



Hornet IPG

Hermeticity Testing Protocol

Effective Date:

Rev:

Pg. 1 of 8

1 Purpose

This protocol prescribes methods and records results necessary to verify hermetic capabilities for the 3025 Hornet IPG. This protocol is based on MIL standards with reference to specific methods established at Med-Ally. This protocol is intended to be edited to meet the needs of each project at the time of execution without requiring revision of the template.

2 Scope

This document specifies device leak rate requirements, methods to establish gross leak time limits, methods for verification testing, and forms to record testing results.

3 References

Document No.	Title
MIL-STD 883K	TEST METHOD STANDARD MICROCIRCUITS
MIL-STD 750-1A-CHG-2	ENVIRONMENTAL TEST METHODS FOR SEMICONDUCTOR DEVICES

4 Appendices

Appendix:	Title
A	Visual Inspection
B	Leak Test Results
C	Additional Notes Area (if required)

5 Definitions

Abbreviation or Term	Definition
DVT	Design Verification Test
CHLD	Cumulative Helium Leak Detector
IPG	Implantable Pulse Generator

6 Testing Protocol

6.1 Hermeticity requirements:

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6.1.1 Less than or equal to 6.7×10^{-9} atm cm³/s with 25% Helium, 75% argon (1.0×10^{-9} atm cm³/s with 100% helium)

6.2 **Approvals:**
Quality Approval to Execute Testing:

Signature: _____ Date: _____

6.3 **Equipment**

6.3.1 Leak Detector: _____

Last Calibration: _____ Due: _____

6.3.2 Test Chamber: _____

6.3.3 Microscope: _____

6.3.4 Other Equipment (if required):
12 pt

6.4 **Sample Number:** _____,

6.5 **Requirements Drawing Number:** _____

6.6 **Sample Generation**

6.6.1 Describe the origin of the samples used. If new samples were created for this test, describe any deviations, if applicable, that may impact testing. Include work order number if available.

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Initial:_____ Date:_____

6.7 Pre-Testing Inspection

6.7.1 Complete visual inspection of the weld or hermetic assembly areas per the assembly drawing. Record results in the table in Appendix A.

Initial_____ Date_____

6.8 Testing:

6.8.1 Perform equipment setup and startup procedures per the equipment work instruction:

Work Instruction:_____

Initial:_____ Date:_____

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6.8.2 Place the Leak Test Chamber into the testing port and “zero” or recalibrate the chamber to ensure accurate readings.

Initial: _____ Date: _____

6.8.3 Once setup is complete, place the first device into the chamber complete hermeticity testing. Repeat for all devices in the sample set. Complete the table in Appendix B to record actual leak rates observed after the specified testing time.

Initial _____ Date _____

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7 Approvals

7.1 Verify testing results meet drawing requirements

Initial_____ Date_____

7.2 Quality Approval

- 7.2.1 Review Protocol
- 7.2.2 Review Appendix A: Visual Inspection
- 7.2.3 Review Appendix B: Leak Testing Results
- 7.2.4 Review Appendix C: Additional Notes (if applicable)

Signature:_____ Date:_____

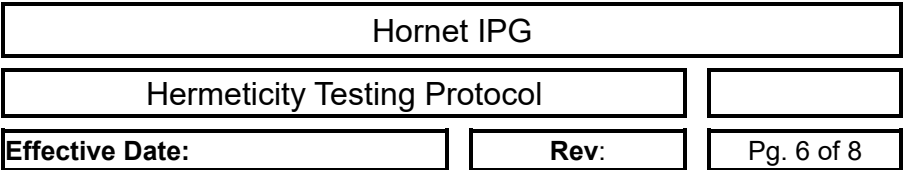
7.3 Other Approval (If required):

Signature:_____ Date:_____

7.4 Notes (if required):

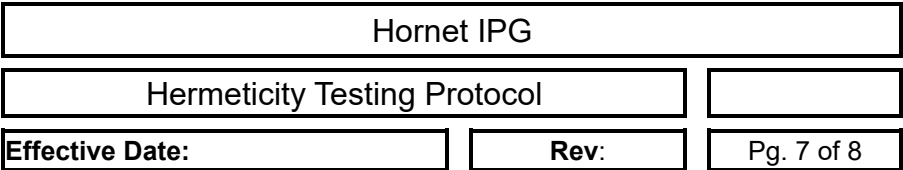
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Appendix C: Additional Notes (if required). Notes may be typed or hand written:

Signature: _____ Date: _____ Page ____ of ____