October 20th 2019

Subject: Shelf Life Confirmation Letter

Non-hermetic (Valid for plastic encapsulated electronic) electronic packaged devices require appropriate handling to ensure optimum board performances. Melexis’ Soldering Recommendations can be found on following link: https://www.melexis.com/en/quality-environment/soldering.

To ensure optimum board performances, moisture loading and shelf life are important parameters.

- Besides handful exceptions, our devices are qualified, against either MSL1 or MSL3 moisture sensitivity level as per J-STD-020.
- Shelf life of MSL1 devices is limited by solderability. Melexis guarantees 2 years solderability post-delivery (up to 4 years versus the data code). Note that storage period can be extended through adequate solderability tests [1] [2].
- Shelf life of MSL3 devices is limited by solderability and hermeticity of dry lock [1].
  - Dry pack hermiticity can be verified through the humidity card included into the reels. Silica gel is included to absorb any residual moisture.
  - Melexis guarantees 2 year solderability post delivery (up to 4 years versus the data code). Note that storage period can be extended through adequate solderability tests and adequate storage conditions [1] [2].

- Summary table:

<table>
<thead>
<tr>
<th>MSL1</th>
<th>MSL3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shelf life</td>
</tr>
<tr>
<td></td>
<td>&lt;4 years post date code</td>
</tr>
</tbody>
</table>

- Dry Pack Condition
  - Compliant
    - Solderability check to be conducted prior board mounting
    - HIC OK (Blue)
    - HIC NDK (Pink)
  - Solderability check to be conducted prior board mounting
    - Re-bake component as per JEDC-033

[1]: General guideline about Handling of Moisture Sensitive Devices, please refer to J-STD-033.
[2]: General guideline about Long-Term storage, please refer to JEP-160.