

MEC A/S

Verification of Illumec Switch

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Report concerning Project No.

0511a Verification of Illumec Switch

1. Definition

The scope of this report is to verify the “Illumec” switch range reliability and processability in RoHS compatible environments.

The Illumec switch is available in both Surface Mount and Through Hole versions. The test has been limited to the Surface Mount version, as this version will meet the most demanding process requirements.

2. Applicable documents

- JEDEC J-STD-020C
- EN/IEC 60068-2-6
- EN/IEC 60068-2-14
- EN/IEC 60068-2-27

3. Work Description

For Verification of the Illumec Switches the following has been carried out:

Visual inspection and Microscopy

X-Ray Inspection

Mounting and soldering of Illumec switch on vehicle PCB

Reflow Classification according to JEDEC J-STD-020C

Change of temperature according to EN/IEC 60068-2-14

Vibration Test according to EN/IEC 60068-2-6

Shock Test according to EN/IEC 60068-2-27

Microscopy of microsectioning

Cutting and encapsulation of items for microsectioning

1 test item taken for microsectioning from Switch "As Delivered" #1

1 test item taken for microsectioning from Switch after Reflow Classification and Temperature cycling #2

1 test item taken for microsectioning from Switch after Reflow Classification, Temperature cycling and Vibration and Shock Test #3

Microsectioning

For identification, microsectioning was marked 0447A MEC NO.1 to 3.

4. Summary Conclusion

The Illumec Switch is based on the same technology used in the Multimec switch, which has already documented its reliability. This test documents that the use of LED chip components, mounted using conductive adhesive, is a reliable method to integrate the illumination.

The tested Illumec switches passed all the tests for Change of Temperature, Vibration and Shock according to the referred EN/IEC specifications.

Furthermore the tested Illumec switches documented its processability according to JEDEC J-STD-020C.