



CERTIFICATE FOR RADIOACTIVE SEALED SOURCE

Manufacturer: Communications & Power Industries, LLC
Model Designation: VDC1142
Serial Number(s): 174, 175, 194, 424, 433, 436, 441, 445, 456
Product Description: Receiver protector device containing a TR tube
The TR tube contains H3 solid on a coated foil inside of a brazed low vacuum sealed assembly.

Damage to the device may compromise the vacuum integrity, drawing air into the device and not expelling radioactive material from it.

This device is manufactured to comply with 10 CFR 30.15(a)(8). This device may be received, possessed, used, transferred, owned, or acquired without requiring a license and with exemption to parts 20, 30 through 36, and 39 of Title 10, Chapter I, of the *Code of Federal Regulations*.

Shelf Life: 25 years

TR Tube

Radionuclide: H3 as Tritium Solid
Activity Content: 27 mCi (1×10^9 Bq) – Assayed at date of manufacture

Standards Compliance

ISO2919 Classification: ISO/12/C11111
Exposure @ 10cm: <0.02 mR/hr per periodic Ludlum Model 3 GM Detector measurements taken of a sample of manufactured devices
Surface Contamination: <25 dpm/100cm² per periodic scintillation counting measurements taken of a sample of manufactured devices

Leakage:

Brazed TR assembly tested beyond ISO9978:2020(E) 6.1.3 acceptance criteria to $<1.0 \times 10^{-4}$ $\mu\text{Pa} \cdot \text{m}^3 \cdot \text{s}^{-1}$ with helium mass spectrometry.

Temperature Cycling: -55°C to +100°C. Failure is determined via RF performance testing which will fail in the event of a compromised seal.

Engineering Signature: _____

Date: _____

5/17/22

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