

NARROWBAND SP8T SWITCH REFLECTIVE AND ABSORPTIVE 0.02-18 GHz

GENERAL INFORMATION:

Series TF-8 and TN-8-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.

DC Requirements: Consult factory for high power options. 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 +480 mA and -5 volts at -160 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:

Switching Speed: 10% to 90% or 90% to 10% of RF. There is an additional 30 nanosec of driver delay. MIL-E-5400.

Environment:

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 MDB1-15SSP 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 nine sided) i.e. TF-811R.
- If driver is required, add 'D' to the model number when ordering, i.e. Model TF-811R, with driver, becomes TF-811RD.
- 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-820RD-1 is a nine sided SP8T 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.)

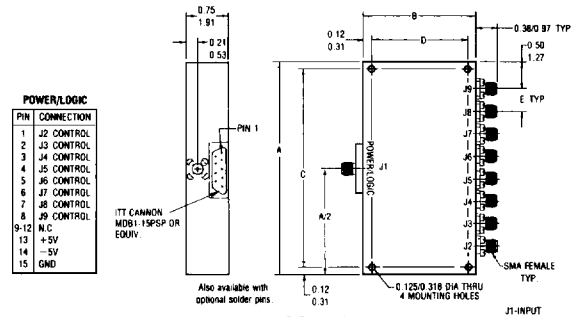
MECHANICAL OUTLINES

Outline	A Inches cm.	B Inches cm.	C Inches cm.	D Inches cm.	E Inches cm.
1	3.80 8.64	2.00 5.08	3.550 9.017	1.750 4.450	0.40 1.02
2	4.50 10.16	3.00 7.62	4.250 10.795	2.750 6.985	0.50 1.27
3	1.02 2.59	1.950 4.953	—	—	—
4	1.30 3.30	2.550 6.477	—	—	—
5	4.50 11.43	3.50 8.89	4.250 10.795	3.250 8.255	0.50 1.27
6	4.50 11.43	2.35 5.97	4.250 10.795	2.100 5.334	0.50 1.27

