

TEST SUMMARY

125°C HIGH TEMPERATURE TESTING OF MICRO-FIT GOLD PLATED SYSTEMS

1.0 SCOPE

This Test Summary covers the Micro-Fit 3.00 mm pitch Receptacles and Plugs, terminated with gold plated terminals with 18-30 AWG wire using crimp technology, and mated to each other or to printed circuit board headers with gold plated terminals. Samples were subjected to thermal aging at 125°C for 1000 hours per Sequence 1 of EIA-364-1000.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Description	Series Number
Micro-Fit Female Crimp Terminal	43030 (Gold only) ⁽¹⁾ , 46235
Micro-Fit Male Crimp Terminal	43031 (Gold only) ⁽¹⁾
Micro-Fit Glow Wire Receptacle (U.L. 94V-2) ⁽¹⁾	43025, 43645, 172952
Micro-Fit Glow Wire Plug (U.L. 94V-2) ⁽¹⁾	43020, 43640, 203632
Micro-Fit Header Assembly	43045 ⁽¹⁾ , 43650 ⁽¹⁾

⁽¹⁾This summary applies to gold-plated options and glow wire capable receptacles and plugs only. See applicable sales drawings for part numbers.

2.1.1 PART NUMBERS TESTED

Micro-Fit Female Crimp Terminal: 43030-0002, 46235-0001
 Micro-Fit Male Crimp Terminal: 43031-0002
 Micro-Fit Glow Wire Receptacle: 43025-1210
 Micro-Fit Glow Wire Plug: 43020-1210
 Micro-Fit Header Assembly: 43045-1213

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Dimensions, Materials & Plating: See individual sales drawings.

2.3 PRODUCT SPECIFICATION TITLE AND DOCUMENT NUMBER

Product Specification for Micro-Fit Connector System: PS-43045, PS-43650

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

3.1 TESTING SEQUENCES

Reference Appendix A

3.2 OTHER DOCUMENTS AND SPECIFICATIONS

EIA-364-1000

4.0 QUALIFICATION

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

REVISION: A	ECR/ECN INFORMATION: EC No: 633298 DATE: 2020/03/05	TITLE: MICROFIT TEST SUMMARY - 125°C AMBIENT TEMP (GOLD PLATING)	SHEET No. 1 of 4
DOCUMENT NUMBER: 430450006-TS	CREATED / REVISED BY: MKIPPER	CHECKED BY: SSOUSEK	APPROVED BY: FSMITH

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5.0 PERFORMANCE

5.1 ELECTRICAL PERFORMANCE

Table 1 – Micro-Fit with Select Gold Plating, Wire to Board (43030 Female)

STAGE	DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MINIMUM	MAXIMUM
1	Contact Resistance	Initial	10 milliohms MAXIMUM	8.27 ⁽²⁾ mΩ	8.03 ⁽²⁾ mΩ	8.74 ⁽²⁾ mΩ
2	Contact Resistance	After Durability 50 Cycles	20 mΩ Δ max ⁽³⁾	0.06 mΩ	-0.14 mΩ	0.48 mΩ
				PASS		
3	Contact Resistance	After Thermal Aging (1000 hours)	20 mΩ Δ max ⁽³⁾	1.27 mΩ	0.06 mΩ	16.82 mΩ
				PASS		
4	Contact Resistance	After Reseating 3 Cycles	20 mΩ Δ max ⁽³⁾	1.04 mΩ	0.17 mΩ	7.06 mΩ
				PASS		

⁽²⁾ Absolute resistance values. Includes bulk wire resistance.

⁽³⁾ Δ mΩ values shown are with respect to initial contact resistance measurements from Stage 1.

Table 2 – Micro-Fit with Select Gold Plating, Wire to Wire (43030 Female)

STAGE	DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MINIMUM	MAXIMUM
1	Contact Resistance	Initial	10 milliohms MAXIMUM	14.90 ⁽²⁾ mΩ	12.71 ⁽²⁾ mΩ	16.75 ⁽²⁾ mΩ
2	Contact Resistance	After Durability 50 Cycles	20 mΩ Δ max ⁽³⁾	0.08 mΩ	-0.19 mΩ	2.15 mΩ
				PASS		
3	Contact Resistance	After Thermal Aging (1000 hours)	20 mΩ Δ max ⁽³⁾	1.13 mΩ	0.20 mΩ	15.49 mΩ
				PASS		
4	Contact Resistance	After Reseating 3 Cycles	20 mΩ Δ max ⁽³⁾	1.17 mΩ	0.08 mΩ	14.95 mΩ
				PASS		

⁽²⁾ Absolute resistance values. Includes bulk wire resistance.

