

USE OF AGED COMPONENTS

Electronic Manufacturing Solutions Limited (EMS) statement regarding use of aged components.

The purpose of this statement is to inform as well as educate customers on the risks of using aged components in their products.

SCOPE:

This statement does **not** refer to or cover the salvage or reclamation of used components and is entirely focused on unused components from approved sources of supply.

Customers who may supply free issue parts to EMS should also consider this statement and refer to the waiver & warranty section below.

EMS supports multi-industries and therefore cannot give a simple list of age limits for all components or all circumstances. For example, an IC (integrated circuit) used in a desk calculator would most likely work fine for many years even if a five-year-old IC was fitted, however, the same aged IC should **not** be used in a road vehicle, or a pacemaker. The application where the IC is used changes the reliability & quality requirements and therefore when/if that IC fails it could cause a display error, vehicle breakdown or indeed be a risk to someone's health.

While the market demand for a component might change, the risk from using an aged component doesn't, so please talk to EMS to avoid any confusion.

For *commercial* use we have internal guidance in place as follows.

Integrated Circuits up to 5 years of age†

Passive components including electrolytic capacitors up to 10 years

Specialist components such as crystals, oscillators, and thermistors up to 5 years.

For aerospace, defence, medical and automotive customers, only components less than 12 months old or from the same batch will be used.

† The process that is used in plating component lead surfaces is designed to assist the 'wetting' of solder. Over time this surface can oxidise and corrode depending on the proximity of humidity and chemicals. Moisture sensitivity also plays a part here and will impact decision making over five years and if without original packaging.

Waiver & Warranty:

Components used within the ages indicated above, will have come from EMS approved sources, and will not impact on the normal product warranty period of 12 months.

Where customer requests use of older components or provides EMS with free issue parts outside of these ages or, where the age cannot be confirmed, a waiver may be required to exclude the component from any obligation or warranty upon EMS.

Signed

Jonathan Plummer Managing Director