

Backwall Reader (Tower) In Process Q/A

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| VR102601 | | | |
| Reference Drawings: | VR102601-Interconnect Diagram_Rev A; VR102682_BDHDPE_REV5; BD Document # DTC20000025109-000-07; VR102601-Cable Secure Points Rev A | | |
| Family Tree: | ISO-FAM-001 | Dimension Table Recording Reference: | ISO-QAR-001, ISO-QAR-002, ISO-QAR-003 |
| Q/A Checklist Reference: | Backwall Reader (Tower) QA Checklist Rev. G (ISO-QAC-52) | | |
| Sequence | | | |

In Process Inspection_01

- 1 Plastics have been routed & deburred per Engineering specifications. (Machining process M001 & M002; Part # VR102682)
- 2 Verify critical dimensions listed on ISO-QAR-001 (Record measurement values only on 5% of Lot)
- 3 Verify that Lot # of HDPE has been recorded.

In Process Inspection_02

- 1 Verify that Aluminum Ground Plane has been cut and installed to cover routed pocket on HDPE.
- 2 Install FR4 with glue to HDPE using Heat Process per Engineering procedure.
- 3 Verify that Lot # of FR4 has been recorded.
- 4 Verify Mux Boards have been created and assigned an asset number in the database. (Primary & Secondary)
- 5 Verify Mux Boards have been installed in correct order to routed HDPE. (Primary & Secondary)
- 6 Inspect solder joint from ground plane to mux boards.
- 7 Inspect solder joints for feedlines to mux boards:
 - A) Ensure Bus wire soldered to resistors on mux boards & FR4 feedline
 - B) Ensure Bus wire does not loop above solder joints of Antenna feedlines

In Process Inspection_03

- 1 Verify M6e ThingMagic reader (Product ID # 225029) has been created and assigned an asset number in the database.
- 2 Verify M6e ThingMagic reader (Product ID # 225029) has a passing test per Engineering Test Procedure.
- 3 Verify that the Interface board has been installed per interconnect diagram VR102601.
- 4 Ensure cables have been tested by an identifying green dot (In-House Built). (Verify Lot # has been recorded on all cables installed.)
- 5 Verify connections of Data, GPIO, & RF cables between mux boards per Interconnect diagram VR102601.

In Process Inspection_04

- 1 Verify RF cables have been connected to the Thingmagic Reader per interconnect diagram VR102601
- 2 Verify VSWR test has passed per Engineering Test Procedure.
- 3 Verify RFID (Product ID # 225322) has been created and assigned an asset number in the database.
- 4 Verify that Asset # or VRSN label has been applied to FR4 (RFID) per Interconnect diagram VR102601.
- 5 Verify Interface board (Product ID # 225331) has been created and assigned an asset number in the database.
- 6 Verify unit has a passing System test recorded in the database.
- 7 Verify unit has a passing Open Top Antenna Far Field Test recorded in the database.
- 8 Verify all cable assemblies are installed and glued down per (VR102601-Cable Secure Points Rev A) .
- 9 Ensure that all cables and glue are not lying above routed HDPE surface.

In Process Inspection_05

- 1 Verify 1/8" Top ABS has been routed per Machining process **M003**; Part # **VR102653_BD TOP ABS_REV1**
- 2 Verify that Lot # of 1/8" ABS material has been recorded.
- 3 Verify 1/16" Bottom ABS has been routed per Machining process **M004**; Part # **VR102654_BD BOT ABS_REV1**
- 4 Verify that Lot # of 1/16" ABS material has been recorded.
- 5 Verify gluing of 1/16" & 1/8" ABS material to unit has been performed per Glue Process Procedure.
- 6 Verify that edges have been rounded and cleaned on unit.
- 7 Verify that mounting holes have been drilled per Machining process **M006**; Part # **VR102688 (BD Document # DTC20000025109-000-07)** and verify critical dimensions listed on **ISO-QAR-002 (Record measurement values only on 5% of Lot)**

FINAL Q/A

- 1 Verify connector plate has been installed securely and has unit asset number label applied.
- 2 Verify critical dimensions per **(BD Document # DTC20000025109-000-07 - NOTE: 10 - {100% of units}) [Record values on ISO-QAR-003]**
(Record all measurement values only on 5% of Lot per BD Drawing DTC-20000025109-000-07)
- 3 Verify FCC/Certification labels have been applied at locations shown on drawing: **(BD Document # DTC20000025109-000-07)**
- 4 Verify MFC & VRSN labels are applied per SRA-16 MFC Label Requirements drawing. **(SRA-16_MFC Label Requirements)**
- 5 Verify Connector on plate is covered with ESD film cover.
- 6 Place unit on fixture and verify unit dimensions. Remove unit from fixture when complete.
- 7 Verify unit has completed all passing tests (VSWR, System, Far Field, & Pre-Box Test)
- 8 Verify the Q/A Checklist has been completely filled out.
- 9 Verify all VRSN #'s have been linked accordingly in the database. **(Family Tree will also reflect VRSN #'s)**
- 10 Verify unit has been cleaned and free from loose debris.
- 11 Verify all In-Process inspections and Incoming Q/A Checklists have been completed prior to step 11.
- 12 Verify a Certificate of Conformance sheet has been printed, information is correct, and is attached to unit.