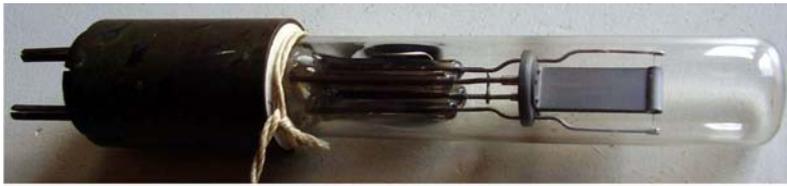


## RM4025 - German Quasi-Experimental CW Magnetron



RM 4025 - Siemens & Halske



This is an extremely rare sample of split-anode 3 cm CW-like magnetron. It recalls the type described by Kilgore in pages 14 and 15 of his paper (\*1). RM 4025 never went into full production and about 50 units were made before the end of the war.

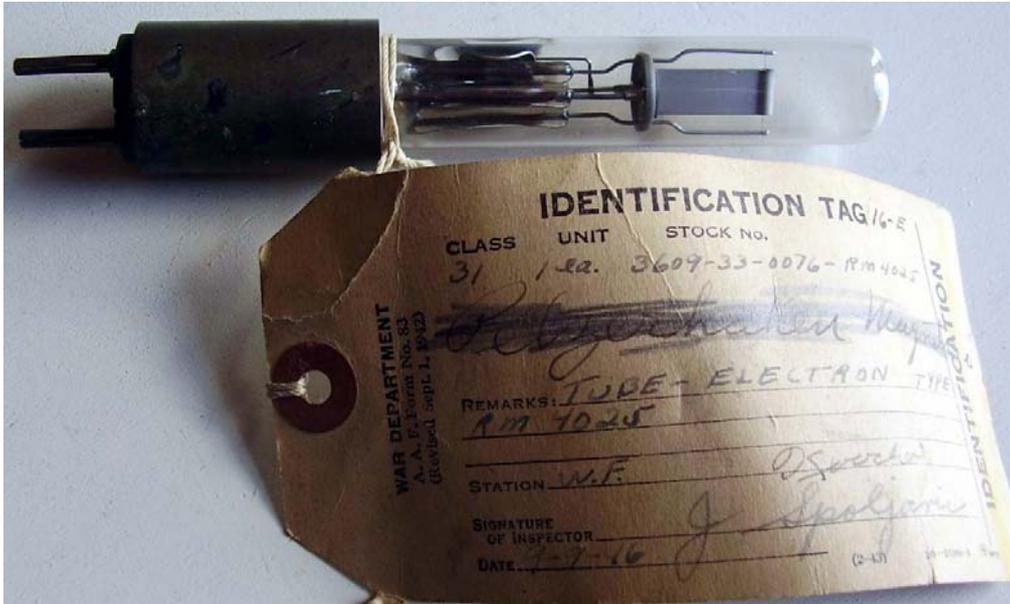
The sample looks very clean, no sign of darkening inside the bulb, as it was never used. Overall length is about 145 mm. Two pins to the filament, brass collar to the center tap of the internal resonator. The quite high value of the peak emission current suggests that filament is made of thoriated-tungsten. At the same time the small size of the internal resonating system, about 14 mm length, and the high input power, about 8 kW, suggest that it was intended for pulse operation. The anode internal diameter is in the order of 2 mm. Likely it was capacitively coupled to an external waveguide launcher or to a coaxial transition section.

A few data are available on the site of Hans Thomas Schmidt:

<p><b>RM 4025</b> PTH, Siemens &amp; Halske</p>	<p><math>\lambda \sim 3 \text{ cm}</math> <math>U_f = 1,3...2 \text{ V}</math> <math>I_f = 3 \text{ A}</math> <math>Feld = 3500 \text{ G}</math></p>	<p><math>U_a = 2 \text{ kV}</math> <math>I_a = 4 \text{ A}</math></p>	<p>In Nullserienfertigung ~ 50 Stück  2 Schlitze Dauerstrichmagnetron Nachbau</p>
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<http://www.hts-homepage.de/Wehrmacht/Magnetronliste.html>

Drawings and operating notes of this magnetron are given in the [CIOS report 1/144](#) on the activities of PTR, Physikalisch Technische Reichsanstalt, dated June 1945 (\*2). From the said source we learn that the angle of direction of the magnetic field to the axis of the anode cylinder had to be between  $5^\circ$  and  $10^\circ$ , depending upon the anode load.



The sample looks unused and still retains its classification label of the US War Department, dated 1946.

- 1) [Magnetron Oscillators](#), Kilgore,
- 2) [CIOS report, 1945](#)
- 3) [CIOS report. magnetron selection, 1945](#)