

ENGINEERING  DEPT.	PRODUCT SPECIFICATION  For CBRQ Series 0.8mm Board to Board Connector	SPEC.NO.: SPCB070A
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1. SCOPE:

This specification contains the test requirement of subject connectors when tested under the condition and below standards base on CviLux test procedure

2. APPLICABLE STANDARDS:

EIA-364

Test methods for electrical connectors

3. APPLICABLE SERIES NO.: CBRQ Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

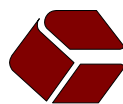
See attached drawings

6. ACCOMMODATED P.C.BOARD

1.6 mm (.063")

CviLux

REVIEWED : Lawrence APPROVED : Keny VERIFIED : Annie .



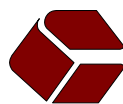
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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		Working Voltage: Less than 36 Volts AC (per pin) Voltage: 50 Volts AC (per pin) Current: 0.5 Amperes (per pin)
7.2	Contact resistance	Dry circuit of DC 20 mV max.,100 mA max.	70 m $\Omega$ Max.(initial) per contact 20 m $\Omega$ Max. Change allowed
7.3	Dielectric strength	When applied AC 250 V 1minute between adjacent terminal. ( EIA-364-20 )	No breakdown Current leakage< 1 mA
7.4	Insulation resistance	Unmated connectors, applied DC 250 V between adjacent terminals. ( EIA-364-21 )	1000 M $\Omega$ Min.

8. MECHANICAL PERFORMANCE:

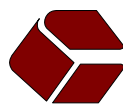
	ITEM	TEST CONDITION	REQUIREMENT
8.1	Mating / Unmating Forces	Operation Speed: 25.4 $\pm$ 3 mm/minute. Measure the force required to mate/unmate connector. (EIA-364-13)	Mating Force: 2.10Kgf Max. Unmating Force: 0.15Kgf Min.
8.2	Durability	The sample connectors should be mounted in the tester and fully mated and unmated the number of 30cycles specified at the rate of 25.4 $\pm$ 3 mm/min. (EIA-364-09)	Mating Force: 1.65Kgf Max. Unmating Force: 0.12Kgf Min. Contact resistance: To pass pare7-2
8.3	Pin / Base retention force	Apply axial pull out force at the speed rate of 25.4 $\pm$ 3 mm/minute.	0.15 Kgf Min.
8.4	Fitting Nail / Base retention force	Apply axial pull out force at the speed rate of 25.4 $\pm$ 3 mm/minute.	0.15 Kgf Min.



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9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Mate connector: measure the temperature rise at rated current until temperature stable. The ambient condition is still air at 25°C ( EIA-364-70 Method 1 Condition 1)	30°C Max. Change allowed
9.2	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. (EIA-364-28 Condition I)	Discontinuity: 1μs Max
9.3	Mechanical Shock	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. (EIA-364-27, test condition A)	Discontinuity: 1μs Max Contact resistance: To pass para 7-2
9.4	Solder ability	Subject the test area of contacts into the flux for 5-10 sec. And then into solder bath, Temperature: 245 ±5°C, Time: 4~5 sec. (EIA-364-52)	Solder able area shall have minimum of 95% solder coverage.
9.5	Resistance to soldering heat	Pre Heat : 150°C~180°C, 60~120sec. Heat : 230°C Min., 40sec Min. Peak Temp. : 260°C Max, 10sec. Max. Refer reflow temperature profile (para 11)	Appearance: No damage
9.6	Temperature life	Subject mated connectors to temperature life at 85°C for 96 hours. (EIA-364-17, Test condition A)	Appearance: No damage Contact resistance: To pass para 7-2 Dielectric strength: To pass para 7-3 Insulation resistance: To pass para 7-4

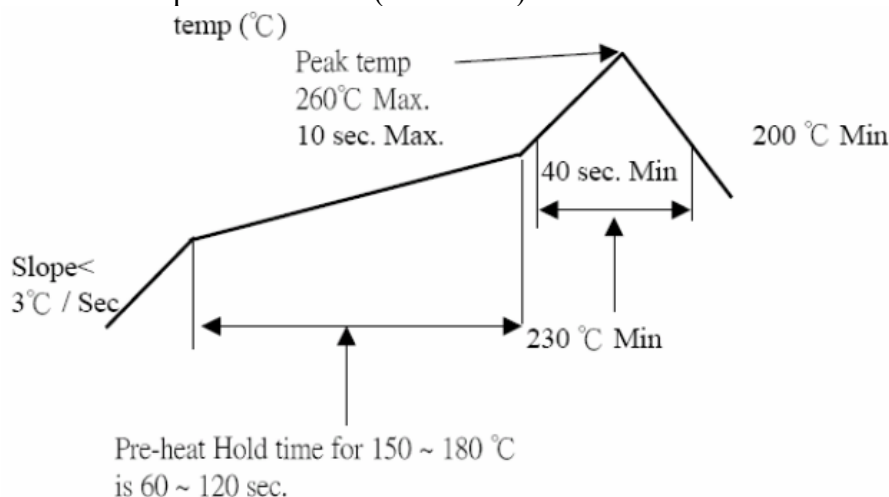


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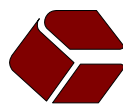
	ITEM	TEST CONDITION	REQUIREMENT
9.7	Thermal Shock	Mate module and subject to follow condition for 5 cycles. 1 cycles consist of: (1) -40 +0/-3 °C, 30 min. (2) Room temp. 10-15 min. (3) +85 +3/-0 °C, 30 minutes (4) Room temp. 10-15 min. (EIA-364-32, test condition A)	Appearance: No damage
9.8	Humidity	Mated Connector, 40 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested. (EIA-364-31,Condition A, Method II)	Appearance: No damage Contact resistance: To pass para 7-2 Dielectric strength: To pass para 7-3 Insulation resistance: To pass para 7-4
9.9	Salt spray	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C for 8 hours. (EIA-364-26,Test condition B)	Appearance: No damage Contact resistance: To pass para 7-2
9.10	Hand Soldering Temperature Resistance	Use a soldering iron that has a sufficient head capacity and high stability of temperature. The tip of the iron should be shaped so as not to touch the part body directly. Temperature : 360±10°C 3s	Appearance: No damage

10. OPERATING TEMPERATURE RANGE: -40°C to +80°C

11. Recommended IR Reflow Temperature Profile(Lead-Free):



12. PRODUCT QUALIFICATION TEST SEQUENCE



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Test or Examination	Test Group									
	1	2	3	4	5	6	7	8	9	
	Test Sequence									
Examination of Product				1、7	1、6	1、4				
Contact Resistance		1、5	1、4	2、10	2、9	2、5				
Insulation Resistance				3、9	3、8					
Dielectric strength				4、8	4、7					
Temperature rise	1									
Mating / Unmating Forces		2、4								
Durability		3								
Vibration			2							
Shock (Mechanical)			3							
Thermal Shock				5						
Humidity				6						
Temperature life					5					
Salt Spray						3				
Solder ability							1			
Pin / Base retention force								1		
Fitting Nail / Base retention force								2		
Resistance to Soldering Heat									1	
Quantities of Samples	2	4	4	4	4	4	2	4	2	