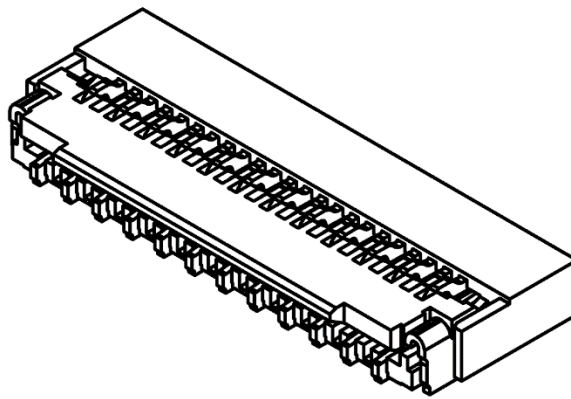


PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19		
Product Description	0.3mm Pitch ZIF FPC				Page	1	
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ	Approved	PH

Side Entry



PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19		
Product Description	0.3mm Pitch ZIF FPC				Page	2	
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ	Approved	PH

1.0 SCOPE.

This specification covers performance, tests and quality requirements for 0.3mm Pitch ZIF FPC Connector

2.0 APPLICABLE DOCUMENTS.

EIA-364 Electronics Industries Association

3.0 REQUIREMENTS.

3.1 Design and Construction

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

3.2 Materials and Finish

3.2.1 Housing: High-Temp Plastic LCP (UL94V-0), Natural or Black

3.2.2 Actuator: LCP (UL94V-0), Black

3.2.3 Contact: Phosphor Bronze

Finish: (a) Finish: see ordering information

(b) Under-plate: Nickel-plated all over

3.2.4 Fitting Nail: Phosphor Bronze, Tin-plated overall

3.3 Ratings

3.3.1 Voltage rating: 30V AC

3.3.2 Current rating: 0.2A

3.3.3 Operating Temperature Range: -55°C to +85°C

PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19
Product Description	0.3mm Pitch ZIF FPC			Page	3
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ
				Approved	PH

4.0 PERFORMANCE.

Item	Test Condition	Requirement
Examination of Product	Visual, dimensional and functional per applicable quality inspection plan.	Product shall meet requirements of applicable product drawing and specification.

4.1 Electrical Performance.

Item	Test Condition	Requirement
Low-signal Level Contact Resistance	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max., in accordance with EIA-364-23.	Even Pin: 50 m Ω Max. Odd Pin: 80 m Ω Max.
Insulation Resistance	Unmated connectors, apply 250 V DC between adjacent terminals, in accordance with EIA-364-21.	50 M Ω Min.
Dielectric Withstanding Voltage	Test between adjacent contacts of unmated connectors, in accordance with EIA-364-20.	250 VAC Min. at sea level for 1 minute. No discharge, flashover or breakdown. Current leakage: 0.5 mA max.
Temperature Rise	Mate connector: measure the temperature rise at rated current after: 0.2 A/Power contact. The temperature rise above ambient shall not exceed 30°C The ambient condition is still air at 25°C, in accordance with EIA-364-70, Method 2.	30°C Max. Change allowed

4.2 Mechanical Performance.

Item	Test Condition	Requirement
Durability	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 25.4mm/min In accordance with EIA-364-09.	20 cycles
FPC Retention Force	Insert the actuator, pull the FPC at the speed rate of 25 \pm 3 mm/min.	The withdrawal force shall be more than 0.15N x No. of pins

PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19
Product Description	0.3mm Pitch ZIF FPC			Page	4
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ
				Approved	PH

Item	Test Condition	Requirement
Terminal/Housing Retention Force	Apply axial pull out force at the speed rate of 25 ±3 mm/minute. On the terminal assembled in the housing.	0.8N Min.
Vibration	The electrical load condition shall be 100 mA maximum for all contacts. Subject to a simple harmonic motion having amplitude of 0.76mm (1.52mm maximum total excursion) in frequency between the limits of 10 and 55 Hz. The entire frequency range, from 10 to 55 Hz and return to 10 Hz, shall be traversed in approximately 1 minute. This motion shall be applied for 2 hours in each of three mutually perpendicular directions. In accordance with EIA-364-28, Condition I	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max. 1 u sec Max.
Shock (Mechanical)	Subject mated connectors to 50 G's (peak value) half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100mA maximum for all contacts. In accordance with EIA-364-27, test condition A	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max. 1 u sec Max.

4.3 Environmental Performance.

Item	Test Condition	Requirement
Resistance to Reflow Soldering Heat	Pre Heat: 150°C~180°C, 60~90sec. Heat: 230°C Min., 40sec Min. Peak Temp.: 260°C Max, 10sec Max.	No Damage
Resistance to Hand Soldering Heat	Soldering iron: 350±10°C Duration: 3~4 sec.	No Damage

PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19		
Product Description	0.3mm Pitch ZIF FPC			Page	5		
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ	Approved	PH

