

WESTINGHOUSE ELECTRIC CORPORATION

BLOOMFIELD, NEW JERSEY

12-17-51

DATA SHEETType 5939Gas Switching Window TubeDescription

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.

<u>Ratings</u>	<u>Maximum</u>	<u>Nominal</u>	<u>Minimum</u>	<u>Units</u>
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.

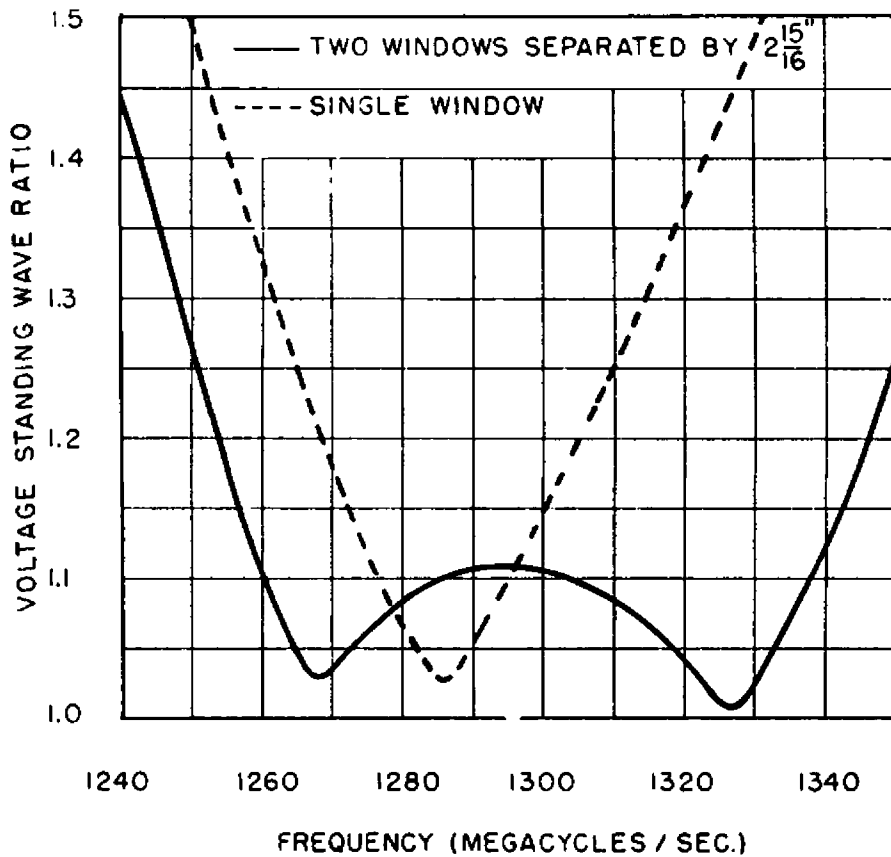
Electrical Data - Single Window

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.			

Type 5939



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