⁽³⁾ Δ mΩ values shown are with respect to initial contact resistance measurements from Stage 1.

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5.1 ELECTRICAL PERFORMANCE (CONTINUED)

Table 3 – Micro-Fit with Select Gold Plating, Wire to Wire (46235 Female)

STAGE	DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MINIMUM	MAXIMUM
1	Contact Resistance	Initial	10 milliohms MAXIMUM	15.05 ⁽²⁾ mΩ	14.72 ⁽²⁾ mΩ	15.40 ⁽²⁾ mΩ
2	Contact Resistance	After Durability 50 Cycles	20 mΩ Δ max ⁽³⁾	-0.01 mΩ	-0.28 mΩ	0.23 mΩ
				PASS		
3	Contact Resistance	After Thermal Aging (1000 hours)	20 mΩ Δ max ⁽³⁾	3.08 mΩ	0.47 mΩ	17.73 mΩ
				PASS		
4	Contact Resistance	After Reseating 3 Cycles	20 mΩ Δ max ⁽³⁾	2.68 mΩ	0.31 mΩ	17.73 mΩ
				PASS		

⁽²⁾ Absolute resistance values. Includes bulk wire resistance.

⁽³⁾ Δ mΩ values shown are with respect to initial contact resistance measurements from Stage 1.

5.2 MECHANICAL PERFORMANCE

Table 4 - Micro-Fit, Glow Wire Capable Housings, Wire to Wire

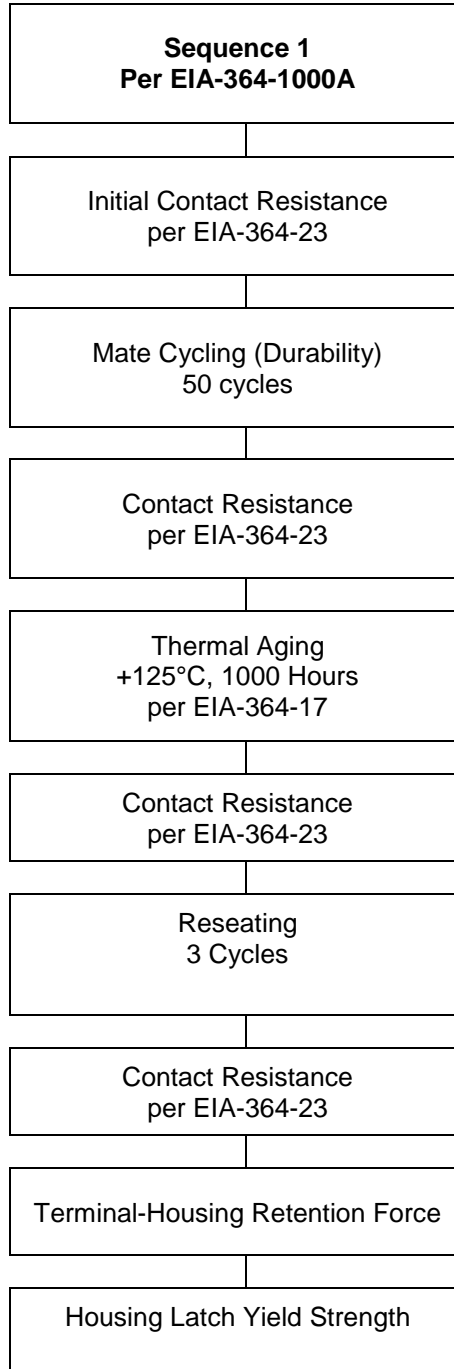
STAGE	DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MINIMUM	MAXIMUM
1.1	Female Terminal Retention Force (Terminal to Housing) (46235)	Final (After Full Sequence 1)	24.5 N MIN	54.8 N	40.1 N	68.5 N
				PASS		
1.2	Male Terminal Retention Force (Terminal to Housing) (43031)		24.5 N MIN	72.9 N	58.0 N	83.4 N
				PASS		
2	Thumb Latch Yield Strength		58.0 N MIN	51.4 N	47.8 N	54.7 N
				PASS ⁽⁴⁾		

⁽⁴⁾ Thumb latch disengaged but did not yield / fracture.

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Appendix A -Test Sequences



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