16.0-18.0	2.10 / 2.20	1.70	1 / 6	3 / 4		100	2.25 / 2.35	20	2.40 / 2.50

If improvement of any of the electrical specifications listed above is required, consult factory.

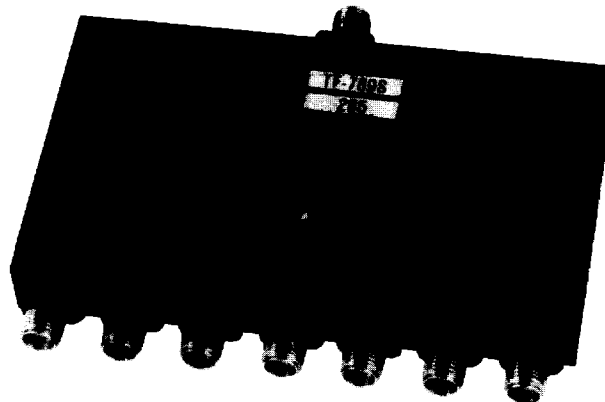
† Reflective Switch: VSWR measured in the 'ON' input and 'ON' Output Position.
Absorptive Switch: VSWR measured in the 'ON' Input and 'ON' Output and 'OFF' Output Position.

Insertion Loss measured with input power less than 100 mW. Increase insertion loss by 20% for outer arms, for rectangular (S) package.

Hermetic Seal
and Mil STD 883
Screening Available

TYPICAL MODEL NO.

TF	XXX	S		D	X
or	or	or			
TN	XXXX	R			
Model	Freq	Pkg	Driver	Speed	
Series	Code	Style	Option	Option	
		(Note 2)	(Note 3)	(Note 4)	



**KDI/triangle
ELECTRONICS**

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