Tube Of The Month

HK-55

In a previous article, I described the development of the gridless gammatron by Heintz & Kaufman back in 1929. With the break-up of the RCA monopoly, the reasons for this technology went away. About 1934, H&K produced what I think was the last of the gridless gammatrons type tubes called the HK-55. A first glance, this tube looks like a "50 watt" size rectifier. The previously forbidden features that H&K was able to use included an enclosed anode and the use of internal insulators. Gammatrons always had their filament mounted near the "gamma" plate. With an enclosed anode, the filament and gamma plate had to be in the middle of the enclosed anode. The HK-55 had an oval anode made of graphite. A porcelain insulator supported the gamma plate and filament. The gamma plate was a flat sheet of metal with a "V" shaped opening cut into it. The filament would fit into the gap so that the filament and gamma plate would be in the same plane. The field produced by the bias on the gamma plate would affect the electron flow from the filament and the tube would operate as a traditional gammatron. The 55 has a dissipation of 75 watts and a mu of 3.5. The 55 appears to be more efficient with its higher mu than the older gammatrons.

I can find no evidence that this tube was very popular and is scarce today. Tube data was still being printed for this tube as late as 1938 in The Radio Handbook.

More photos at http://n6jv.com.