

Waters THE SCIENCE OF WHAT'S POSSIBLE.™	Validation Assessment Form
Document #: TE82743-2-20SEP19-VAF	SAP #: TE008274302

VALIDATION ASSESSMENT
For the TE82743-2 RACAL Functional Tester

PREPARED BY

Name	Role	Signature	Date
Luo HuaZhen	Senior Test Engineer		28 OCT 2019

REVIEWED BY

Name	Role	Signature	Date
Matthew Brule	Senior Test Engineer		05-Nov-2019
Chan Yee Hwa	Manufacturing Engineer		30 OCT 2019

APPROVED BY

Name	Role	Signature	Date
Tan Kah Chin	Senior Quality Assurance Manager		

The "Prepared By" signature denotes that this document accurately describes the planned Process Validation activities.

The "Reviewed By" signature[s] denotes agreement with the details of the planned testing and/or deliverables to be performed in order to qualify the TE82743-2 RACAL Functional Tester.

The "Approved By" signature denotes that this document has been reviewed and approved for overall quality and completeness.

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1. PURPOSE

The purpose of the Validation Assessment Form (VAF) is to document the assessment of an engineering change to the released TE82743-2 RACAL Functional Tester (TE82743-2). This document shall also define the deliverable(s) required to maintain the equipment qualification, based on the engineering change. Qualification of the equipment shall ensure that it functions within its specifications.

2. BACKGROUND

RACAL Functional Tester TE82743-2 is a PCB functional tester at Waters Singapore Contract Manufacturing CEI Batam for PCB testing. The test fixture TE82836 is used to test PCB 210000460, 210000456, 210000218, 21000021820 on RACAL Test Station at Waters Singapore Contract Manufacturing Venture Singapore.

This test fixture TE82836 will be transfer from Venture Singapore to CEI Batam and running the test on RACAL Functional Tester TE82743-2. The associated test program will be installed on RACAL Functional Tester TE82743-2 at CEI Batam.

3. DESCRIPTION OF CHANGE

3.1. Transfer of Functional Test Fixture TE82836-2 from Venture Singapore to CEI Batam. The validation is required for this equipment transfer with the associated test program installed on RACAL functional tester TE82743-2.

4. RISK ASSESSMENT

4.1. High Risk Assessment

Please check the appropriate boxes below to determine the high risk assessed qualification or requalification requirements:

4.1.1. Specification	No	Yes
Is the change a test specification value being modified and/or added?	☒	☐

4.1.2. Software/Firmware	No	Yes
Is the change a software modification that affects the way the system controls, and/or measures a test specification and/or PSC result?	☒	☐
Is the change due to firmware downloaded to the UUT by a test system?	☒	☐
Is the change a flash file update?	☒	☐
Is it a change to an existing, or the addition of a new, PCB Test Sequence?	☒	☐

4.1.3. Hardware (Mechanical, Electrical, Pneumatic, Hydraulic, etc.)	No	Yes
Is the change a mechanical, electrical, pneumatic, and/or hydraulic modification that alters the way the system controls, and/or measures a test specification and/or PSC result?	☒	☐

4.1.4. Equipment/Process Moves	No	Yes
Is the change a move of the equipment, test method or process, to a different facility?	☒	☐

4.2. Medium Risk Assessment

Please check the appropriate boxes below to determine the medium risk assessed qualification or requalification requirements:

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4.2.1. Replacement of Non-Identical	No	Yes
Is the change due to a replacement of a system component with a non-identical equivalent?	☒	☐

4.2.2. Computer Related or Replacement of Custom PCBs	No	Yes
Is the change an update to the PC operating system?	☒	☐
Is the change a computer or printed circuit board replacement?	☒	☐

4.2.3. Software/Firmware	No	Yes
Is the change a minor software bug fix or a minor improvement (i.e. a part number add)?	☐	☒
Is the change a test system instrument firmware update (i.e. update to a stack component)?	☒	☐

4.2.4. Equipment/Process Moves	No	Yes
Is the change a move of the equipment, test method or process, within the Milford site?	☒	☐

4.3. This change results in a High Risk Assessment and the associated requalification requirements, as detailed in Section 6.0.

5. **HAZARD ASSESSMENT:**

No hazards potentially introduced to the environment, operator, assembler, service technician or end user due to the change.

6. **VERIFICATION, QUALIFICATION AND/OR VALIDATION:**

6.1. Equipment Design Verification (EDV)	No	Yes
Based on the Risk Assessment, does an EDV Protocol need to be created or revised due to this change?	☒	☐
Based on the Risk Assessment, does an EDV Protocol need to be executed due to this change? (Justify partial execution in the Comments/Justification section below.)	☒	☐
Comments/Justification This change is a physical move and does not affect the design or control of the system.		

6.2. Installation Qualification (IQ)	No	Yes
Based on the Risk Assessment, does an IQ Protocol need to be executed due to this change? (Justify partial execution in the Comments/Justification section below.)	☒	☐
Comments/Justification This change is to transfer PCM/TCM test fixture TE82836-2 together with test program from Venture RACAL tester TE82743-3 to CEI RACAL tester TE82743-2. The affected part numbers will be tested on TE82743-2 after the change to verify tester functional performance. The Objective Evidence of the test records for the new part numbers for this station shall be provided as Attachments and routed for approval using the Validation Assessment Objective Evidence Routing Sheet provided at the end of this VAF.		

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6.3. Test Method Validation (TMV)	No	Yes
Based on the Risk Assessment, does a TMV need to be executed due to this change? (Justify partial execution in the Comments/Justification section below.)	☒	☐
Comments/Justification The system does not utilize external measurement equipment and this change does not involve Operator influence.		
6.4. Operational Qualification (OQ)	No	Yes
Based on the Risk Assessment, does an OQ Protocol need to be created or revised due to this change?	☒	☐
Based on the Risk Assessment, does an OQ need to be executed due to this change? (Justify partial execution in the Comments/Justification section below.)	☒	☐
Comments/Justification 100% critical to quality (CTQ) attributes verified.		

6.5. Performance Qualification (PQ)	No	Yes
Based on the Risk Assessment, does a PQ Protocol need to be created or revised due to this change?	☒	☐
Based on the Risk Assessment, does a PQ need to be executed due to this change? (Justify partial execution in the Comments/Justification section below.)	☒	☐
Comments/Justification 100% critical to quality (CTQ) attributes verified.		

6.6. Electromagnetic Interference (EMI) Assessment:

This change only affects test equipment; therefore, there is no impact to product EMI.

7. IMPLEMENTATION ASSESSMENT:

- No existing document in SAP; CEI Batam must create own documents for this fixture by referring the existing documents from Venture Singapore.
- The affected products will be stopped for shipping before this validation complete.
- The test fixture will be transferred from Venture Singapore to CEI Batam and the relevant personnel will be trained after transfer.

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**VALIDATION ASSESSMENT
OBJECTIVE EVIDENCE COMPLETION**
For the TE82743-2 RACAL Functional Tester

PREPARED BY

Name	Role	Signature	Date
Luo HuaZhen	Senior Test Engineer		

REVIEWED BY

Name	Role	Signature	Date
Matthew Brule	Senior Test Engineer		
Chan Yee Hwa	Manufacturing Engineer		

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ATTACHMENTS:

Attachment 1: PCB 210000456 Test Record

Attachment 2: PCB 210000460 Test Record