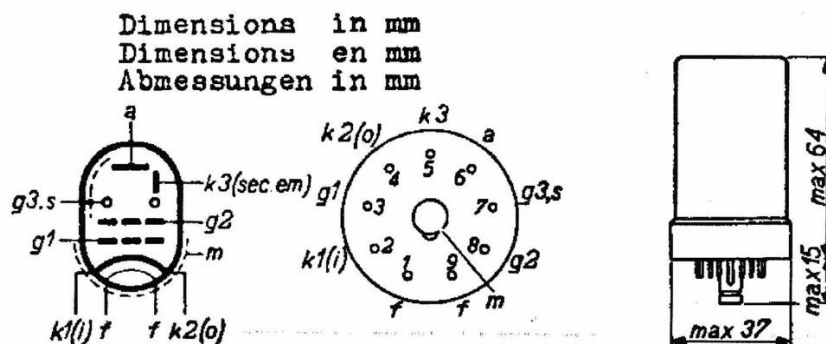


## EFP60 - Secondary Emission Amplifier



Almost certainly Philips EFP60 was the first high-frequency amplifier based upon the secondary emission effect. This [article](#), dated August 1939, with the contribution of British Mullard on the Journal of Scientific Instruments allows to date the announcement of the tube just few days before WWII began in Europe. It was probably intended for applications as VHF amplifier in then promising television field. All the available resources were moved to military productions and both television and EFP60 had to wait until the end of the war. In the meantime the secondary emission effect was exploited in America by RCA to design the giant acorn tubes, [1630](#) and its prototype [R-1790](#), as RF front-end in early SCR-270 VHF radar sets. But the war efforts generated countless devices, capable of handling any signals, and EFP60 was confined to few niche markets in the instrumentation field.

The basic Philips production was marketed worldwide with the various brands related to the mother firm. The above sample, 'Made in Holland', was badged as Amperex.



Data available [here](#).