DOCUMENT CHANGE REQUEST

DCR number 1253	Changes required for: Proc	Originator: MAILLARD
Date: 2021/02/18	Date sent: 2019/03/14	Organisation: RAKON FRANCE
Status: IMPLEMENTED		

Title:	Generic Specification for CRYSTAL CONTROLLED OSCILLATORS		
Number:	3503	Issue:	3

Other documents affected:

Page:

25

Paragraph:

8.11

Original wording:

8.11 MECHANICAL SHOCK
MIL-STD-202, Test Method 213, Test Condition F (1500g, 0.5ms, half-sine).

Proposed wording:

8.11 MECHANICAL SHOCK
MIL-STD-202, Test Method 213, Level 2000g, duration 0.3ms, half-sine pulse

Justification:

The evaluation and then the qualification test results of RK135 have demonstrated that the assembly can withstand 3000g 0.3ms without any failure or degradation. Keeping a comfortable margin, the level of 2000g 0.3ms is then proposed for Qualification and periodic verification.

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Page:

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Paragraph:

8.12.2

Original wording:

8.12.2 Qualification And Periodic Tests (Class 1 and 2 Oscillators)
MIL-STD-202, Test Method 214, Test Condition I-F (20.71grms overall), 3 minutes per axis.

Proposed wording:

8.12.2 Qualification And Periodic Tests (Class 1 and 2 Oscillators)
MIL-STD-202, Test Method 214, Test Condition I-J (37.8grms overall), 5 minutes per axis.

Justification:

The evaluation and then the qualification test results of RK135 have demonstrated that the assembly can withstand 46.3grms during 5mn per axis without any failure or degradation. Keeping a comfortable margin, the level of 37.8grms overall (MIL-STD-202 TM214 cond I-J) is then proposed for Qualification and periodic verification.

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Paragraph:

8.13

Original wording:

8.13 CONSTANT ACCELERATION
8.13.1 Screening Tests (Class 2 Oscillators only)
MIL-STD-883, Test Method 2001, Test Condition A (5000g), Y1 axis only.
8.13.2 Qualification And Periodic Tests (Class 2 Oscillators only)
MIL-STD-883, Test Method 2001, Test Condition B (10000g), Y1 axis only.

Proposed wording:

8.13 CONSTANT ACCELERATION
8.13.1 Screening Tests (Class 2 Oscillators only)
MIL-STD-883, Test Method 2001, Test Condition A (5000g), Y1 axis only.
8.13.2 Qualification And Periodic Tests (Class 2 Oscillators only)
MIL-STD-883, Test Method 2001, Test Condition A (5000g), Y1 axis only.

Justification:

Failures during the qualification of RK135 and during the LAT of RK115 (non qualified version), led to the following limitations:
- the decrease of the max operating and storage temperatures from +125°C to +110°C (see recent DCR related to ESCC 3503/001)
- the decrease of the constant acceleration test level from 10000g to 5000g during Qualification and peridioc verification tests. No change for screening tests: the level is maintained at 5000g.

Attachments:

escc3503iss3_for_publishing.docx

Modifications:

As reviewed and concluded by PSWG_90 on 22/01/2020:

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item 1) Original Change item on Constant Acceleration (during Qualification And Periodic Tests): Page 25, Para 8.13.2:

Change from condition B (10000g) to condition A (5000g) is accepted.

In addition, similarly, on Page 17, Para 5.2.2.4.1(d)i. Packaged Test Sublot Testing/Screening:

Change Constant Acceleration

DCR1253

Modifications

As reviewed and concluded by PSWG_90 on 22/01/2020:

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item 1) Original Change item on Constant Acceleration (during Qualification And Periodic Tests): Page 25, Para 8.13.2:

Change from condition B (10000g) to condition A (5000g) is accepted.

In addition, similarly, on Page 17, Para 5.2.2.4.1(d)i. Packaged Test Sublot Testing/Screening:

Change Constant Acceleration

Approval signature:

Date signed:

2021-02-18