

# Cu Direct Plating Technology on Quartz Glass for RF Application

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3. **FAILURE CRITERIA.** Unless otherwise specified, any device tested for Fine Leak that exhibits a leakage rate equal to or greater than the test limits of table VII shall be considered a failure.

TABLE VII. Test limits for all fine leak methods. 1/ 2/

Internal Free Volume of package (cm <sup>3</sup> )	L Failure Criteria atm-cm <sup>3</sup> /sec (air)	L Failure Criteria atm-cm <sup>3</sup> /sec (air)
	Hybrid Class H, and Monolithic Classes B, S, Q and V	Hybrid Class K only
≤ 0.05	5 X 10 <sup>-8</sup>	1 X 10 <sup>-9</sup>
>0.05 - ≤ 0.4	1 X 10 <sup>-7</sup>	5 X 10 <sup>-9</sup>
> 0.4	1 X 10 <sup>-6</sup>	1 X 10 <sup>-8</sup>

Yet suppliers like yourself only test the seals to condition A4 which is 1e-08 helium leak rate ....are hermetic seals capable at these lower spec values?

2.1.4 Test condition A<sub>4</sub>, procedure applicable to the unsealed package method. The fixture and fittings of 2.1.1.a. shall be mounted to the evacuation port of the leak detector. Proof of fixturing integrity shall be verified by sealing a flat surfaced metal plate utilizing the gasket of 2.1.1b (and grease or fluid of 2.1.1.c if required to obtain seal) and measuring the response of the leak test system. Testing shall be performed by sealing the package(s) to the evacuation port and the package cavity evacuated to 0.1 torr or less. Care shall be taken to prevent contact of grease with package (seal ring not included) to avoid masking leaks. The external portion of the package shall be flooded with Helium gas either by the use of an envelope or a spray gun, at a pressure of 10 psig.

2.1.4.1 Failure criteria. Unless otherwise specified, devices shall be rejected if the measured leak rate (R) exceeds 1 X 10<sup>-8</sup> atm cm<sup>3</sup>/s He.