

PRODUCT SPECIFICATION
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1.SCOPE:

This specification covers the requirements for product performance of 10.0 mm pitch wire to wire or wire to board connector series.

2.PART NAME & PART NUMBERS

Part name	Part number
Housing	A2361HFA/HMA
Terminal	A2361F-T/A2361M-T
Wafer	A2361WVA/WRA

3. CONSTRUCTION. DIMENSIONS . MATERIAL & SURFACE FINISH

Construction and dimensions shall be in accordance with the referenced drawings. Material and surface finish shall be as specified below.

Part name		Material	Surface finish
Housing		Nylon 66	UL94V-0
Terminal		High conductive copper alloy	Tin over Nickel/Gold over Nickel
Wafer	Post	Phosphor Bronze	Tin over Nickel/Gold over Nickel
	Body	Nylon 46	UL94V-0

4. RATINGS & APPLICABLE WIRES

Item	Standard						
Rated Current (Max.) and Applicable Wires	600V AC DC						Insulation O.D. 5.30mm Max.
	No.of circuits		Wire size (AWG)				
			#10	#12	#14	#16	
	W-W	2	33.0	23.0	17.0	13.0	
		4	33.0	23.0	17.0	13.0	
		6	33.0	23.0	17.0	13.0	
	W-B	2	33.0	23.0	17.0	13.0	
		4	33.0	23.0	17.0	13.0	
		6	33.0	23.0	17.0	13.0	
Ambient Temperature		-40℃~105℃*					

Note: Do not branch in parallel current which exceeds the rated current

*: Including terminal temperature rise

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5. CONDITIONS:

The conditions shall be in accordance with the referenced data of next table.

Number	Item	Requirement
(1)	Bend up	3°Max.
	Bend down	3°Max.
	Twisting	4°Max.
	Rolling	8°Max.
(2)	Bell mouth (flare)	0.20-0.50 mm
(3)	Cut-off tab length	0.50 mm Max.
(4)	Extruded wire length	3.50-4.50 mm
(5)	Seam	Seam shall not be opened and no wire allowed out of crimping area
(6)	Wire strip length	7.5-8.5 mm ref.

After crimping, the crimped areas [(5)、(6)] should be as follows.

Wire Size (AWG)	Terminal Part Number	Conductor(mm)		Insulation(mm)		Crimp Strength (kgf)
		Crimp Width	Crimp Height	Crimp Width	Crimp Height	
# 10	A2361F-T	3.95(Max)	2.69~2.79	5.25(Max)	5.10	36.00(Min.)
# 12			2.39~2.49		4.95	31.00(Min.)
# 14	A2361F-T-L	3.20(Max)	1.89~1.99	3.20(Max)	4.50	22.70(Min.)
# 16			1.82~1.92		4.50	13.61(Min.)

The crimp width at the conductor part & crimp height at the insulation part is a reference value, so adjust it according to a wire to be used.

6. PERFORMANCE

6.1 ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
6-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV max.,10mA..	1.5 mΩ Max(tin) 1.0 mΩ Max(gold)
6-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent	1000MΩ Min.
6-1-3	Dielectric Withstanding Voltage	Mate connectors, apply 2200V AC (rms) for 1 minute between adjacent terminal or ground.	No Breakdown and Flashover

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6.2 MECHANICAL PERFORMANCE

Test Description		Procedure		Requirement
6-2-1	Insertion & Withdrawal Force	Insert and withdraw connectors at the speed rate of $25 \pm 3\text{mm/minute}$.		(Per Pin) Insertion Force: 3.0kgf Max. Withdrawal Force: 0.25kgf Min.
6-2-2	Terminal Insertion Force	Insert the crimped terminal into the housing rate of $25 \pm 3\text{mm/minute}$.		7.0kgf Max.
6-2-3	Crimping Pull Out Force	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of $25 \pm 3\text{mm/minute}$.	AWG #10	36.00kgf Max.
			AWG #12	31.00kgf Max.
			AWG #14	22.70kgf Max.
			AWG #16	13.61kgf Max.
6-2-4	Terminal/Housing Retention Force (With TPA)	Apply axial pull out force at the speed rate of $25 \pm 3\text{mm/minute}$ on the terminal assembled in the housing.		10.0kgf Min.
6-2-5	Locking Strength	Apply axial pull out force at the speed rate of $25 \pm 3\text{mm/minute}$ on the terminal assembled in the housing.		10.0kgf Min.
6-2-6	Header Terminal Retention Force	Apply axial push force at the speed rate of $25 \pm 3\text{mm/minute}$.		2.0kgf Min.
6-2-7	Durability	When mated up to 30 cycles by the rate of 10 cycles per minute (gold 100 times)		1.0mΩ Max.
6-2-8	Vibration	Amplitude : 1.5mm P-P Sweep time: 10-500Hz in 10 minute Duration: 9 hours	Contact Resistance	1.0mΩ max.
			Discontinuity	1μsec. max.
6-2-9	Mechanical Shock	50 G, 11ms, Half-Sine Shock Pulse.	Contact Resistance	1.0mΩ max.
			Discontinuity	1μsec. max.

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6.3 ENVIRONMENTAL PERFORMANCE AND OTHERS

6-3-1	Temperature Rise	Carrying rated current load.	Temperature Rise	30°C max.
6-3-2	Heat Resistance	105 ± 2°C, 240 hours	Contact Resistance	1.0mΩ max.
			Discontinuity	1μsec. max.
6-3-3	Cold Resistance	Temperature:-40 ± 2°C Duration:96 hours	Appearance	No Damage
			Contact Resistance	1.0mΩ max.
6-3-4	Humidity	Temperature:40 ± 2°C Relative Humidity: 90 ~ 95% Duration:96 hours	Appearance	No Damage
			Contact Resistance	1.0mΩ max.
			Insulation Resistance	1000MΩ min.
			Dielectric Withstanding Voltage	No Breakdown and Flashover
6-3-5	Thermal shock.	25 cycles of: a)- 40±3°C,30 minutes, +25 +/- 10 deg. C for 5 minutes max. b) +105±3°C,30 minutes +25 +/- 10 deg. C for 5 minutes	Appearance	No Damage
			Contact Resistance	1.0mΩ max.
6-3-6	Solderability	Soldering Time: 3~5 sec. Solder Temperature: 245 ± 5°C	Solder Wetting	95% of immersed area must show no voids, pin holes
6-3-7	Resistance to Soldering Heat	Soldering Time: 3~5 sec. Solder Temperature: 260 ± 5°C	Appearance	No Damage