QK707A - CW Magnetron for Microwave Ranges

In late 1945 at Raytheon Percy Spencer, the brilliant inventor who had brought substantial improvements to the original British design of the cavity magnetron, was investigating the heat generated by microwave radar transmitters. He placed a bag of popcorn in front of a small radiating horn, observing how fast the kernels began popping. The day after he put an egg before the horn and this cooked so fast inside to explode and splatter one of the engineers which was too close. This experiment gave rise to a line of microwave ranges by Raytheon, with the trade mark ‘Radarange’.

QK707 was introduced presumably in the late fifties to replace an early model, the QK390. This latter type was capable of generating 800 W typical at 2450 MHz with about 2 kW input power. QK707 generated the same power with increased efficiency, just needing about 1700 W in input. Typical operating conditions were 6300 V at 0.275 mA. Water cooling was required when operating. 6.0 V at 35 A filament.

This sample was made presumably in the early sixties in the **ELSI plant, in Sicily**, Italy. From 1962 to 1967 ELSI production was fully qualified and marked as Raytheon, which held the majority of the shares.

- Close-up views of the label. ‘ITALY’ was also punched on the body.