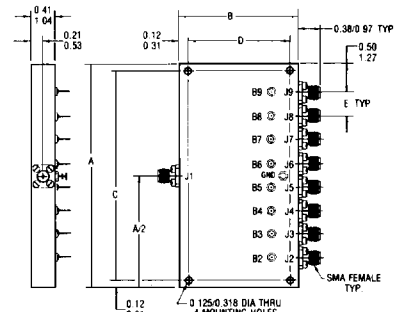
Inches/Centimeters

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

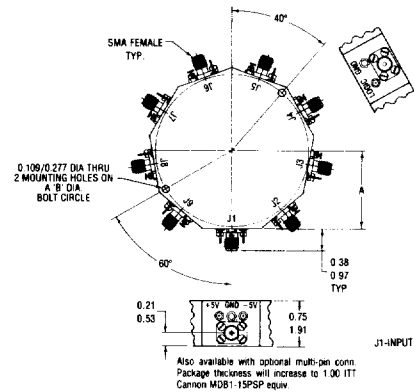
SERIES TF-8/TN-8-A



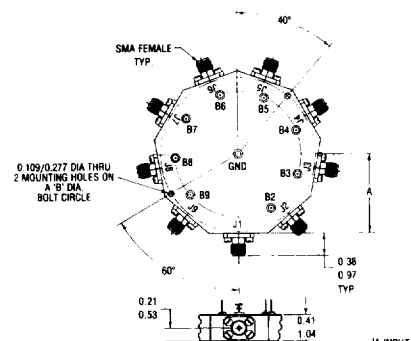
CONFIGURATION S
OUTLINE WITH DRIVER



CONFIGURATION S
OUTLINE WITHOUT DRIVER



CONFIGURATION R
OUTLINE WITH DRIVER



CONFIGURATION R
OUTLINE WITHOUT DRIVER

BROADBAND

SP8T SWITCH

SERIES TF-8/TN-8-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.					
TF-811	TN-811-A	0.02-0.07	0.90 / 1.00	1.55	2 / 5	4 / 4	500	0.95 / 1.05	N/A	N/A
TF-814	TN-814-A	0.2-0.25	0.90 / 1.00	1.55	2 / 5	4 / 4	500	0.95 / 1.05	N/A	N/A
TF-817	TN-817-A	0.4-0.45	1.00 / 1.10	1.55	2 / 5	4 / 4	200	1.05 / 1.15	N/A	N/A
TF-820	TN-820-A	0.7-0.8	1.10 / 1.20	1.55	1 / 2	3 / 4	100	1.20 / 1.30	20	1.30 / 1.40
TF-823	TN-823-A	0.95-1.22	1.20 / 1.30	1.55	1 / 2	3 / 4	100	1.30 / 1.40	20	1.40 / 1.50
TF-826	TN-826-A	1.02-1.10	1.20 / 1.30	1.55	1 / 2	3 / 4	100	1.30 / 1.40	20	1.40 / 1.50
TF-829	TN-829-A	1.2-1.4	1.20 / 1.30	1.55	1 / 2	3 / 4	100	1.30 / 1.40	20	1.40 / 1.50
TF-832	TN-832-A	1.5-1.6	1.20 / 1.30	1.55	1 / 2	3 / 4	100	1.30 / 1.40	20	1.40 / 1.50
TF-835	TN-835-A	1.7-2.4	1.30 / 1.40	1.55	1 / 2	3 / 4	100	1.40 / 1.50	20	1.50 / 1.60
TF-838	TN-838-A	2.2-2.3	1.30 / 1.40	1.55	1 / 2	3 / 4	100	1.40 / 1.50	20	1.50 / 1.60
TF-841	TN-841-A	2.9-3.1	1.30 / 1.40	1.55	1 / 2	3 / 4	100	1.40 / 1.50	20	1.50 / 1.60
TF-844	TN-844-A	3.1-3.5	1.30 / 1.40	1.55	1 / 2	3 / 4	100	1.40 / 1.50	20	1.50 / 1.60
TF-847	TN-847-A	3.3-3.7	1.30 / 1.40	1.55	1 / 2	3 / 4	100	1.40 / 1.50	20	1.50 / 1.60
TF-850	TN-850-A	3.7-4.2	1.30 / 1.40	1.55	1 / 2	3 / 4	100	1.40 / 1.50	20	1.50 / 1.60
TF-853	TN-853-A	4.2-4.4	1.40 / 1.50	1.55	1 / 2	3 / 4	100	1.50 / 1.60	20	1.60 / 1.70
TF-856	TN-856-A	4.4-5.0	1.50 / 1.60	1.55	1 / 2	3 / 4	100	1.60 / 1.70	20	1.70 / 1.80
TF-859	TN-859-A	5.0-5.25	1.50 / 1.60	1.65	1 / 2	3 / 4	100	1.60 / 1.70	20	1.70 / 1.80
TF-862	TN-862-A	5.4-5.9	1.50 / 1.60	1.65	1 / 2	3 / 4	100	1.60 / 1.70	20	1.70 / 1.80
TF-865	TN-865-A	5.9-6.4	1.50 / 1.60	1.65	1 / 2	3 / 4	100	1.60 / 1.70	20	1.70 / 1.80
TF-868	TN-868-A	6.7-7.4	1.70 / 1.80	1.65	1 / 2	3 / 4	100	1.80 / 1.90	20	1.90 / 2.00
TF-871	TN-871-A	7.1-7.7	1.70 / 1.80	1.65	1 / 2	3 / 4	100	1.80 / 1.90	20	1.90 / 2.00
TF-874	TN-874-A	8.5-9.6	1.80 / 1.90	1.65	1 / 6	3 / 4	100	1.90 / 2.00	20	2.00 / 2.10
TF-877	TN-877-A	9.0-9.2	1.80 / 1.90	1.65	1 / 6	3 / 4	100	1.90 / 2.00	20	2.00 / 2.10
TF-880	TN-880-A	9.3-9.7	1.80 / 1.90	1.75	1 / 6	3 / 4	100	1.90 / 2.00	20	2.00 / 2.10
TF-883	TN-883-A	9.8-10.4	2.00 / 2.10	1.75	1 / 6	3 / 4	100	2.10 / 2.20	20	2.20 / 2.30
TF-886	TN-886-A	10.0-10.5	2.00 / 2.10	1.75	1 / 6	3 / 4	100	2.10 / 2.20	20	2.20 / 2.30
TF-889	TN-889-A	12.0-12.4	2.10 / 2.20	1.75	1 / 6	3 / 4	100	2.20 / 2.30	20	2.30 / 2.40
TF-892	TN-891-A	13.1-13.5	2.20 / 2.30	1.75	1 / 6	3 / 4	100	2.30 / 2.40	20	2.40 / 2.50
TF-895	TN-894-A	14.5-15.5	2.20 / 2.30	1.75	1 / 6	3 / 4	100	2.30 / 2.40	20	2.40 / 2.50
TF-896	TN-896-A	15.0-17.0	2.20 / 2.30	1.75	1 / 6	3 / 4	100	2.30 / 2.40	20	2.40 / 2.50
TF-899	TN-899-A	16.0-18.0	2.20 / 2.30	1.75	1 / 6	3 / 4	100	2.35 / 2.45	20	2.50 / 2.60

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

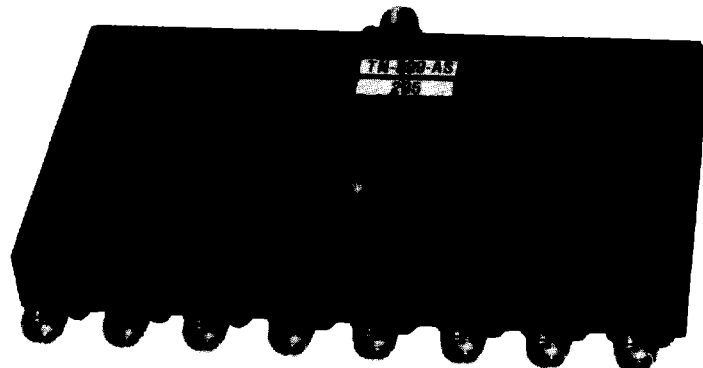
† Reflective Switch: VSWR measured in the 'ON' input and 'ON' Output Position.
Absorptive Switch: VSWR measured in the 'ON' Input and 'ON' Output and 'OFF' Output Position.

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

TYPICAL MODEL NO.

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

Hermetic Seal
and Mil STD 883
Screening Available



**KDI/triangle
ELECTRONICS**

31 Farinella Drive • East Hanover, NJ 07936 • Phone: (201) 884-1423
TWX: (710) 986-8202 • FAX: (201) 884-0445