NUMBER: 108-5351

SECURITY CLASSIFICATION: Customer Release

Product Specification

108-5351

AMP-LATCH Series.

FCRC Puddle card Connector

This specification may change without notice as a result of product design change amd product evaluation testing.

1. Scope :

1.1 Contents

This specification covers the requirements for product performance, test methods and quality assurance provisions of AMP-LATCH Series.FCRC Puddle card Connector.

The applicable product descriptions and part number are as shown in Fig. 1 :

Product Part No.	Descriptions
216093-X	Puddle card Connnector Kit

Fig. 1

2. Applicable Documents :

The following documents from a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

2.1 AMP Specifications :

A. 109-5000 Test Specification, General Requirements for Test Methods

B. Test Report : TR-90254

2.2 Military Standard and Specifications :

MIL-STD-202 Test Methods for Electronic and Electrical Component Parts

LTR	REVISION RECORD	DR	CHK	DATE
0	RFA-1765	M.W	R.N	31/29'91

DR. 29-MAR.-'91 M.WASHIZU

CHK. 29 MAR '91 R.NISHIMURA

APP. 29 MAR '91 R.Ishimura

SHEET 1 OF 5

AMP (Japan), Ltd. Kawasaki, Japan

LOC	LOC	NO.	REV.
J	A	108-5351	0

NAME AMP-LATCH Series. FCRC Puddle card Connector

DIST.

PRINT

3. Requirements :

3.1 Design and Construction :

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2 Materials :

A. Contact :

Contact is made of phosphor bronze, with bright tin-lead plating of 2.5 to 5.0 μm over nickel underplate of 1.3 μm all over.

B. Housing :

Housing is made of thermoplastic (polyester) resin conforming to UL 94 V-0

3.3 Ratings :

A. Voltage Rating : 250 VAC maximum

B. Current Rating : 1 A maximum per contact position.

C. Temperature Rating : −55 °C to +85 °C

3.4 Performance and Test Descriptions :

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Fig. 2. All tests are performed at ambient temperature, unless otherwise specified. The Note (a) "Shall meet visual requirements, show no physical damage"

Para.	Test Items	Requirements	Procedures
3.4.1	Confirmation of Product	Product shall be conforming to the requirements of applicable product drawing.	Visually, dimensionally and functionally inspected per applicable inspection plan.
3.5	Electrical Requirements		
3.5.1	Termination Resistance (Low Level)	15 mΩ max. (Initial) 30 mΩ max. (Final)	Subject contacts assembled in housing to closed circuit current of 50 mA max. at open circuit voltage of 50 mV max. Fig. 3. AMP Spec. 109-5306

Fig.2 (cont'd)

Para.	Test Items	Requirements	Procedures
3.5.2	Insulation Resistance	5000 MΩ min. (Initial) 1000 MΩ min. (Final)	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the connector. MIL-STD-202, Method 302, Condition B.
3.5.3	Dielectric Strength	Connector must withstand test potential of 0.5 kVAC for 1 minute. Connector shall withstand without abnormalities such as circuit breakdown and flashover.	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the connector. MIL-STD-202, Method 301
3.6	Physical Requirements		
3.6.1	Vibration Sinusoidal High Frequency	No electrical discontinuity greater than 1 microsecond shall occur. See Note (a). After vibratile conditioning, low level termination resistance shall be 30 mΩ max.	Connectors to 10-500-10 Hz traversed in 15 minutes with 10 G accelerated velocity ; 3 hours each of 3 mutually perpendicular planes with contact-loaded and series wired connector shall be mounted on PCB and test current of 100 mA shall be applied during test. MIL-STD-202, Method 204, Condition A
3.6.2	Physical Shock	No electrical discontinuity greater than 1 microsecond (s) shall occur. See Note (a). After vibratile conditioning, low level termination resistance shall be 30 mΩ max.	Connectors to 100 G's sawtooth or halfsine shock pulses of 6 millisecond duration ; 3 shocks in each direction applied along the 3 mutually perpendicular plans total 18 shocks ; with contact-loaded and series wired connector shall be mounted on PCB and test current of 100 mA shall be applied during test. MIL-STD-101, Method 213, Condition 1

Fig.2 (Cont'd)

Para.	Test Items	Requirements	Procedures
3.6.3	Resistance to Soldering Heat	No physical damage	Subject connectors mounted on printed circuit board to solder bath at 260 °C for 10 seconds MIL-STD-202, Method 210, Condition B except as indicated above
3.7	Environmental Requirements		
3.7.1	Thremal Shock	Termination Resistance (Low Level) (Final) ; 30 mΩ MAX. See Note (a)	Connectors to 5 cycles between −55 °C and 85 °C. MIL-STD-202, Method 107, Condition A
3.7.2	Humidity, Steady State	Insulation Resistance (Final) 1000 MΩ min. Termination Resistance (Low Level) (Final) 30 mΩ MAX. And meet the requirements of dielectric strength per Para. 3.5.3.	Subject connectors to steady state humidity at 40±2 °C and 90-95 % R.H. for 96 hours. MIL-STD-202, Method 103, Condition B
3.7.3	Salt Spray	Termination Resistance (Low Level) (Final) ; 30 mΩ MAX. Must meet visual & electrical requirements, where applicable.	Sample connectors to 5% salt concentration for 48 hours ; MIL-STD-202, Method 101, Condition B

Fig.2 (end)

3.8 Product Qualification and Requalification Tests

Test or Examination	Test Group (a)					
	1	2	3	4 (c)	5	6
	Test Sequence (b)					
Examination of Product	1, 5	1, 5	1, 5	1, 6	1, 7	1, 3
Termination Resistance, Dry Circuit	2, 4	2, 4	2, 4	2, 5		
Dielectric Withstanding Voltage					3, 6	
Insulation Resistance					2, 5	
Vibration				3		
Physical Shock				4		
Resistance to Soldering Heat						2
Thermal Shock (per Product Spec)		3				
Humidity, Steady State	3				4	
Corrosion, Salt Spray			3			
Number of Samples	5	5	5	3	5	5

(a) Connector housings and contacts shall be prepared in accordance with applicable Instruction Sheet. They shall be selected at random from current production.

(b) Numbers indicate sequence in which tests are performed.

(c) Discontinuities shall not take place in this test group, during tests.

Fig. 3

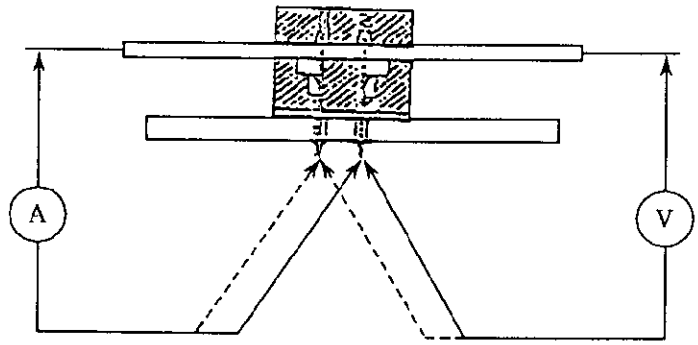

Fig. 4 Low Level Termination Resistance Probing Points