



RF Group  
Group Procedure RF003  
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# HI-POT PROCEDURE FOR TESTING CAPACITORS AND GAP SHORT RELAYS

## 1.0 Purpose

- 1.1 This procedure shall be used by knowledgeable RF group engineers and technicians to determine the voltage integrity of the gap short relays and vacuum capacitors.

## 2.0 Responsibilities

- 2.1 The RF Group Technician Supervisor and responsible engineer shall train all technicians in this procedure.

## 3.0 Precautions

- 3.1 This procedure requires a minimum of two people: one to operate High Potential Tester and one to act as safety watch.
- 3.2 All personnel involved in this procedure shall remove all conductive jewelry, exposed key rings, exposed tools, or other conductive articles.
- 3.3 All personnel shall wear safety glasses.
- 3.4 Test area shall be cordoned off and at least 4 feet shall be established on all sides. Warning and information signs shall be posted.
- 3.5 No work (manipulation or handling cables, relays or capacitors) shall be performed "HOT". All work (cable connections or other) behind the safety barrier shall be performed with HI-POT tester deenergized.

## 4.0 Test Setup Procedure

- 4.1 The HI-POT tester shall be connected to the safety ground.
- 4.2 The HI-POT tester controls shall be located outside the barrier fence. The test leads shall pass through the barrier to the item under test.
- 4.3 A ground stick shall be attached to the non- metered ground terminal of the HI-POT.
- 4.4 When attaching the item under test, the metered ground lead shall be attached first.

## 5.0 Test Procedure

- 5.1 The HI-POT is connected to the item under test and the voltage is gradually raised to (25 kV for the gap short relay, and to the test voltage of the capacitor) the test voltage. The test voltage shall be kept at this level for 30 seconds.
- 5.2 At the end of the test period, the HI-POT level is reduced to zero and the tester switch is turned to the OFF position. The tester will internally discharge the cable.
- 5.3 The HI-POT tester voltmeter shall be observed. When it has reached zero, the grounding stick shall be attached to the item under test. The test leads shall be removed.
- 5.4 Restore test area to a safe condition and remove all safety locks and tags.

Test procedure prepared by: \_\_\_\_\_

Test procedure approved by: \_\_\_\_\_