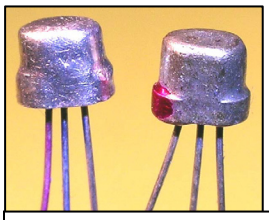
Transistor Museum™ Store
Historic Semiconductor Fact Sheet
Raytheon CK78X Germanium Alloy Junction Transistor

Storage/Display envelope provided with your transistor.

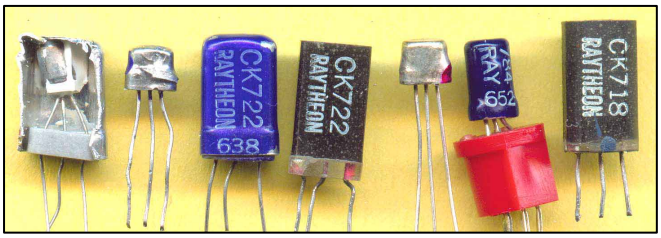
Historical Background: Raytheon was the leading supplier of the first transistors to hearing aid manufacturers, starting in 1952. These first Raytheon transistors were black epoxy cased units, labeled as CK718. Transistor technology was developing rapidly and the next generation of smaller metal cased units appeared in 1955. Still further size reduction and improved performance resulted in the 1957 vintage unit enclosed in this package. Surplus Raytheon CK78X transistors were encapsulated inside larger blue or silver metal cases and marketed as the popular CK722 hobbyist transistor.



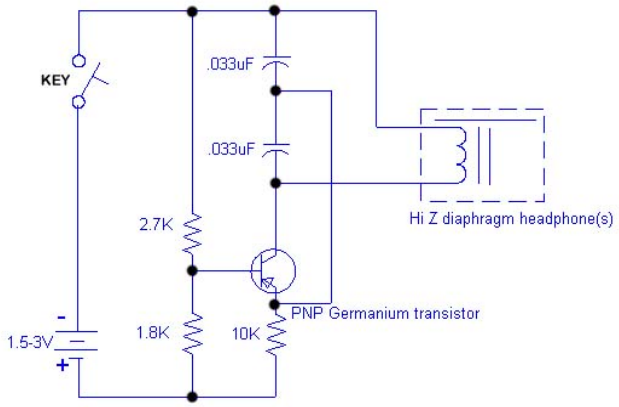
Your new transistor is ready for use in your favorite **CK722** project.

This is a closeup of the two styles of the CK78X transistor types which may be included in this package. The red dot or red lead marks the collector lead of the transistor. The middle lead is the base and the remaining lead is the emitter.

This is a photo of the four Raytheon CK78X type transistors in a RadioEar Model 850 hearing aid. The blue unit is a type 783 with an 802 date code. The silver unit on the left is a type 782 with an 814 date code (1958, week 14).



The above photo documents the evolution of the first Raytheon hearing aid transistors. On the right is a type CK718 – this was the first type of hearing aid transistor available in large quantities, starting in 1952. The smaller blue unit in the red socket represents the next generation of smaller, better performing hearing aid transistor. The small silver unit (third from the right) shows continued reduction in size. Raytheon selected only high performing units for hearing aid use, and marketed the remaining lower performing units as "hobbyist" type transistors. The black CK722 above is a relabeled CK718. As hearing aid transistors became smaller, Raytheon retained the original case size of the black CK722 by encapsulating the smaller transistors inside a larger metal case. The blue metal CK722 contained a silver small silver transistor inside (second from left). On the left is an "opened" silver CK722 showing the tiny hearing aid transistor inside.



Typical Application: The schematic above illustrates a typical application for the Raytheon CK78X hearing aid transistor. This circuit is a mid 1950s Code Practice Oscillator, designed and marketed by Valandy Electronics. It was one of the first transistorized hobby projects available and used surplus Raytheon hearing aid transistors.