

**0.3 mm Pitch FPC Connector**

**1. INTRODUCTION**

1.1. Purpose

Testing was performed on the Tyco Electronics 0.3 mm Pitch FPC Connector to determine its conformance to the requirements of Product Specification 108-57877, Revision A.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of the 0.3 mm Pitch FPC Connector.

1.3. Conclusion

The 0.3 mm Pitch FPC Connector listed in paragraph 1.5. conformed to the electrical, mechanical, and environmental performance requirements of Product Specification 108-57877, Revision A.

1.4. Product Description

The 0.3 mm Pitch FPC Connector is designed for printed circuit board applications.

1.5. Test Specimens

Test specimens were representative of normal production lots. The following specimens were used for test.

Test Group	Quantity	Part number	Description
A, B, C, D, E, F, G, H	5 ea.	3-2041390-9	0.3 FPC, 39 Position, Bottom Contact, G/F

1.6. Qualification Test Sequence

Test or Examination	Test Group (a)							
	A	B	C	D	E	F	G	H
	Test Sequence (b)							
Examination of product.	1, 5	1, 3	1	1, 5	1, 3	1, 8	1, 3	1, 5
Low level contact resistance.	2			2, 4		2, 6		2, 4
Insulation resistance.	3					3, 7		
Dielectric withstanding voltage.	4					4		
FPC retention force.		2						
Contact retention force.			2					
Durability.				3				
Vibration, sinusoidal.					2			
Humidity-temperature cycling.						5		
Resistance to reflow soldering heat.								3
Solderability.							2	

**NOTE** (a) See paragraph 1.5.  
(b) Numbers indicate sequence in which test are performed.

Figure 1

**2. TEST RESULT**

Test Group	Test Description	Requirement	Test Result				Judgment
			Max.	Min.	Ave.	Std. Dev.	
A	Examination of product.	Meets product drawing.	PASSED				Accepted
	Low level contact resistance.	50 mΩ maximum initial.	15.1	12.1	13.6	0.84	Accepted
	Insulation resistance.	50 MΩ minimum.	PASSED				Accepted
	Dielectric withstanding voltage.	No breakdown or flashover.	PASSED				Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
B	Examination of product.	Meets product drawing.	PASSED				Accepted
	FPC retention force.	15 gf per contact minimum. 39P = 585 gf minimum	1032	958	992	33	Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
C	Examination of product.	Meets product drawing.	PASSED				Accepted
	Contact retention force.	100 gf per contact minimum.	150	120.3	135.5	8.62	Accepted
D	Examination of product.	Meets product drawing.	PASSED				Accepted
	Low level contact resistance.	50 mΩ maximum initial.	16	13.6	15	0.86	Accepted
	Durability.	No damage.	PASSED				Accepted
	Low level contact resistance.	100 mΩ maximum final.	23	18.1	20.5	1.48	Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
E	Examination of product.	Meets product drawing.	PASSED				Accepted
	Vibration, sinusoidal.	No discontinuities of 1 μs or longer duration.	PASSED				Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
F	Examination of product.	Meets product drawing.	PASSED				Accepted
	Low level contact resistance.	50 mΩ maximum initial.	15	12.1	13.6	0.89	Accepted
	Insulation resistance.	50 MΩ minimum.	PASSED				Accepted
	Dielectric withstanding voltage.	No breakdown or flashover.	PASSED				Accepted
	Humidity-temperature cycling.	No damage.	PASSED				Accepted
	Low level contact resistance.	100 mΩ maximum final.	23	18.1	20.5	1.37	Accepted
	Insulation resistance.	50 MΩ minimum.	PASSED				Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
G	Examination of product.	Meets product drawing.	PASSED				Accepted
	Solderability.	95% solder coverage min.	PASSED				Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
H	Examination of product.	Meets product drawing.	PASSED				Accepted
	Low level contact resistance.	50 mΩ maximum initial.	15	12.1	13.6	0.85	Accepted
	Resistance to reflow soldering heat.	No damage.	PASSED				Accepted
	Low level contact resistance.	100 mΩ maximum final.	23	18.1	20.4	1.46	Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted

Figure 2