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## Bel Position Statement on Tin Whisker Growth for Lead-free Components

As part of Bel's compliance with the RoHS (Restriction of Hazardous Substances) European Union Directive, our designs are subjected to tests based on JEDEC Standard JESD22A121 'Measuring Whisker Growth on Tin and Tin Alloy Surface Finishes' established by JEDEC. This testing by an independent laboratory ensures that all Bel products containing lead-free plating (tin >95 percent which includes Sn or Sn alloys such as Sn-Ag-Cu and Sn-Cu) meet industry standards regarding tin whisker growth.

Where applicable, Bel products incorporate a number of techniques to deter tin whisker growth. Depending on the product design and its specific application, prevention features may include employment of any one or a combination of the following:

- 1) Tin-free plating
- 2) Nickel underplating
- 3) Matte or low stress tin
- 6) Hot-dipped solder terminations coated with tin alloys such as Sn-Ag-Cu or Sn-Ag-Cu

JEDEC Standard JESD22A121 test results for Bel products are available upon request.

Sincerely,

A handwritten signature in black ink that reads "Joseph F. Berry". The signature is written in a cursive, flowing style.

Joseph F. Berry  
Engineering Manager  
Bel Fuse Inc.