WESTINGHOUSE ELECTRIC CORPORATION

BLOOMFIELD, NEW JERSEY

12-17-51

DATA SHEET

Type 5939

Gas Switching Window Tube

Description

The 5939 tube is a fixed tuned gas switching window for use in pulsed systems operating at frequencies in the 1300 megacycle region. A pair of these tubes, spaced as specified below, constitutes a broad-band pre-TR device.

Mechanical Data

Outline Dimensions, Drawing No. 60158-B
Window consists of a metal plate and gas-filled glass bulb.

Mounting

The tube may be mounted in any position. It should be clamped between suitable gaskets to flanges UG-368/U (female) and UG-369/U (male) soldered to RG-69/U waveguide.

Ratings	Maximum	Nominal	Minimum	Units
Peak Power	800	500		KW
Average power	500			W
Pulse Duration	4			μs
Duty Cycle	.001	.0006		
Ambient Temperature	60		-20	°C
Life(at 500 KW, 4 μs, 150 pps)		2000	500	hrs.
Electrical Data - Single Window				
Resonant Frequency	1292		1280	Mc/sec.
Low Level Input V.S.W.R.		See Graph		
Loaded Q	3.4			
Insertion Loss at Resonance	0.3			db
Leakage Power, Average over Pulse at 500 KW, 4 μs, 150 pps	6.0	4.5		KW
Leakage Power, Average over Pulse at 500 KW, 1 μs, 600 pps	6.5	5.0		KW
Recovery Time at 500 KW, 3 db down	36	<12		μs
Arc Loss at 500 KW	0.08			db
Minimum Firing Power at 4 μs, 150 pps	8	3(approx.)		KW
Minimum Firing Power at 1 μs, 600 pps	6	2(approx.)		KW
Electrical Data - Two Windows, Separation 2-15/16" Between Centerlines				
Operational Band	1350		1250	Mc/sec.
Low Level Input VSWR over the Band	1.4(See Graph)			
Insertion Loss	0.6			db
Leakage Power, Recovery Time, Arc Loss, Minimum Firing Power	Same as for single window above.			

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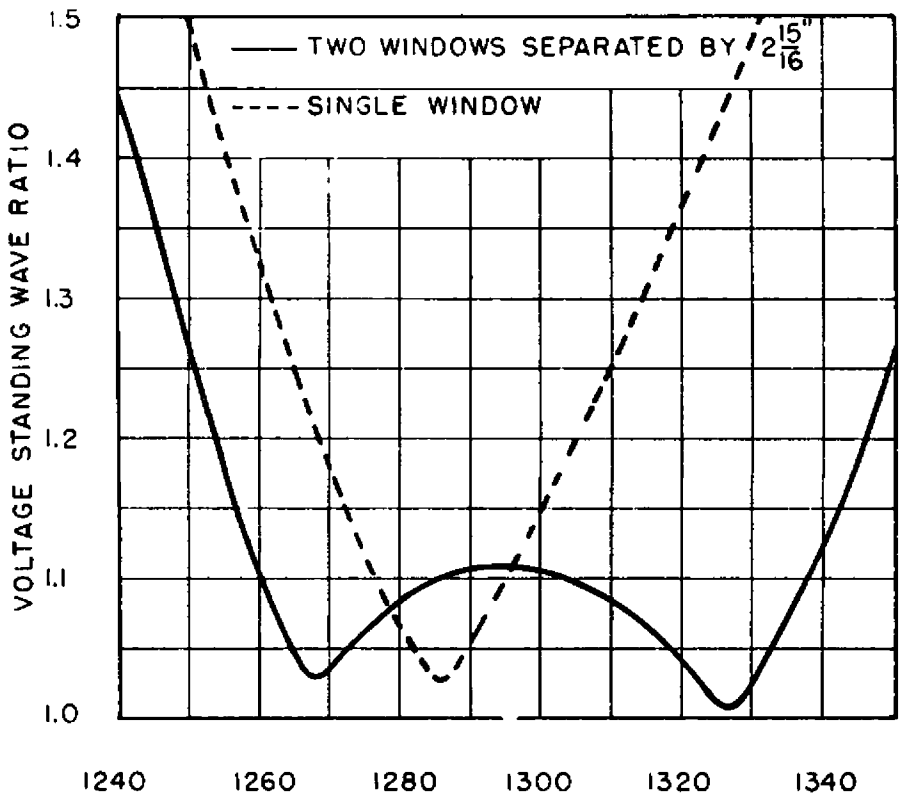

CURVES OF VOLTAGE STANDING WAVE RATIO VS FREQUENCY FOR A SINGLE WINDOW AND FOR A COMBINATION OF TWO WINDOWS RESONANT AT 1286 MC/SEC.