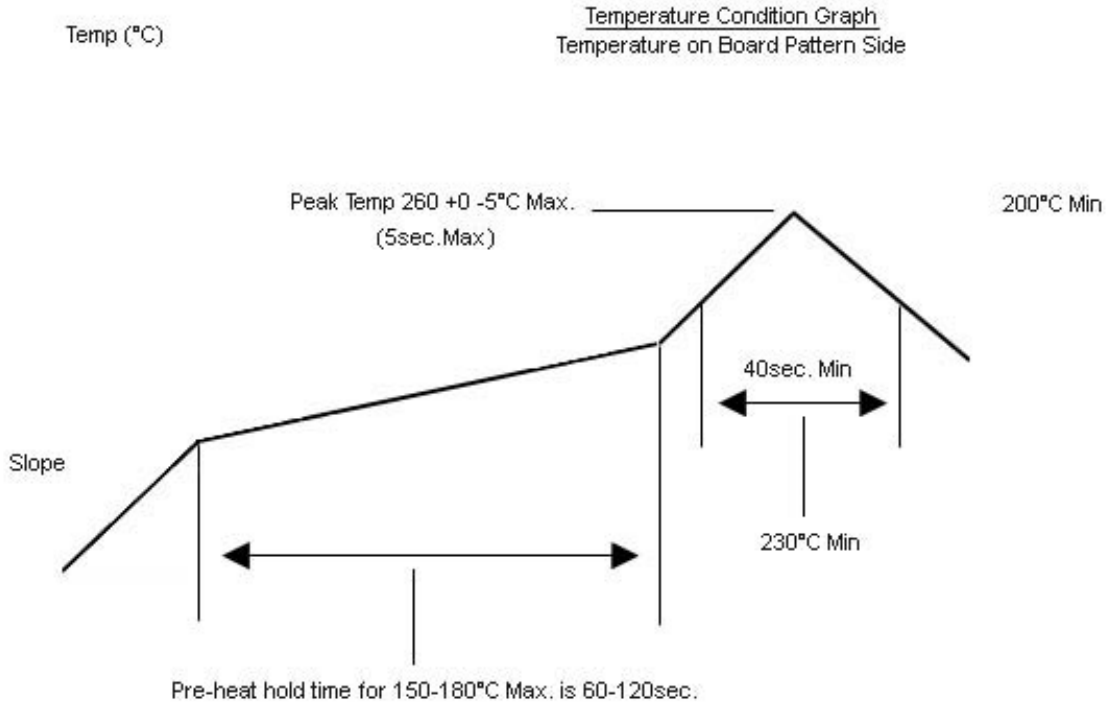
Item	Test Condition	Requirement
Thermal Shock	Mate module and subject to follow condition for 5 cycles. 1 cycles: -55 +0/-3°C, 30 minutes +85 +3/-0°C, 30 minutes In accordance with EIA-364-32, test condition A	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max. 1 u sec Max
Humidity	Mated Connector +40°C, 90~95% RH, Refer to Method II. In accordance with EIA-364-31, test condition A	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max. 20MΩ Min.
Temperature Life	Subject mated connectors to temperature life at +85°C for 96 hours. In accordance with EIA-364-17, test condition A	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max.
Low Temperature	Subject mated connectors to temperature life at -40°C for 96 hours. In accordance with EIA-364-59, test condition D	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max.
SO ₂ Gas	Mate applicable FPC and expose them to the following SO ₂ gas atmosphere. Temperature: 40±2°C Gas Density: 50±5 ppm Duration: 24 hours	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max.
NH ₃ Gas	Mate applicable FPC, allow to stand for 40 minutes in container filled with NH ₃ gas (from density 28% ammonia water)	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max.
Salt Spray	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C for 48 hours. In accordance with EIA-364-26, test condition B	No Damage Even Pin: 70 m Ω Max. Odd Pin: 100 m Ω Max.
Solderability	Subject the test area of contacts into the flux for 5-10 sec. And then into solder bath, Temperature at 245 ±5°C, for 4-5 sec. In accordance with EIA-364-52	Solder area shall have minimum of 95% solder coverage.

PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19		
Product Description	0.3mm Pitch ZIF FPC				Page	6	
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ	Approved	PH

5.0 INFRA RED REFLOW CONDITION.

5.1 Lead-Free Process: Duration = 2 times



PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19		
Product Description	0.3mm Pitch ZIF FPC			Page	7		
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ	Approved	PH

6.0 PRODUCT QUALIFICATION AND TEST SEQUENCE.

Test or Examination	Test Group												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	Test Sequence												
Examination of Product	1,3	1,7	1,6	1,5	1,9	1,6	1,3	1,3	1,5	1,3	1,3	1,3	1,3
Low-signal Level Contact Resistance		2,6	2,5	2,4	2,8	2,4,6			2,4				
Insulation Resistance					3,7								
Dielectric Withstanding Voltage					4,6								
Temperature Rise	2												
Durability		4											
Vibration			3										
Shock (Mechanical)			4										
Thermal Shock				3									
Humidity					5								
Temperature Life						3							
Low Temperature						5							
SO ₂ Gas							2						
NH ₃ Gas								2					
Salt Spray									3				
Solderability										2			
FPC Retention Force		3,5											
Terminal / Housing Retention Force											2		
Resistance to Soldering Heat												2	
Resistance to Hand Soldering Heat													2
Sample Size	5	5	5		5	5	5	5	5	5	5	5	5

PRODUCT SPECIFICATION

Part Number	FFC1XXX	Rev	B	Date	09/09/19		
Product Description	0.3mm Pitch ZIF FPC				Page	8	
Doc Number	0.3mm FFC Spec	Prepared	CC	Checked	VJ	Approved	PH

Revision Details:

Revision	Information	Page	Release Date
A	Specification Released	-	09/09/2019