



PRODUCT SPECIFICATION

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1.SCOPE:

This specification covers the product performance requirements of 5.70 mm spacing line-to-plate connector series.

2.PART NAME & PART NUMBERS

Part name	Part number
Housing	C6201HFB C6201HFE
Terminal	C6201F-T-E(-H)
Wafer	C6201WVB/WRB

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		Phosphor bronze High conductive copper alloy	Tin over Nickel/Gold over Nickel
Wafer	Post	Brass	High Conductivity copper
	Body	Nylon 66/LCP	UL94V-0

4. RATINGS & APPLICABLE WIRES

Item	Standard			
Rated Voltage (Max.)	600V AC DC			
Rated Current (Max.) and Applicable Wires	No.of circuits	Wire size (AWG)		
		#12	#14	#16
	2-circuits	23.5	21.0	17.0
	4-circuits	22.0	17.0	15.0
	6-circuits	21.0	15.0	13.0
	8-circuits	20.0	13.0	12.0
	10-circuits	19.0	13.0	12.0
	12-circuits	18.0	13.0	12.0
Ambient Temperature Range		-40℃~105℃*		

 Insulation O.D.
3.75mm Max.

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)	0.20-1.00 mm
(3)	Cut-off tab length	0.60 mm Max.
(4)	Extruded wire length	0.1-0.76 mm
(5)	Seam	Seam shall not be opened and no wire allowed out of crimping area
(6)	Wire strip length	5.5-6.0 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	
# 12	C6201F-T-H	3.25 (Max)	1.90~2.00	/		15.9(Min.)
# 14	C6201F-T-E	2.50 (Max)	1.50~1.60			11.3(Min.)
# 16			1.45~1.55			9.08(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.

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6. PERFORMANCE
6.1 ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
6-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV Max. 10mA.	Tin: 10 mΩ Gold: 5 mΩ
6-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground.	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

6.2 MECHANICAL PERFORMANCE

Test Description		Procedure		Requirement
6-2-1	Insertion & Withdrawal Force	Insert and withdraw connectors at the speed rate of 25 ± 3 mm/minute.Per EIA-364-37.		(Per Pin) Tin plated: Insertion Force: 0.70kgf Max. Withdrawal Force: 0.66kgf Max. Gold plated: Insertion Force: 0.61kgf Max. Withdrawal Force: 0.57kgf Max.
6-2-2	Crimping Pull Out Force	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25 ± 3 mm/minute.	AWG #12	15.9(Min.)
			AWG #14	11.3(Min.)
			AWG #16	9.08(Min.)
6-2-3	Locking Strength	Apply axial pull out force at the speed rate of 25 ± 3 mm/minute on the terminal assembled in the housing.		6.90kgf Min.



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6-2-4	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. Per EIA-364-29.		w/o TPA: 3.67kgf Min. with TPA: 3.73kgf Min.
6-2-5	Header Terminal Retention Force	Apply axial push force at the speed rate of 25 ± 3 mm/minute.		1.0kgf Min.
6-2-6	Durability	Mate connectors 25 cycles for tin plated and 200 cycles for gold plated connectors at a maximum rate of 10 cycles per minute. Per EIA-364-09	Contact Resistance	Tin: 20 mΩ Gold: 10 mΩ
6-2-7	Vibration	Mate connectors and vibrate per EIA-364-28 test condition VII-D Tin: 15 minutes each axis. Gold: 1.5 hours each axis.	Appearance	No Damage
			Contact Resistance	Tin: 20 mΩ Gold: 10 mΩ
			Discontinuity	1μsec. Max.
6-2-8	Mechanical Shock (Tin Plated only)	USCAR-2 Rev 6 per sequence M per section 5.9.6, Classification: V1, S1, T2 Shock: 35 G's, 10 shocks per axis Vibration: 8 hours per axis, 1.81 g	Appearance	No Damage
			Contact Resistance	Tin: 20 mΩ Gold: 10 mΩ
			Discontinuity	1μsec. Max.

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6.3 ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
6-3-1	Temperature Rise	Carrying rated current load.	Temperature Rise	30°C Max.
6-3-2	Thermal Shock	High temperature: $85 \pm 3^{\circ}\text{C}$ Time: 30 minutes Low temperature: $-55 \pm 3^{\circ}\text{C}$ Time: 30 minutes Test round: 10 Per EIA-364-32 method A, condition 1	Appearance	No Damage
			Contact Resistance	Tin: 20 mΩ Gold: 10 mΩ
6-3-3	Heat Resistance	105 \pm 2°C, 240 hours Gold Plated Only: 120 \pm 2°C, 1200 hours Per EIA-364-17 Method A.	Appearance	No Damage
			Contact Resistance	Tin: 20 mΩ Gold: 10 mΩ
6-3-4	Temperature and humidity cycle	Temperature and humidity: 25°C 80%RH Temperature and humidity: 65°C 50%RH ramp time: 0.5hr dwell time: 1hr Test round: 24	Appearance	No Damage
			Contact Resistance	Tin: 20 mΩ Gold: 10 mΩ
6-3-5	Thermal Cycling	Per EIA-364-1000.01 Test Group 5: Cycle mated connector between 15°C \pm 3°C and 85°C \pm 3°C as measured on the part. Ramps should be a minimum of 2°C per minute, and dwell times should insure contacts reach the temperature extremes (minimum of 5 minutes). Humidity is not controlled. Perform 500 cycles.	Appearance	No Damage
			Contact Resistance	Tin: 20 mΩ Gold: 10 mΩ
6-3-6	Solderability	Soldering Time: 5 \pm 0.5 sec. Solder Temperature: 240 \pm 5°C	Solder Wetting	95% of immersed area must show no voids in
6-3-7	Resistance to Soldering Heat	Normal materials Soldering Time: 3~5 sec. Solder Temperature: 250 \pm 5°C High temperature resistant materials Soldering Time: 3~5 sec. Solder Temperature: 260 \pm 5°C	Appearance	No Damage