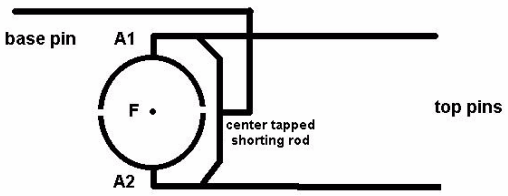
A-103A - RCA Experimental Split-Anode Magnetron

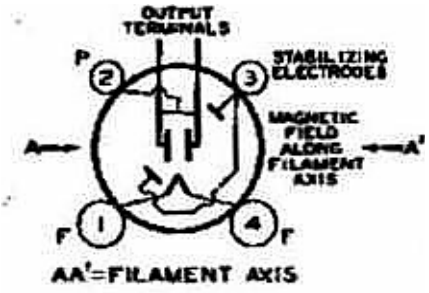
This looks to be a split-anode magnetron with self-contained resonating line terminating loop. The two anode half cilynders are connected to the two top pins. The connecting rods are shorted together shortly above the anode, likely to form part of the resonating system. The position of the shorting rod suggests that the tube was designed to oscillate at very high frequency and indeed the data sheet of the 2J35 gives 10 cm approximate wavelenght.

Probably proposed between the end of 1940 and the first half of 1941. when only the unstable Sutton tube was available for the role, as local oscillator for the very early microwave radar receivers, or for radar test instruments.



According to Lud Sibley, an A-103B RCA experimental magnetron was registered as 2J35 in 1943. Data available in the **RMA release No. 324**.

Not known the differences between the A-103A and A-103B. Anyway shape and electrode arrangement looks to be very similar if not the same.



Here are some close-up views of the resonator formed by two vertical segments, about 5 mm each, and the two halves of the horizontal shorting jumper. The center of the jumper is connected to one pin of the base. The equivalent line is about 1 cm long and should resonate at about 4 cm.