

Mini-Fit Sigma Seal

WIRE TO WIRE CONNECTOR SYSTEM

1.0 SCOPE

This Test Summary covers the 4.20 mm (.165inch) centerline (pitch) wire to wire connector system terminated with 16 to 28 AWG standard, copper wire using crimp technology with Tin plating.

2.0 PRODUCT DESCRIPTION**2.1 DESCRIPTION, SERIES NUMBER, AND LINKS**

DESCRIPTION	SERIES NUMBER
Male Terminal	172765
Plug Housing	207017
TPA	172709
Sigma Seal	207019

2.2 DIMENSIONS, MATERIALS, PLATINGS

See the appropriate sales drawings for the information on dimensions, materials, platings and markings.

2.3 PRODUCT SPECIFICATION TITLE AND DOCUMENT NUMBER

Title : Product Specification for Mini-Fit Sigma Seal Connector System.
 Document No. : 2070170000-PS
 Title : Test Summary for Mini-Fit Sigma Seal Connector System.
 Document No. : 2070170001-TS

PENDING
APPROVAL

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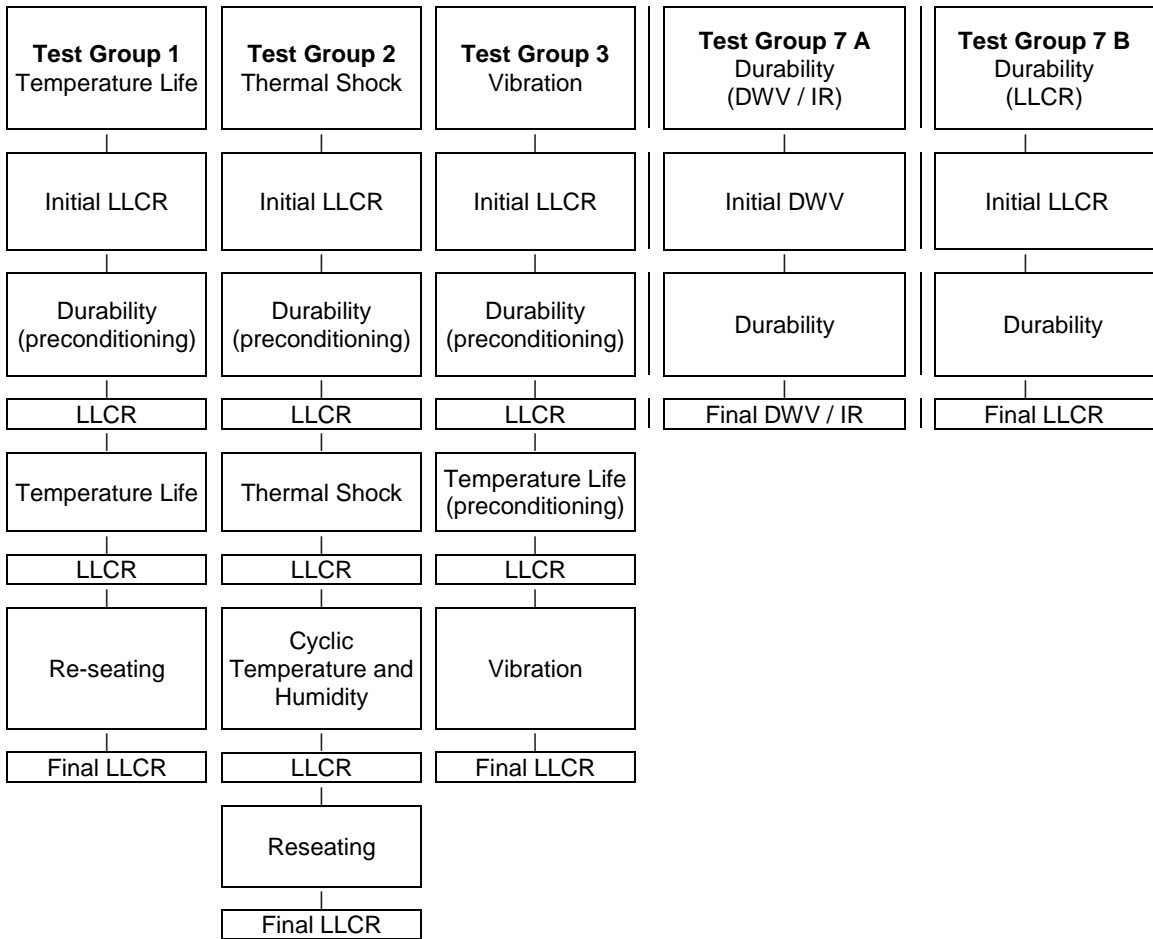
REVISION: A	EC INFORMATION: EC No: 629453630128 DATE: 12/19/20192020/01/08	TEST SUMMARY FOR MINI-FIT SIGMA SEAL CONNECTOR SYSTEM				SHEET No. 1 of 6
DOCUMENT NUMBER: 2070170000-TS	DOC TYPE: PS	DOC PART: 000	CREATED / REVISED BY: MBN02	CHECKED BY: KCHIKKANNANCSR	APPROVED BY: NCSRNCRSR	
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3.0 APPLICABLE DOCUMENTS AND SPECIFICATION

See sales drawings and other sections of this specification for the necessary referenced documents and specifications.

