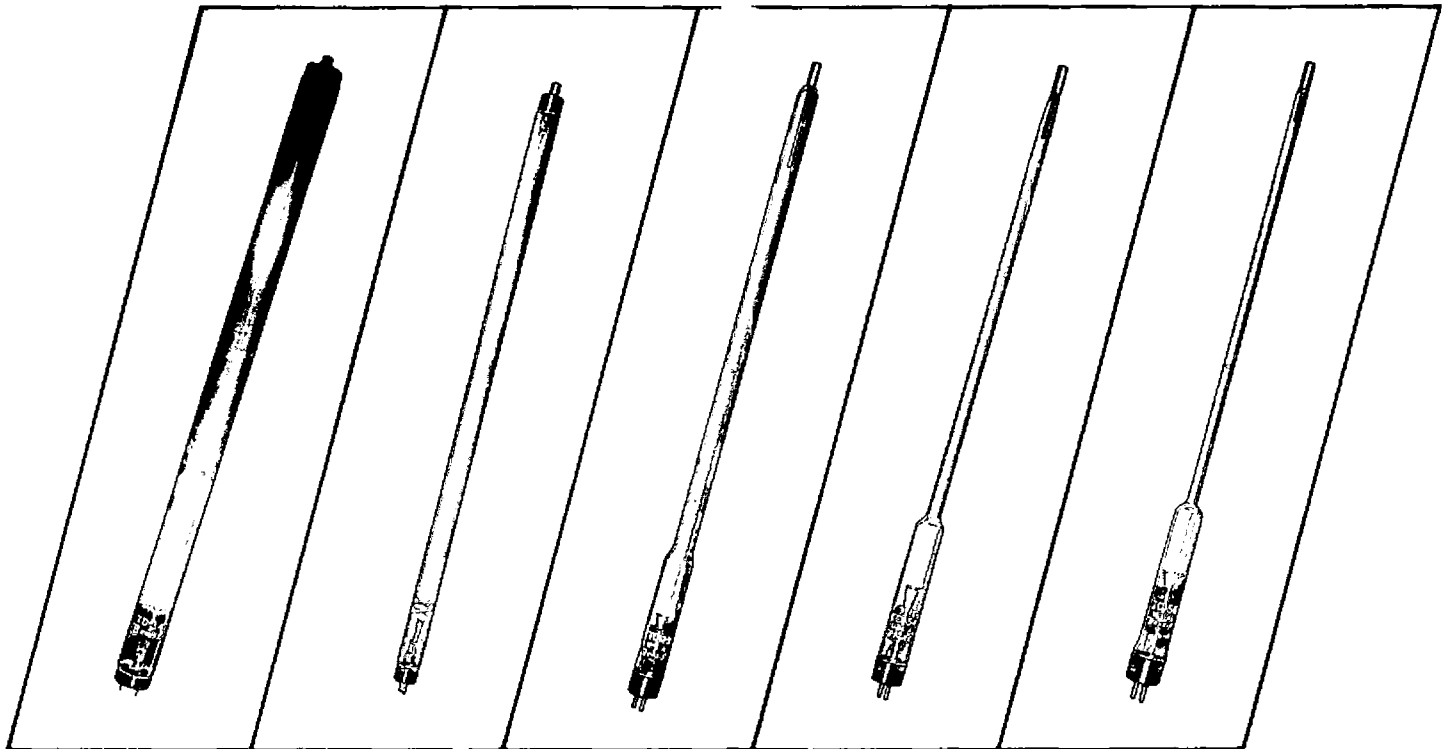


# GAS NOISE SOURCES, NEON



7148  
TD-34

7989  
TD-48

6882  
TD-23

7991  
TD-54

7990  
TD-50

## DESCRIPTION

These tubes are designed for use as DC operated noise sources in super high frequency (SHF) measurements. When used in standard mount assemblies, they function as untuned terminations over the entire recommended transmission bandwidths of the guides.

	7148/TD-34	7989/TD-48	6882/TD-23	7991/TD-54	7990/TD-50
Waveguide	RG-48/U	RG-49/U RG-50/U	RG-52/U	RG-91/U	RG-53/U
Frequency kMc	2.60 - 3.95	3.95 - 5.85 5.85 - 8.20	8.20 - 12.40	12.40 - 18.00	18.00 - 26.50
Insertion Angle	10° E	10° E	10° E	10° E	10° E

