

Module Product Quality Specifications

1 Scope

This specification describes the quality condition of Module Product specification.

Total quality of Module Product will express in this document and Module Product's specification and quality specification of mounted device's as VFD, touch switch panel, and so on.

2 Function

All function shall meet to description on Module Product Specification.

Please refer Module Product specification in detail.

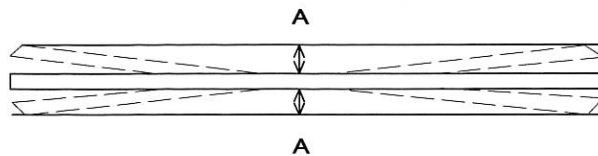
3 Outer Dimension

All quality shall meet to quality specification of mounted device.

Please refer mounted device's quality specification.

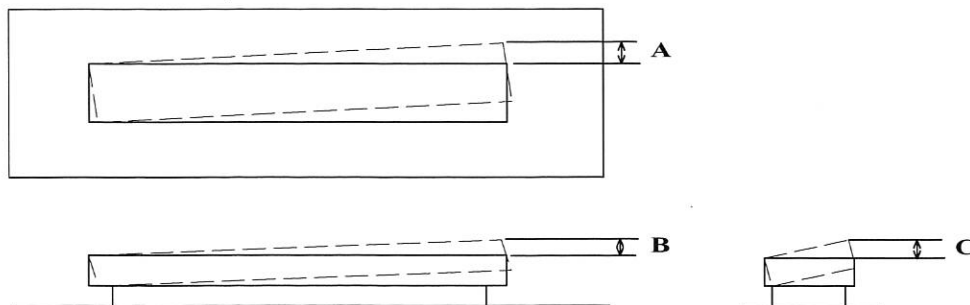
4 Tolerance

4.1 Wrap/Twist of PCB



PCB Length	Less than 200 mm	More than 200mm
Tolerance(A)	0.5mm MAX	0.7mm MAX

4.2 Slant of device assembly



length of PCB	Max tolerance		
	Less than 100 mm	100 to 200 mm	More than 200 mm
Direction A	0.5	0.8	1.0
Direction B	0.5	0.8	0.8
Direction C	0.5	0.5	0.5

4.3 Scratch of PCB

Without scratch which is caused of disconnection of circuit and strip of resist

4.4 Stain of PCB

Without stain except Flux.

4.5 Stain of Flux

This subject is applied washing type, only.
Without flux.

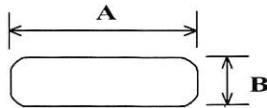
4.5 Conductive material on The PCB

/Soldering ball

Ball size should be less than 0.3 mm.

/Scattering of soldering

$A < 0.3$ mm and $B < 0.3$ mm is qualified.



/Other material should be nothing.

5 Soldering

5.1 Soldering Bridge.

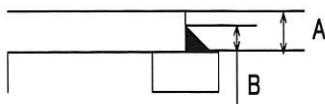
Without solder bridge

5.2 Soldering Condition.

Surface mount component

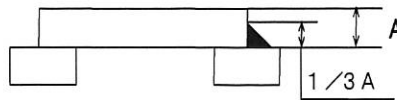
Case1: Chip thickness(A) is more than 1mm

Solder filet(B) is more than 0.5mm



Case2: Chip thickness(A) is less than 1mm

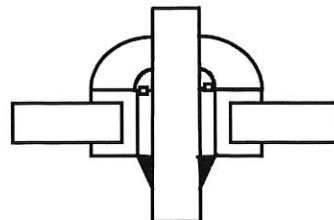
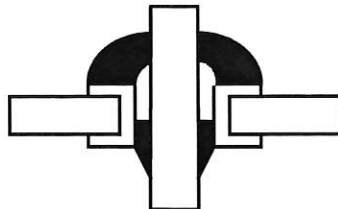
Solder filet is more than $1/3$ of Chip thickness



Discrete component

/Soldering on pad should be over 80%

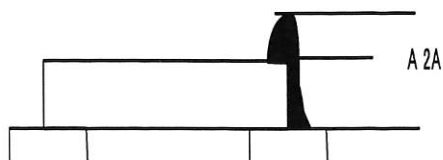
/Soldering in through hole should be more than $1/2$ of capacity.



