

SPECIFICATION AND PERFORMANCE

Series	123A 85H Series	File	123A-85H Series_SPEC_4	Date	2019/06/11
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Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of

P/ N	Descriptions
123A-85AA0	M2 CONNECTOR, A KEY, 0.5 PITCH, H8.5mm
123A-85BA0	M2 CONNECTOR, B KEY, 0.5 PITCH, H8.5mm
123A-85EA0	M2 CONNECTOR, E KEY, 0.5 PITCH, H8.5mm
123A-85MA0	M2 CONNECTOR, M KEY, 0.5 PITCH, H8.5mm

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.

MATERIALS		
NO.	PART NAME	DESCRIPTION
1	Housing	LCP E6808, UL94V-0, Black
2	Contact	Phosphor Bronze C5210, gold flash plating on contact & solder area, 50u" min. nickel under-plating over all
3	Hold down	Brass C2680, 50u"min. matte tin plating under 50u" min. nickel plating

RATING	
Rated Voltage	50VAC
Rated Current	0.5A
Operating Temperature	-40°C TO +85°C
Storage Temperature	-40°C TO +85°C
Durability	60 CYCLES

ELECTRICAL		
Item	Requirement	Test Condition
Low Level Contact Resistance	Initial: 55mΩ max. After test: ΔR 20 mΩ max.	Subject mated contacts assembled in housing to closed circuit current of 100mA (max) at open circuit voltage of 20mV voltage (max.) EIA 364-23

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Insulation Resistance	500 MΩ Min.	Measured by applying 500V DC for 2 minutes between adjacent contacts of unmated connector. (EIA-364-21)
Dielectric withstanding Voltage	No breakdown	Apply [300V] AC (rms) for 1 minute between adjacent contacts of unmated connector. (EIA-364-20).

MECHANICAL

Item	Requirement	Test Condition
Mating Force/ Unmating Force	2.04Kgf(20N) Max	Operation Speed: [25.4] mm/min. Measure the force required to mate/unmate connector. (EIA-364-13)
Durability	No evidence of physical damage	Operation Speed: [500+/-50] cycle per hour. Durability Cycles : 60 Cycles (EIA-364-09).
Vibration	Appearance: no damage Discontinuity: 1 microsecond Max	15 Minutes in each of 3 mutually perpendicular Direction both mating halves should be rigidly fixed so as not to contribute to the relative motion of one contact against another. EIA-364-28 Test condition VII test condition letter D
Mechanical Shock	Appearance: no damage Discontinuity: 1 microsecond Max	Pulse width: 2msec Wave form : 285 G 3 strokes in X \ Y and Z axes by 2 direction (EIA-364-27)

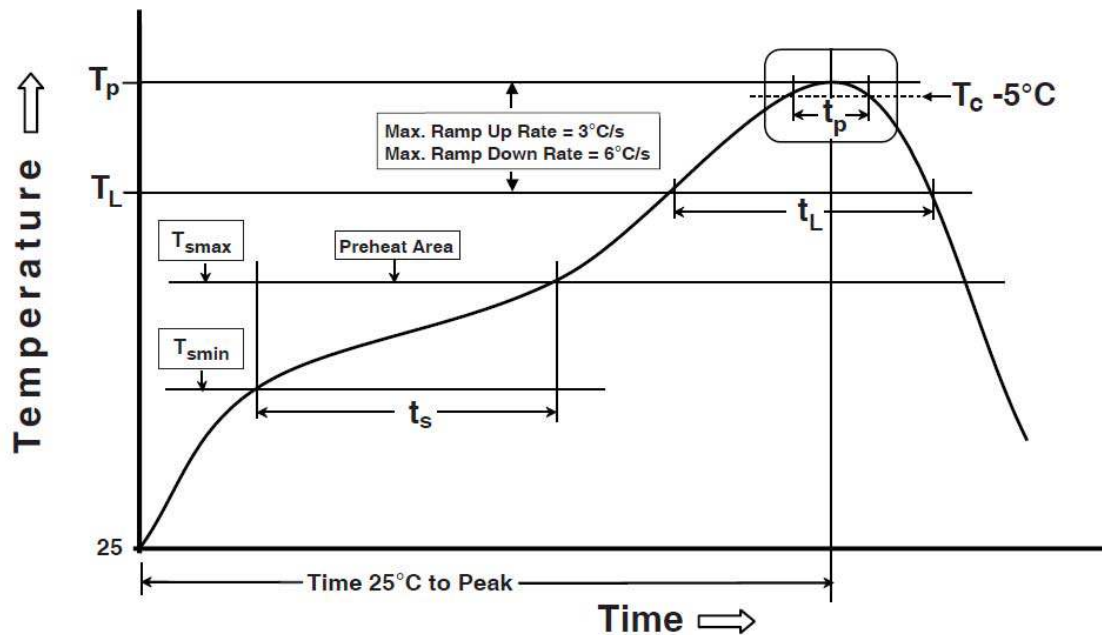
ENVIRONMENTAL

Item	Requirement	Test Condition
Solder ability	95% min. of solder area 10x the magnifying glass of view	Soldering time : 4~5 second Solder Temperature: 245±5°C (EIA-364-52)
Thermal Shock	No evidence of physical damage	Mated Connectors -55+/-3°C (30 min.), +85+/-2°C (30 min.) Perform this cycle, repeat 10 cycles (EIA-364-32)
Temperature Life	No evidence of physical damage	Mated Connector 105°C, 96 hours, (EIA-364-17)
Humidity	No evidence of physical damage	Subject mated Connectors to 96 hours at 40°C with 90~95% RH. (EIA-364-31)

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Salt Spray	No detrimental corrosion allowed in contact area and base metal exposed	Subject mated connectors to 35+/-2°C and 5+/-1% salt condition for 48hours. After test, rinse the sample with water and recondition the room temperature for 1 hour. (EIA-364-26B)
Mixed flowing gas	Contact Resistance $\Delta R = 20 \text{ m}\Omega$ Max.(Final)	Mated connectors, Duration: 120 hours (EIA-364-65, class IIA)
Resistance to Reflow Soldering Heat	No physical damage shall occur. Test Initial and final, Coplanarity of product shall meet requirements of applicable product drawing and specification.	Test connector on PCB Pre-heat: 150~180°C, 90±30sec. Heat: 230 °C Min, 30±10sec. Peak temp: 260 °C Max. 3~5sec.



Preheating temperature: $150 \sim 200^\circ\text{C}$, 60~120 seconds

Liquidus temperature (T_L): 217°C , 60~150 seconds

Peak temperature: 260°C

Time within 5°C of peak temperature (T_c): 255°C , 30seconds