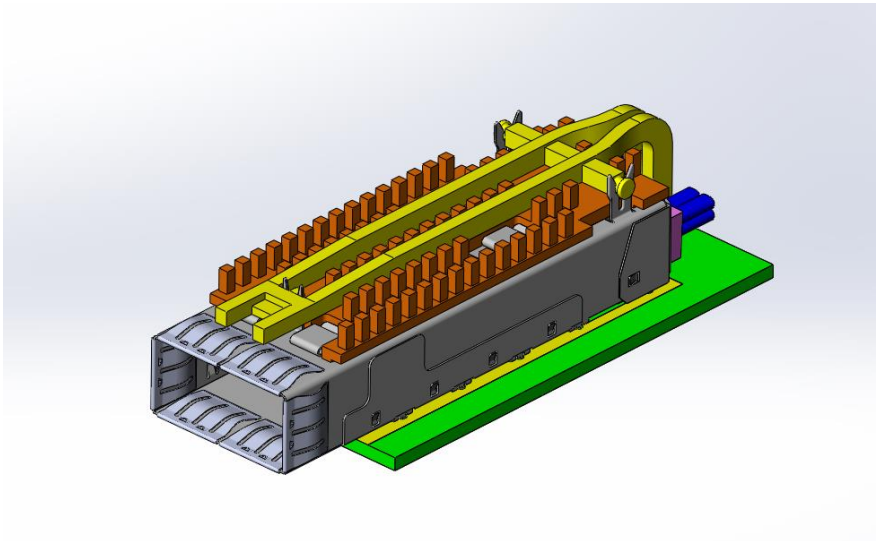
Project Number: Design Qualification Test Report	Tracking Code: 1534057_Report_Rev_3
Requested by: Roy Luo	Date: 12/12/2018
Part #: QSFPC-1-1-S-LP-F	Tech: Peter Chen
Part description: QSFPC	Qty to test: 12
Test Start: 5/3/2018	Test Completed: 5/15/2018



DESIGN QUALIFICATION TEST REPORT

QSFPC
QSFPC-1-1-S-LP-F

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
5/25/2018	**1**	**Initial Issue**	**PC**
8/28/2018	**2**	**Updated the part numbers**	**PC**
12/12/2018	**3**	**Updated the part numbers**	**PC**

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to IS0 10012-l and ANSI/NCSL 2540-1, as applicable.

SCOPE

To perform the following tests: Design Qualification test. Please see test plan.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

1) All materials were manufactured in accordance with the applicable product specification.
2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
3) Either an automated cleaning procedure or an ultrasonic cleaning procedure may be used.
4) The automated procedure is used with aqueous compatible soldering materials.
5) Any additional preparation will be noted in the individual test sequences.

FLOWCHARTS

Pull/Shear

Note: See attached Test Schematic: for test locations

Group 1
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction A

Step	Description
1.	Connector Pull Minimum Force = 500 g

Group 2
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction B

Step	Description
1.	Connector Pull Minimum Force = 500 g

Group 3
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction a

Step	Description
1.	Connector Pull Minimum Force = 500 g

Group 4
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction b

Step	Description
1.	Connector Pull Minimum Force = 500 g

Group 5
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction A

Step	Description
1.	Thermal Age (1)
2.	Connector Pull Minimum Force = 500 g

Group 6
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction B

Step	Description
1.	Thermal Age (1)
2.	Connector Pull Minimum Force = 500 g

Group 7
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction a

Step	Description
1.	Thermal Age (1)
2.	Connector Pull Minimum Force = 500 g

Group 8
QSFPC-1-1-S-LP-F

5 Assemblies

Note: Test direction: Please refer to the attachment direction b

Step	Description
1.	Thermal Age (1)
2.	Connector Pull Minimum Force = 500 g

(1) Thermal Age = EIA-364-17
Test Condition = 4 (105°C)
Time Condition = B (250 Hours)

ATTRIBUTE DEFINITIONS

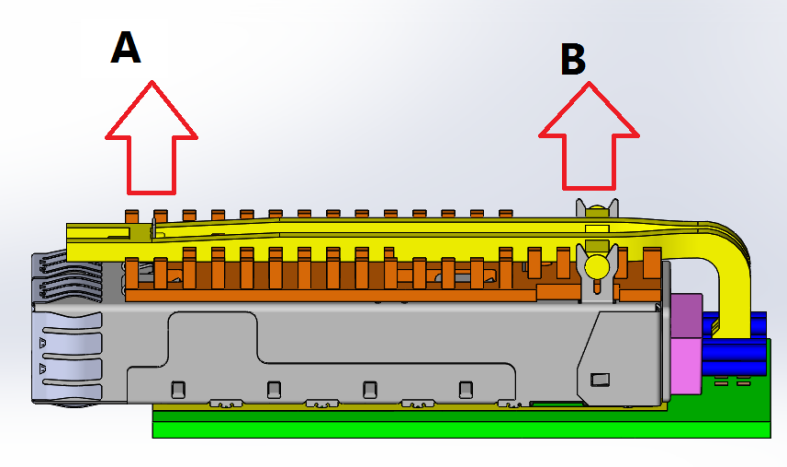
The following is a brief, simplified description of attributes.