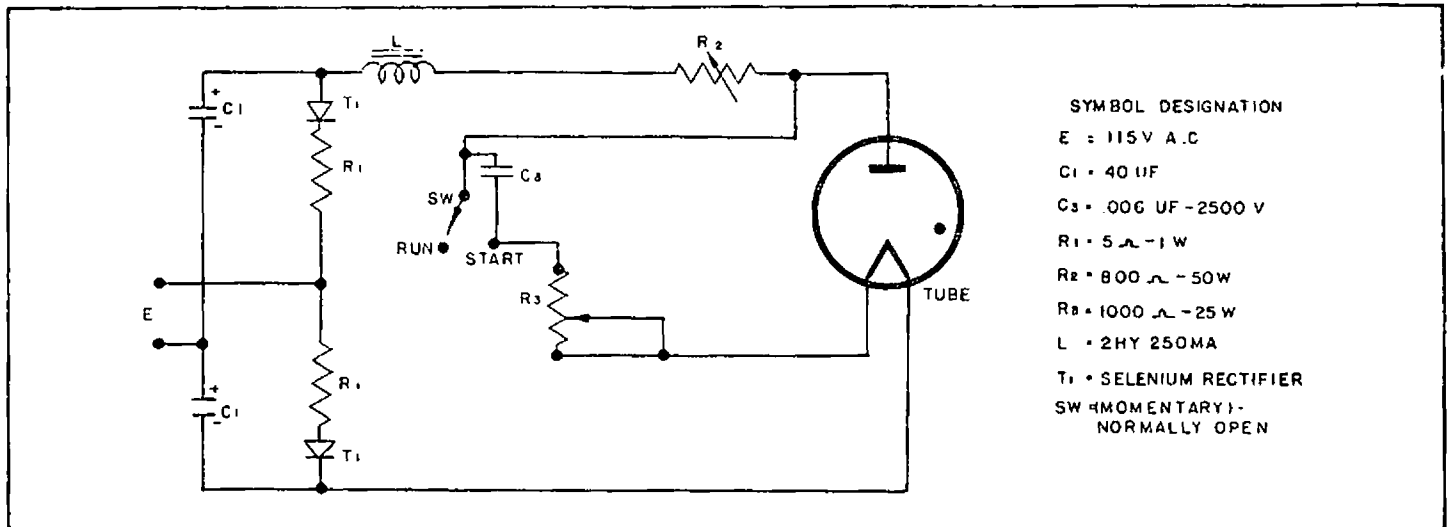
ELECTRON TUBE PRODUCTS  
**Red Bank Division**  
 EATONTOWN, N. J.



# RATINGS

Characteristic	Unit	7148/TD-34	7989/TD-48	6882/TD-23	7991/TD-54	7990/TD-50
Anode Current	mA <sub>dc</sub>	250	250	200	200	200
Filament Voltage	V <sub>dc</sub>	10 max.	20 max.	20 max.	20 max.	20 max.
Filament Current*	mA <sub>dc</sub>	300	170	170	170	170
Tube Dissipation	Watts	41	28	23	27	30
Tube Voltage Drop	V <sub>dc</sub>	165	110	115	135	150
Ambient Temp. Range	°C	-55° to +85°	-55° to +85°	-55° to +85°	-55° to +85°	-55° to +85°
VSWR (Cold)		1.15 max.	1.20 max.	1.20 max.	1.20 max.	1.20 max.
VSWR (Hot)		1.15 max.	1.15 max.	1.15 max.	1.15 max.	1.15 max.
NR-1	db	17.75 $\pm$ .3	18.00 $\pm$ .5	18.00 $\pm$ .3	18.20 $\pm$ .5	18.40 $\pm$ .5

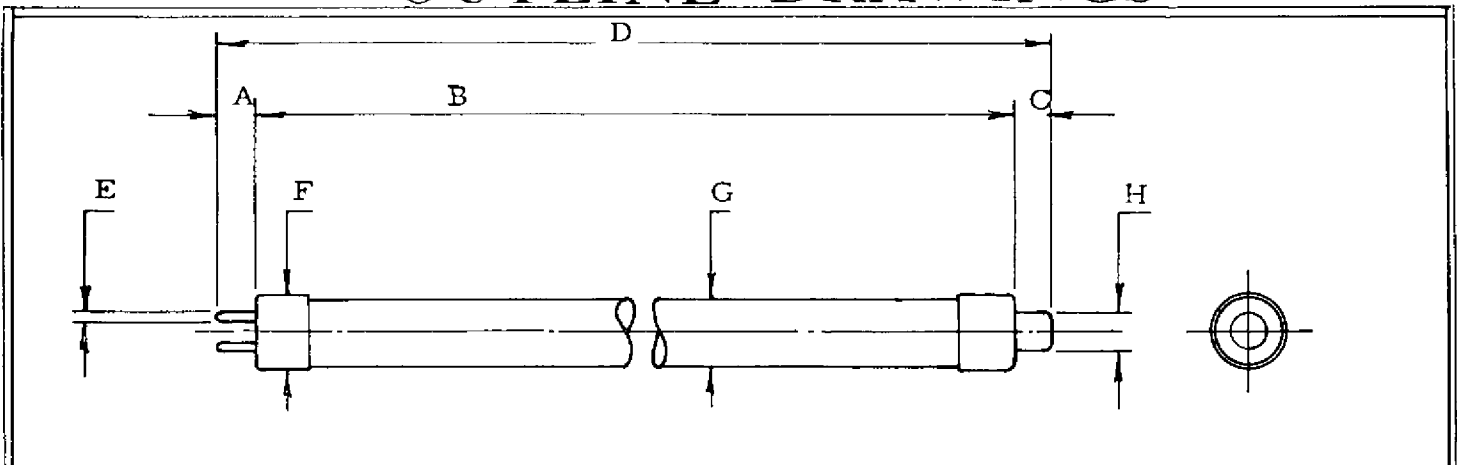
\* Filament current used during starting only.