3.1 TEST SEQUENCES

Laboratory conditions, test sequences and sample selection are in accordance with EIA-364-1000



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DOCUMENT NUMBER: 2070170000-TS	DOC TYPE: PS	DOC PART: 000	CREATED / REVISED BY: MBN02	CHECKED BY: KCHIKKANNANCSR	APPROVED BY: NCSRNCRSR
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Individual Tests

Connector Mate & Un-mate
Force

Terminal Insertion and
Retention Force

Panel Insertion and withdrawal
Force

Wire Pullout Force

Foam Leak Test

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DOCUMENT NUMBER: 2070170000-TS	DOC TYPE: PS	DOC PART: 000	CREATED / REVISED BY: MBN02	CHECKED BY: KCHIKKANNANCSR	APPROVED BY: NCSRNC SR
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4.0 QUALIFICATION

Laboratory conditions and sample selection are in accordance with EIA-364-1000.

5.0 ELECTRICAL PERFORMANCE RESULTS

Dielectric Withstanding Voltage

DESCRIPTION	REQUIREMENT	MEAN	MIN.	MAX.
8 CKT	No Breakdown, Current Leakage < 5 mA	Meets Requirements		
14 CKT	No Breakdown, Current Leakage < 5 mA	Meets Requirements		

Insulation Resistance (Transverse Direction)

DESCRIPTION	REQUIREMENT	MEAN	MIN.	MAX.
8 CKT	1000 MΩ MIN.	Meets Requirements		
14 CKT	1000 MΩ MIN.	Meets Requirements		

Insulation Resistance (Vertical Direction)

DESCRIPTION	REQUIREMENT	MEAN	MIN.	MAX.
8 CKT	1000 MΩ MIN.	Meets Requirements		
14 CKT	1000 MΩ MIN.	Meets Requirements		

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6.0 MECHANICAL PERFORMANCE RESULTS

Connector Mate / Unmate Force 8 CKT

DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Connector Mate Forces per CKT	Initial	15.6 N MAX.	7.92 N	5.86 N	9.41 N
Connector Unmate Forces per CKT	Initial	1.0 N MIN.	7.07 N	6.48 N	7.66 N

Connector Mate / Unmate Force 14 CKT

DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Connector Mate Forces per CKT	Initial	15.6 N MAX.	5.11 N	4.20 N	6.34 N
Connector Unmate Forces per CKT	Initial	1.0 N MIN.	4.48 N	3.97 N	5.38 N

Plug Terminal Insertion / Retention Force 8 CKT

DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Plug Terminal Insertion Force	Initial	14.7 N MAX.	6.14 N	3.90 N	8.40 N
Plug Terminal Retention Force	Initial	30 N MIN.	62.76 N	57.20 N	68.80 N

Plug Terminal Insertion / Retention Force 14 CKT

DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Plug Terminal Insertion Force	Initial	14.7 N MAX.	8.48 N	4.80 N	10.90 N
Plug Terminal Retention Force	Initial	30 N MIN.	54.08 N	50.80 N	56.90 N

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Panel Mount Insertion / Retention Force 8 CKT

1 mm Steel Plate					
DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Panel Mount Insertion Force	Initial	40 MAX.	31.19 N	29.73 N	32.05 N
Panel Mount Retention Force	Initial	100 MIN.	232.42 N	227.50 N	236.70 N

2 mm Steel Plate					
DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Panel Mount Insertion Force	Initial	40 MAX.	25.53 N	24.06 N	27.00 N
Panel Mount Retention Force	Initial	100 MIN.	231.56 N	229.20 N	233.30 N

Panel Mount Insertion / Retention Force 14 CKT

1 mm Steel Plate					
DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Panel Mount Insertion Force	Initial	40 MAX.	24.45 N	21.85 N	26.30 N
Panel Mount Retention Force	Initial	100 MIN.	194.28 N	191.60 N	198.10 N

2 mm Steel Plate					
DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MIN.	MAX.
Panel Mount Insertion Force	Initial	40 MAX.	29.0 N	27.93 N	29.96 N
Panel Mount Retention Force	Initial	100 MIN.	196.06 N	189.90 N	201.40 N

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