# SOPS-937 Supplier NCMPhysical Failure Analysis Protocol

S. Dumont - Sr. Manager, Supplier Quality

D. Nielson - Sr. Director Supplier Quality

D. Nielsen - Sr. Director, Supplier Quality



## **Supplier NCM Semiconductor Protocol**

#### 0 km and Veoneer Production Line Nonconformance(s):

- A PFA (Physical Failure Analysis) must be performed with full details and show the defect type with localization in the die stack.
- An 8D must be completed.

#### **Field Nonconformance(s):**

- Devices from Veoneer Finish Good Assembly Date Code <u>Less Than or Equal to 18 months old</u> at the NCM creation:
  - A PFA must be performed with full details and show the defect type with localization in the die stack.
  - An 8D must be completed.
- Devices from Veoneer Assembly Date Code <u>Greater than 18 months old</u> and within a 3 year period at the NCM creation:
  - The supplier is allowed to proceed for short analysis and to assume the defect type and localization from an FTA (or similar tool) or Nonconformance Library (built from previous cases with known Corrective Actions and/or Continuous improvement activities).
  - An 8D is required.
    - Must show similarity to known nonconformance mode/signature/defect type and applicable corrective actions with timeline.
    - Part must have been produced before applicable corrective actions were implemented.

### **Supplier NCM Semiconductor Protocol**

#### <u>Assigned Special Cause Nonconformance(s):</u>

- A PFA plan may be established with the Veoneer Commodity Supplier Quality Engineer (CSQ).
  - To allow reduction of PFA(s) when nonconforming material is identified within the "Blacklist".
  - Must have a minimum of three (3) PFA's from each wafer lot showing evidence of the same known cause and nonconformance mode.
    - Nonconforming material must be within agreed "Blacklist" of suspect parts.
    - Nonconforming material must have the same electrical signature and/or physical evidence to be the same as known defects with completed PFA.

#### **Veoneer's Customer Voice and/or Requirement:**

- Overrides all protocols and/or agreements with the Supplier that omits a full detailed PFA analysis and completed 8D.
- These cases will be specified on a case-by-case basis by the Veoneer Plant SQ Engineers with CSQ Manager Approval.

## Field Return Outside of Veoneer's 3-year Period

- NCM will not affect the Supplier's VS051 Score Card or Quality Targets.
- Validation of failure mode.
- Identify part history to known NCM's.
- Not applicable in the case of field action/investigation by request of OEM or Government Authority.
  - These cases will be specified on a case-by-case basis and what is required.
  - CSQ Manager approval is required.

# **Revision History:**

Version #	Date	Author	Approver	Modification	Purpose
1.0	Dec. 21, 2021	Stephane Dumont Dennis Nielsen	Dennis Nielsen	New Release	New Release

# Thank You!

veoneer