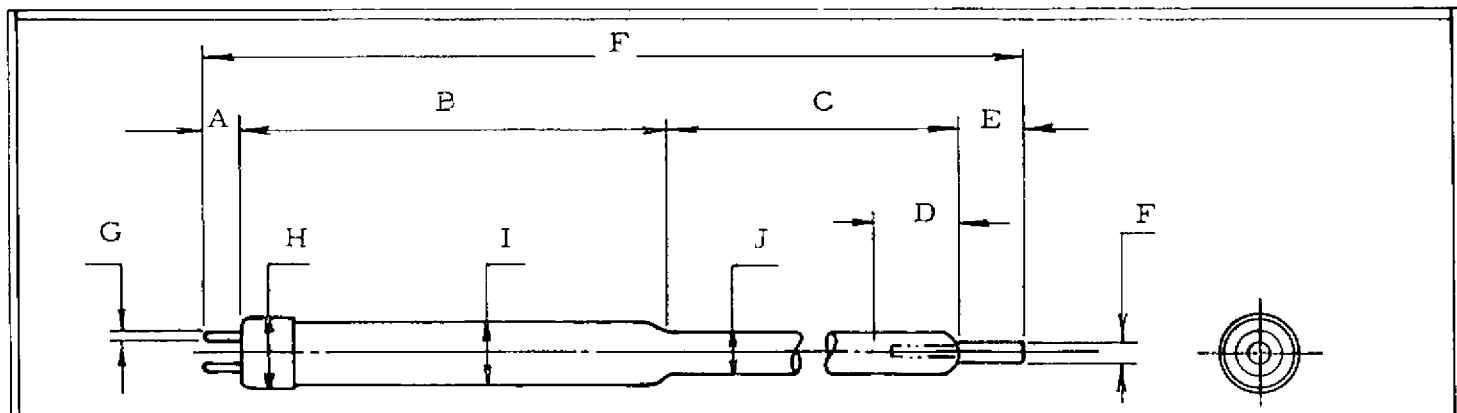
TYPICAL STARTING AND OPERATING CIRCUIT

The run-start switch shown in the typical circuit provides the high voltage surge or spike necessary to initiate the discharge. In the start position, current passes through the filament at the cathode end of the tube preheating the filament and assisting in starting the discharge. As the switch is released to the run position, a high surge voltage appears momentarily across the tube, caused by the collapse of the magnetic field in choke "L". This high voltage initiates the discharge in the tube which is then sustained by the power supply voltage and stabilized by the resistance R2. External power is no longer supplied to the filament once the discharge is established. Filament temperature is maintained by the tube current and is evidenced by a hot spot on the filament structure.

# OUTLINE DRAWINGS



DIM.	7148/TD-34		7989/TD-48		DIM.	7148/TD-34		7989/TD-48	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	.260	.325	.260	.325	E	.090	.105	.090	1.05
B	16.937	17.437	13.875	14.375	F		.990		.555
C	.310	.360	.270	.320	G	.975	1.050	.547	.579
D	17.625	18.000	14.375	15.000	H	.305	.325	.245	.265



DIM.	6882/TD-23		7991/TD-54		7990/TD-50		DIM.	6882/TD-23		7991/TD-54		7990/TD-50	
	Min.	Max.	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.	Min.	Max.
A	.260	.325	.260	.325	.260	.325	G	.090	.105	.090	.105	.090	.105
B		2.750		2.750		2.750	H		.555		.555		.555
C	8.625		7.375		5.187		I		.579		.500		.500
D (See Note)		1.500*	N.A.	N.A.	N.A.	N.A.	J	.370	.380	.235	.265	.160	.194
E		.500		.500		.500	K		.187		.187		.187
F	11.937	12.250	10.875	11.250	9.687	10.000							

\* = .380 max., No min. Dim. on Dia. for this Lgth. of tube.

