

**MECHANICAL DATA**

Ambient Temperature Range . . . . .	-40 to +100 ° C
Net Weight . . . . .	0.13 Lb.
Mounting Position . . . . .	Any

**ELECTRICAL DATA**

Frequency		
Low Level . . . . .	9375 mc	
High Level . . . . .	9310 mc	
Transmitter Peak Power . . . . .	4 KW	Min.
Tuning Susceptance (B/Yo) . . . . .	±0.06	
Equivalent Conductance (G/Yo) . . . . .	0.1	Max.
Arc Loss . . . . .	0.8 db	Max.

**APPLICATION DATA**

The Sylvania Type 6214 is an instant firing ATR which has been developed to meet the special requirements of Beacon Radar systems. Conventional ATR tubes often fail to ionize immediately when the transmitter begins operation, and thus prevent proper transmission for a period of time. Since Beacon systems transmit at relatively low power and are often received at maximum range, this delayed ATR action can seriously impair the efficiency of the system. This is particularly true because Beacon transmissions often consist of coded groups which, partially lost, may be misinterpreted.

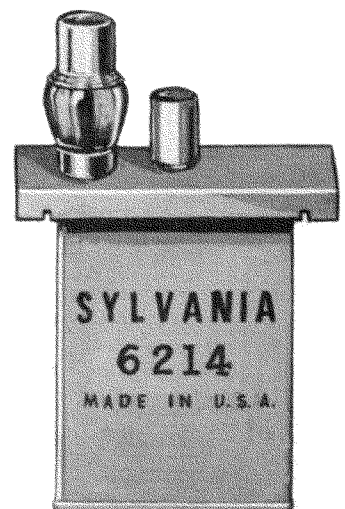
The Sylvania Type 6214 is designed to be mounted on the short side of the wave guide, i.e., shunt position. To achieve the instant starting effect, an exposed ignitor electrode has been added on the end plate of the tube. An ignitor supply is therefore required, which may be taken from the supply for the TR ignitor. This supply should be rated at -650 volts to provide for the nominal voltage drop of -300 volts dc and 100 micro-amp current drain of the 6214.

In a typical system, the Sylvania 6214 behaves as an instantaneous switching device. A series of coded pulses will ionize the tube and the resulting short across the window permits the transmitter power to travel unimpeded to the antenna. A returning echo is sufficiently weak to prevent the ATR from firing and all the energy of the signal is channeled to the receiver.

**QUICK REFERENCE DATA**

The Sylvania Type 6214 is an instant firing ATR which has been developed to meet the special requirements of Beacon Radar systems. The 6214 is designed to be mounted on the short side of the wave guide, i.e., shunt position.

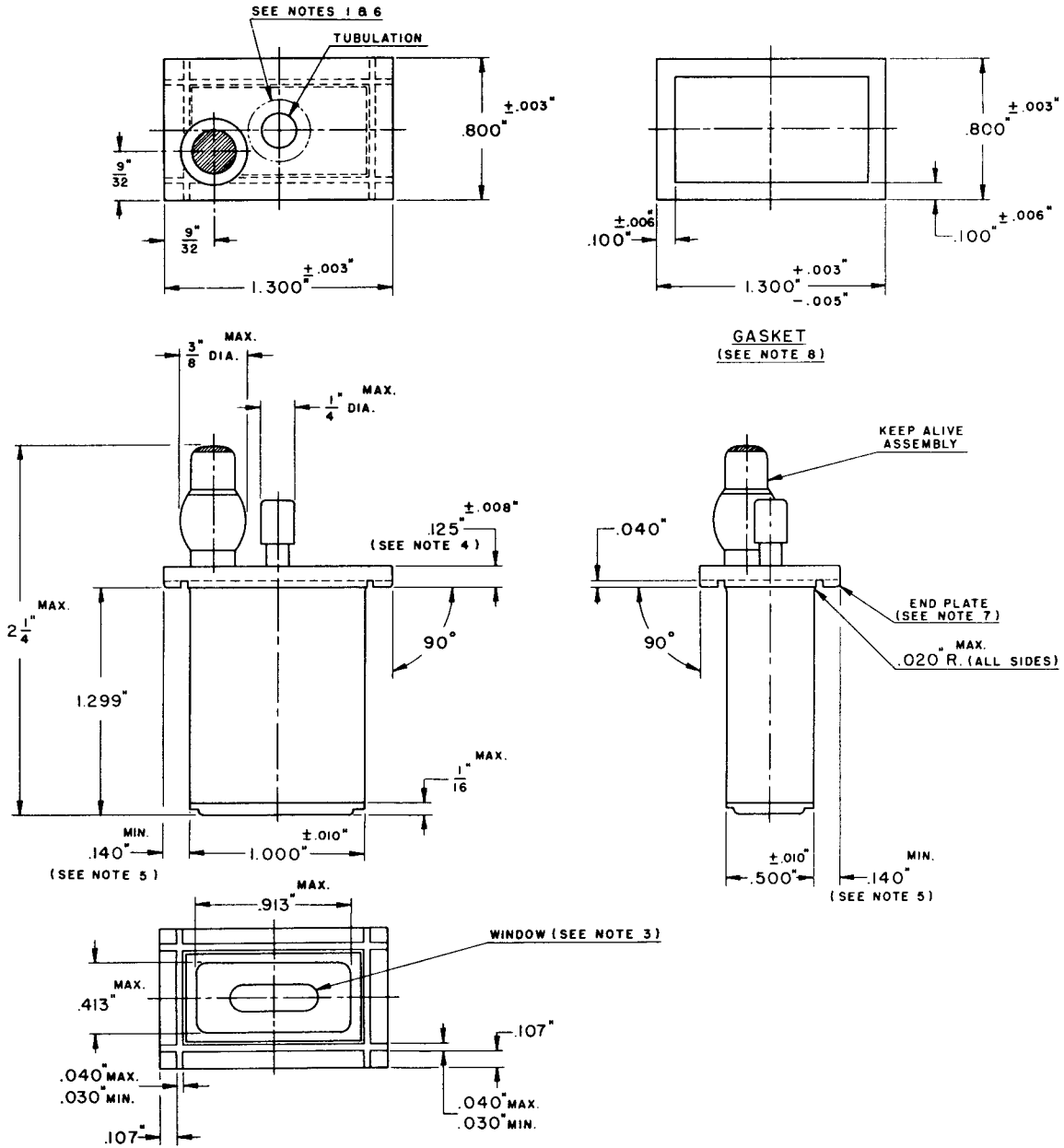
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**SYLVANIA ELECTRIC  
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# SYLVANIA 6214



## DIAGRAM NOTES:

1. The tubulation shall fall within a circle  $\frac{3}{8}$  dia. max. located from the center lines of the flange.
2. Tube to be silver plated.
3. Center lines of window shall coincide with corresponding center lines of box within 0.015 measure in plane of window.
4. Bottom face shall be flat to within .003 for its entire length.
5. Applies at all edges of bottom face only.
6. Spread of solder to be held within  $\frac{3}{8}$  dia. area.
7. Bottom edge of plate to have a maximum radius of .020.
8. Two gaskets of  $.0030 \pm .0005$  thick soft-tempered sheet nickel or copper supplied with tube but not mounted.