

QA Regulation & Workflow

eCOUNT embedded GmbH, Germany
eCOUNT Middle East FZE, United Arab Emirates



Supplier Status:

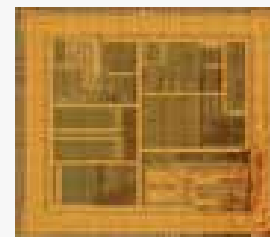
OEM/CEM/official franchise

- Visual inspection
- Inner & outer packaging and documentation check
- Component optical inspection
- MSL Level approval
- Baking option



eCOUNT approved vendor (5 Partners)

- Outer & inner packaging and related documents on check
- Component optical inspection (treatments etc...)
- Marking Permanency (AQL only)
- MSL approval (baking if necessary)
- De-Cap and DIE Inspection (AQL)
- Functionality test (if possible)



New, not-approved vendor & open market source

- Special approval by enduser necessary
- Full test procedure (see matrix)
- Decline PO



eCOUNT Test Code Matrix

Test Process	Source			
	manufacturer	franchise	OEM/CEM	open market
outer & inner packaging and related documentation check	X	X	X	X
component optical inspection	O	O	X	X
marking permanency	O	O	X	X
De-Cap and DIE Inspection	O	O	*o.r.	X
testing continuity	O	O	O	X
X-RAY	O	O	*o.r.	*o.r.
electrical testing	O	O	*o.r.	O
failure analysis and reporting	X	X	X	*o.r.

*= on request

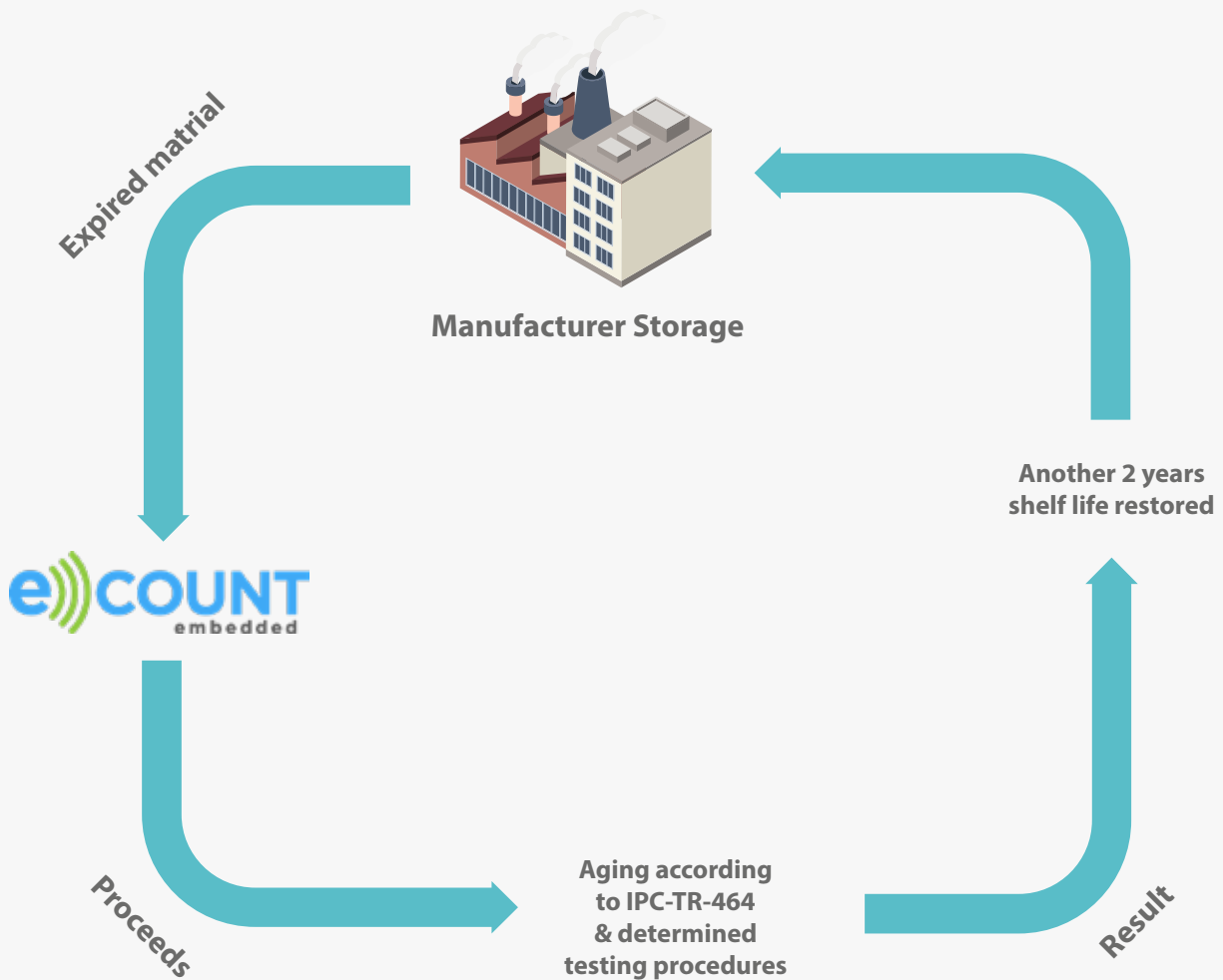
On request available: tin-coating, gold-plating, LASER reballing (BGA), PIN-straighting, lead-free reworking, optical measurement via JEDEC, baking, sealing, retaping ect.



eCOUNT embedded GmbH Strategy for expired material



Due to many high reliability Industrie companies, components' shelf life can be extended (doubletime) by determined testing procedures According to IPC-TR-464 & J-STD-002



Process-Flow:

1. **Simulated Aging of the Component**
 - 2.1 **Curve-Trace-Test**
 - 2.2 **Memory-Check faor active Components or**
 - 2.3 **Key-Functional-Test for passive Components**
3. **Solderability-Test**

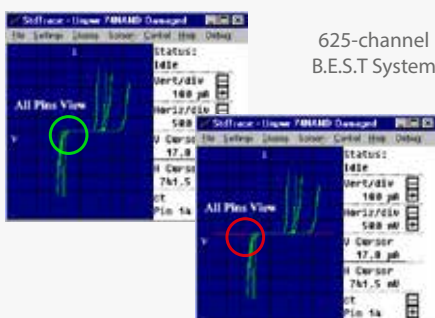
1. Aging

4h baking at 155°C simulates a natural aging of approx 2 years



2.1 Curve-Trace-Test

All pins-in and -out checked for continuity acc. datasheet



2.2 Flash Memory Testing



2.3 Key-Functional-Test

Approval of related specs values



3. Solderability-Test

Verification of Solderability
(Pins, Pads or Balls)