5.3 Over soldering

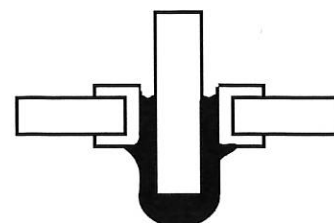
Surface mount component

Soldering high should be less than
thickness of chip.



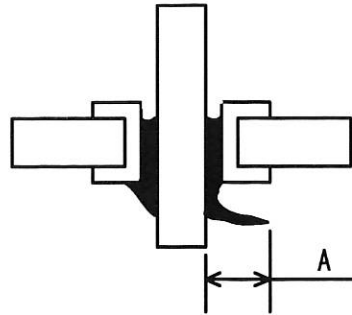
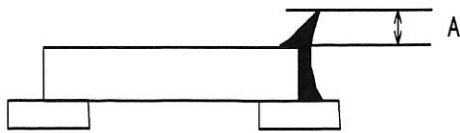
Discrete component

Top of lead should be able to watch



5.4 Soldering projection

Projection (A) should be less than 1.0 mm

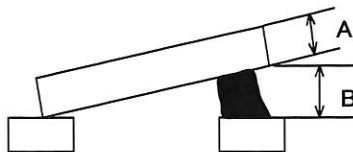


6 Mounting

6.1 Floating

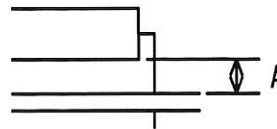
Surface mount component

Soldering volume (B) should be less than component thickness (A)



Discrete component

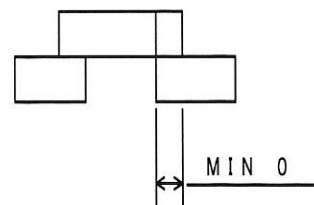
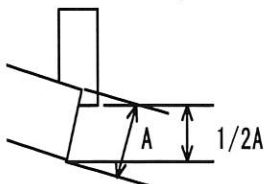
Component position(A) should be less than 1.0mm from PCB surface without component to use stopper



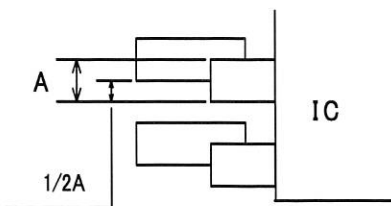
6.2 Positioning

Surface mount component

Position of chip on solder pad should be less than 1/2 width (A) of chip.

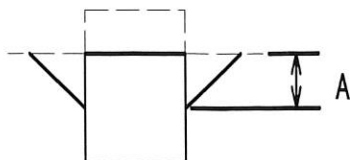


Component position (A) on solder pad should be less than 1/2 width of IC lead..



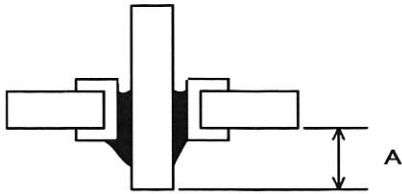
Discrete component

Component position(A) should be less than 1.0mm from normal position.



6.3 Lead pin length

Lead pin length(A) should be within 3.0mm from PCB surface



7 Limited Sample

If both side can not be clear about a certain quality, Will prepare a limited sample for its object what include both agreement.
After that, all goods shall meet limited sample.

8 Others

8.1 If there is difference between this specification and individual Module Product specification, Individual Module Product specification should be the first consideration.

8.2 If there is occurred something without description of this and other specifications, the subject shall be separately discussed and agreed upon between the Parties.