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| Traveler Title | RF Test of Ceramic Windows |
| Traveler Abstract | Covers RF testing of ceramic window assemblies |
| Traveler ID | P1-TUNE-WINCR-RFIN |
| Traveler Revision  | R1 |
| Traveler Author | M. Drury |
| Traveler Date | Click or tap to enter a date. |
| NCR Informative Emails | drury, areilly, scott |
| NCR Dispositioners | drury, scott |
| D3 Emails |  |
| Approval Names | M. Drury | L. Page | A. Reilly |  |
| Approval Signatures |  |  |  |  |
| Approval Dates |  |  |  |  |
| Approval Title | Author | Reviewer | Project Manager |  |

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| References | List and Hyperlink all documents related to this traveler. This includes, but is not limited to: safety (THAs, SOPs, etc), drawings, procedures, and facility related documents. |
|  | Window assy. drawing? | Warm Window RF Qualification Testing SRF-18-79090-OSP |  |  |
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| Revision Note |  |
| R1 | Initial release of this Traveler. |

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| Step No. | Instructions | Data Input |
| 1 | Enter window welding assembly ID | [[WINSN]] <<WINSN>> |
| 2 | Enter adapter brazement serial number | [[WBASN]] <<WBASN>> |
| 3 | Enter flange serial number | [[DSRFSN]] <<DSRFSN>> |

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| **Step No** | **Instructions** | **Data Inputs** |
| 4 | Verify that the waveguide shorting plates have been installed on the two waveguides that enter the CMTF penetrations located behind the 1497 MHz HPA racks.Verify that a waveguide shorting plate has been installed on the open end of the waveguide connected to the unused (for window testing) klystron pair where it exits the HPA rack.If not terminated, see the OSP for detailed instructions* **Personnel operating the 480 VAC breaker switch must wear proper ARC Flash PPE.**
* **All personnel working on open waveguide must apply a personnel LOTO lock to the 480 VAC breaker switch**
* **Observe the VVU meter at the front of the HPA to ensure that power has been removed from the HPA before working on open waveguide**
 | [[WGTerminateVerifiedTime]] <<TIMESTAMP>>[[TerminationVerifiedBy]] <<SRF>>[[WGTerninateComplete?]] <<CHECKBOX>> |
| 5 | Verify that Safety System Group personnel have installed jumpers to bypass the CMTF PSS and have applied configuration Control Locks to the Waveguide shorting plates. | [[PSSBypassComplete]] <<CHECKBOX>>[[ConfigLocksInstalled]] <<CHECKBOX>>[[PSSVerifiedBy]] <<SRF>>[[PSSBypassCompleteTime]] <<TIMESTAMP>> |
| 6 | Follow instructions in OSP for installing window assembly in the test fixture.* **Personnel operating the knife switch must wear proper ARC Flash PPE.**
* **All personnel working on open waveguide must apply a personnel LOTO lock to the 480 VAC breaker switch**
* **Verify that the High Voltage cannot be turned ON**
 | [[WindowInstallComplete]] <<CHECKBOX>>[[WindowInstallTech]] <<SRF>>[[WindowInstallTime]] <<TIMESTAMP>>[[WindowInstallComments]] <<COMMENT>> |

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| **Step No** | **Instructions** | **Data Inputs** |
| 7 | Complete the RF Leakage Survey as described in the OSP with klystron forward power at 100 W.Record the date, time, forward power (W) and the maximum reading from RF survey meter for successful test.**If leakage above 1 mW/cm2 is observed, turn off the RF and take remedial action as described in the OSP.**  | [[RF100SurveyTech]] <<SRF>>[[RF100SurveyTime]] <<TIMESTAMP>>[[ForwardPwr100]] <<FLOAT>>[[MaxReadingSurveyMeter100]] <<FLOAT>>[[RF100SurveyComments]] <<COMMENT>> |
| 8 | Complete the RF Leakage Survey as described in the OSP with klystron forward power at 1 kW.Record the date, time, forward power (W) and the maximum reading from RF survey meter for successful test.**If leakage above 5 mW/cm2 is observed, turn off the RF and take remedial action as described in the OSP.**  | [[RF1KSurveyTech]] <<SRF>>[[RF1KSurveyTime]] <<TIMESTAMP>>[[ForwardPwr1K]] <<FLOAT>>[[MaxReadingSurveyMeter1K]] <<FLOAT>>[[RF1KSurveyComments]] <<COMMENT>> |
| 9 | Install protective enclosure around window assemblyPost hazard warning signs | [[WindowTestTech1]] <<SRF>>[[HazardProtectInPlaceTime]] <<TIMESTAMP>> |

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| **Step No** | **Instructions** | **Data Inputs** |
| 10 | Initiate Labview automated C100 test routineMaintain maximum forward power level until ceramic temperature rate of increase is less than 1 degree C per hour.At the end of the test, turn off RF power.Record requested information and attach completed spreadsheet.* **If ceramic suffers a catastrophic failure, shut down RF immediately.**
* **Catastrophic failures happen in the first few minutes of test and are characterized by hot spots with very high rates of temperature increase (several hundred degrees in several minutes)**
 | [[WindowTestTech2]] <<SRF>>[[WindowTestComplete]] <<TIMESTAMP>>[[MaximumCeramicTemp]] <<FLOAT>>[[MaximumFlangeTemp]] <<FLOAT>>[[TestTime]] <<FLOAT>> (minutes)[[WindowRFTestFile]] <<FILEUPLOAD>>[[WindowTestComments]] <<COMMENT>>[[WindowPassRFTest]] <<YESNO>> |
| 11 | Follow instructions in OSP for removing window assembly from the test fixture.* **Allow time for window assembly to cool.**
* **Personnel operating the knife switch must wear proper ARC Flash PPE.**
* **All personnel working on open waveguide must apply a personnel LOTO lock to the 480 VAC breaker switch**
* **Verify that the High Voltage cannot be turned ON**
 | [[WindowRemoveComplete]] <<CHECKBOX>>[[WindowRemoveTech]] <<SRF>>[[WindowRemoveTime]] <<TIMESTAMP>>[[WindowRemoveComments]] <<COMMENT>> |