ATTACHMENT 2

AEC - Q102-002

BOARD FLEX TEST (BF)
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METHOD – 002

OPTOELECTRONIC COMPONENT
BOARD FLEX TEST (BF)

1. SCOPE

1.1 Description:

This specification establishes the procedure and criteria to determine the ability of surface mounted optoelectronic components to withstand bending, flexing and pulling forces which occur on printed circuit boards during handling and assembly.

2. EQUIPMENT:

2.1 Test Apparatus:

The apparatus shall consist of mechanical means to apply a force which will bend the board \( D \times x = 2 \) mm minimum (or as defined in the customer specification).

3. TEST PROCEDURE:

3.1 Sample Size:

Specified in AEC-Q102 table 2.

3.2 Test Environment:

Part mounted on an FR4 board provided by the supplier for the part being tested with the following requirements:

1. Land pattern is supplier's standard for part being tested.

2. Part mounted on a FR4 PCB board, which is 1.6mm ± 0.2 mm thick and as a Layer-thickness 35 \( \mu \)m ± 10 \( \mu \)m. Part should be mounted using a soldering reflow profile according to JEDEC J-STD-020

3. Place the board into a fixture similar to the one shown in Figure 1 with the component facing down. Apply a force which will bend the board \( D \times x = 2 \) mm minimum (or as defined in the customer specification). The duration of the applied forces shall be 60 (+ 5) Sec. The force is to be applied only once to the board.
3.3 Measurement:

A test monitor (e.g., electrical testing of Vf or leakage current) shall be used to detect when a part cracks or a solder joint failure occurs. It is recommended to use the test monitor during the time the force is being applied. In addition the parts shall be examined under a magnification of up to 50X after stress.

4. FAILURE CRITERIA:

A failure is when a part cracks or causes a change in the electrical parameter being monitored.

Cracked solder joints between part and PCB will no be considered as a failure, but test should be repeated because it cannot be ensured that the part itself underwent the whole bending stress.
## Revision History

<table>
<thead>
<tr>
<th>Rev #</th>
<th>Date of change</th>
<th>Brief summary listing affected sections</th>
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<tbody>
<tr>
<td>-</td>
<td>Apr. 6, 2020</td>
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