



## SPECIAL HERMETIC PRODUCTS, INC.

*Hi-Rel By Design*

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## Design & Process Guidelines

### GUIDE# 1, Rev. A

#### Pin End Surface Quality for Wire Bondability

SHP offers two types of finish on straight cut pin ends.

- 1) The first type, which is our standard, is the result of a shear cut of the pin. This process produces two distinct areas on the end of the pin as shown in Figure 1 – these areas are separated by a line. Area A will be equal to or greater than 75% of the pin end area and may have a finish approaching  $32\ \mu\text{in.}$  Area B will have a rougher, grainier surface, caused by tensile failure on the balance of the pin during the cutting process. This finish may not in all cases be suitable for wire bonding.
- 2) The second type of finish we offer is the ground flat (GF), which provides a finish of  $32\ \mu\text{in.}$  or better over the entire pin end. This ensures a surface that is suitable for the majority of wire bonding techniques.

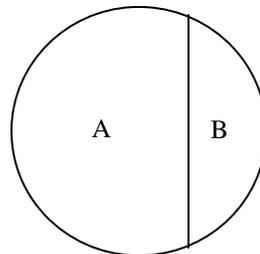


Figure 1

#### Recommendations:

If the method used in making wire or ribbon bonds is tolerant of rougher finishes and can assure hitting Area A, then Type 1 is recommended in the interest of cost and delivery. This type is standard on our feedthrus.

If the targeting method cannot assure that the bond will be in Area A and/or the wire bond technique requires finer and more consistent finishes, then the ground flat option should be used. This is specified by inserting the letters GF in the part number, following the pin length(s) on which the condition is required.