THERMAL:

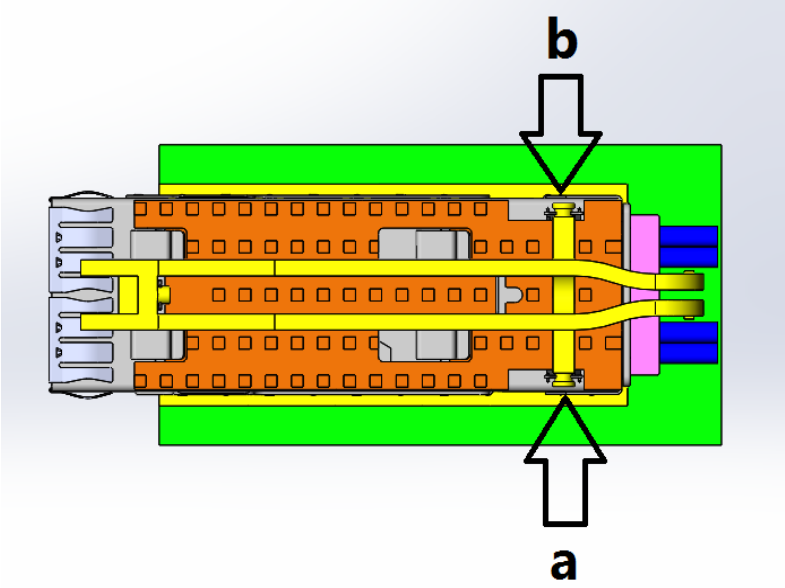
1) EIA-364-17, *Temperature Life with or without Electrical Load Test Procedure for Electrical Connectors.*
2) Test Condition 4 at 105° C.
3) Test Time Condition B for 250 hours.
4) All test samples are pre-conditioned at ambient.
5) All test samples are exposed to environmental stressing in the mated condition.

CONNECTOR PULL:

1) Detail for QSFPC's Light Pipes Pull Test. Note: Pull until body remove from the latch.
   a. Direction 1. Distance: 3mm



   b. Direction 2. Distance: 2mm. Pull until body remove from the latch.



RESULTS

Pull/Shear force

Normal

- **Group 1- Direction A**
  - **Min---------- 2.90 Lbs**
  - **Max ---------- 3.45 Lbs**
- **Group 2- Direction B**
  - **Min---------- 4.92 Lbs**
  - **Max ---------- 6.21 Lbs**
- **Group 3- Direction a**
  - **Min----------25.04 Lbs**
  - **Max ----------27.93 Lbs**
- **Group 4- Direction b**
  - **Min----------25.68 Lbs**
  - **Max ----------30.12 Lbs**

After Thermal aging

- **Group 5- Direction A**
  - **Min---------- 3.06 Lbs**
  - **Max ---------- 3.60 Lbs**
- **Group 6- Direction B**
  - **Min---------- 6.43 Lbs**
  - **Max ---------- 7.28 Lbs**
- **Group 7- Direction a**
  - **Min----------28.30 Lbs**
  - **Max ----------48.12 Lbs**
- **Group 8- Direction b**
  - **Min----------33.94 Lbs**
  - **Max ----------51.29 Lbs**

DATA SUMMARIES

Normal

"A" Direction

	Force (lbs)
Minimum	**2.90**
Maximum	3.45
Average	3.19

"B" Direction

	Force (lbs)
Minimum	**4.92**
Maximum	6.21
Average	5.59

"a" Direction

	Force (lbs)
Minimum	**25.04**
Maximum	27.93
Average	26.58

"b" Direction

	Force (lbs)
Minimum	**25.68**
Maximum	30.12
Average	28.32

DATA SUMMARIES

After thermal aging

"A" Direction

	Force (lbs)
Minimum	**3.06**
Maximum	3.60
Average	3.39

"B" Direction

	Force (lbs)
Minimum	**6.43**
Maximum	7.28
Average	6.76

"a" Direction

	Force (lbs)
Minimum	**28.30**
Maximum	48.12
Average	40.46

"b" Direction

	Force (lbs)
Minimum	**33.94**
Maximum	51.26
Average	44.71

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: HZ-TCT-01
Description: Normal force analyzer
Manufacturer: Mecmesin Multitester
Model: Mecmesin Multitester 2.5-i
Serial #: 08-1049-04
Accuracy: Last Cal: 2018-4-28, Next Cal: 2019-4-27