ATTEND Connect to Your Success	SERIES: 104D-TCA0-R06
	FILE: 104D-TCA0-R06_spec
SPECIFICATION AND PERFORMANCE	DATE: 2014/01/09

Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of 104D-TCA0-R06.

Performance and Descriptions:

The product is designed to meet the electrical, mechanical and environmental performance requirements specification. Unless otherwise specified, all tests are performed at ambient environmental conditions.

RoHS:

All material in according with the RoHS environment related substances list controlled.

MATERIAL AND FINISH		
INSULATOR	**Material**	Plastic Body : LCP+35%GF, Color Black. Slider : LCP+35%GF, Color Black.
CONTACT	**Material**	Contact : Phosphor Bronze Alloy (C5210R–EH) Switch A/C :Phosphor Bronze Alloy (C5210R–EH) Hold down :Phosphor Bronze Alloy (C5191R–H)
	Plating	Contact area: Gold 10 micro inches (Min.) Solder area: Gold flash All under-plated Ductile Nickel 50 micro inches (Min.) Switch A/C & Hold down: Contact area: Gold flash,Solder area: Gold flash All under-plated Ductile Nickel 50 micro inches (Min.)

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SHELL OR COVER	**Material**	Shell :SUS304R-3/4 H Latch : SUS304R-3/4 H Spring : Piano Wire Drag Link : SUS304
	Plating	
RATING	Rating Current: 0.5A (Max.)/(1PIN) Rating Voltage: 100V AC/DC Operating Temperature: -25℃ to +90℃ Storage Temperature: -40℃ to +90℃	

ELECTRICAL		
Item	**Requirement**	**Test Condition**
Contact Resistance	Initial: 80 mΩ (Max)	Solder connectors on PCB and mate them together, measure by applying closed circuit current of 10mA maximum at open circuit voltage of 20mV (max). (JIS C5402 5.4)
Insulation Resistance	Initial: 1,000MΩ(Min).	Apply 500V DC between adjacent contacts, or contact and ground. (MIL-STD-202 METHOD 302)
Dielectric Withstanding Voltage	No breakdown	Mate connectors; apply 500V AC(rms.) between two adjacent for 1minute. (Trip current:1mA) (MIL-STD-202 METHOD 301)

MECHANICAL		
Item	**Requirement**	**Test Condition**
Contact Retention Force	2.5N per pin (Min.)	Place a connector on the push-pull machine, then apply a force on a contact head and push the contact to the opposite direction of the contact insertion at the speed of 25 ± 3mm/min. (EIA364-29)

Durability	Contact Resistance: 100mΩ(Max) No Damage	Solder connectors on PCB, then place them on the pull-push machine, and repeat mating and un-mating 10,000cycles repeatedly at a rate of 400~600 cycles/hour. (EIA364-09)
Vibration	Finish 1. No electrical discontinuity more than 0.1μs. 2 .No Damage 3.Contact Resistance 100mΩ(Max)	Mate dummy card and subject to the following vibration conditions, for a period of 30 minutes in each of 3 mutually perpendicular axis, passing DC 1 mA during the test. Amplitude: 1.52 mm P-P or 19.6 m/s_2 Frequency: 10-55-10Hz Shall be traversed in 1minute. (MIL-STD-202 METHOD 201)
Shock	Finish 1. No electrical discontinuity more than 0.1μs. 2 .No Damage 3.Contact Resistance 100mΩ(Max)	Solder connectors on PCB and mate them together, subject to he following shock conditions, 3 shocks shall be period along 3 mutually perpendicular axis, passing DC 1mA current during the test. 1 axis, plus-minus direction, core 3 times. (total:18times) 490m/s_2 (MIL-STD-202 METHOD 213)
Card Insertion / Eject Force	9.8N(Max)	Push the card at the speed rate 25 ± 3 mm/minute.
Card Release Force	4N+/-1N	From the state of the card lock, Pull the card at the speed rate 25 ± 3 mm/minute.
Push in strength	No Damage	The card inserted in positive and the opposite direction and the load of 30N is added

ENVIRONMENTAL		
Item	**Requirement**	**Test Condition**
Temperature Cycle	Finish 1.Contact Resistance 100mΩ(Max) 2.Insulation Resistance 100MΩ(Min)	Stage Temp Time t1 -55°C 30 min t2 -55~+90 °C 3 min t3 + 90 °C 30 min t4 +90~-55 °C 3 min Test time: 6 cycles (JIS C0025)
Heat Resistance	Finish 1. Contact Resistance: 100mΩ(Max) 2.Insulation Resistance 100MΩ(Min)	Solder connectors on PCB and mate them together, expose to 90 ± 2℃for 96hrs. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 of 2hrs, after which the specified measurements shall be performed. (MIL-STD-202 METHOD 108)
Cold Resistance	Finish 1. Contact Resistance: 100mΩ(Max) 2. Insulation Resistance 100MΩ(Min)	Solder connectors on PCB and mate them together, expose to -55 ± 3℃for 96hrs. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 of 2hrs, after which the specified measurements shall be performed. (EIA364-59)
Humidity	Finish 1. Contact Resistance: 100mΩ(Max) 2. Insulation Resistance 100MΩ(Min)	Humidity storage at +40ºC with 90~95% RH for 96 hours. Upon completion of the exposure period, the test specimens shall be conditions for 1 of 2 hrs, then 10 mating cycles while. (EIA364-31)
Salt Spray	Finish 1. Contact Resistance: 100mΩ(Max)	5 ± 1% salt solutions, at 35 ± 2ºC duration 48 hours. Connectors detached (MIL-STD-1344)

SOLDER ABILITY

Item	Requirement	Test Condition
Solder ability	95%of immersed area must show no voids , pin holes.	Dip solder tails into the molten solder(held at 230±5℃) up to 0.5mm from the tip of tails for 3±0.5 seconds. (MIL-STD-202 METHOD 208)
Resistance to soldering heat	No melting, cracks or functional damage allowed	All connectors designed for PCB soldering within this specification must be able to withstand the heat from solder oven according to the graph below. The cycle should be repeated twice. (MIL-STD-202 METHOD 210)

Peak temperature: 260℃
Soldering temperature: 230℃
Preheating temperature: 150-180℃