

Solder thickness evaluation はんだ厚みの評価

Evaluation condition

The samples are mounted on the substrate using metal masks of different thickness, and the effect of solder thickness is evaluated by the following evaluation items.

厚みの異なるメタルマスクを使用してサンプルを基板上に実装し、以下の評価項目ではんだ厚みの影響を評価する。

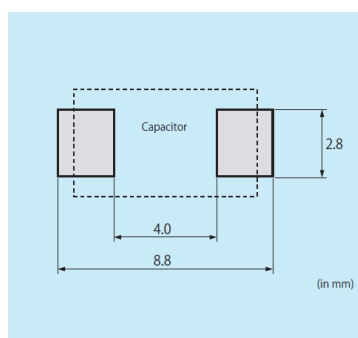
Sample;

Murata Global Part No	Size (mm)	Cap.	Cap. Tol.	Volt.
ECASD60J337M009KA0	7343	330 μ F	$\pm 20\%$	6.3V

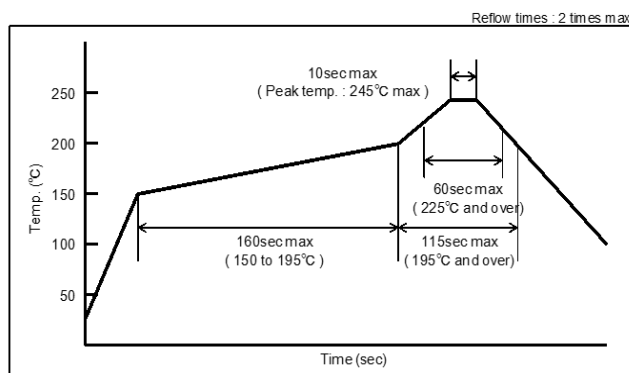
Metal Mask;
200 μ m
100 μ m
60 μ m

Solder; Lead Free Solder (Sn/3.0Ag/0.5Cu)
Particle size 25~36 μ m (for 200 μ m, 100 μ m)
15~26 μ m (for 60 μ m)

Land pattern;



Reflow profile; 2 times



in Air (for 200 μ m, 100 μ m)
in N₂ (for 60 μ m)

Evaluation items;

1. Solder Strength with Environmental Tolerance<Break>
 1. 端子電極固着力<限界>
2. Mechanical Shock Resistance
 2. 耐衝撃性
3. Vibration Resistance
 3. 耐振性

Results

There was no significant difference by solder thickness in each evaluation item.

各評価項目において、はんだ厚みによる著しい差はありませんでした。

Solder Strength with Environmental Tolerance<Break>

Murata Global Part No	Size (mm)	Cap.	Cap. Tol.	Volt.
ECASD60J337M009KA0	7343	330μF	±20%	6.3V

Test condition Relative evaluation of the effect of solder thickness by measuring the solder strength after Temp. Cycle test.

Temp. Cycle test

Minimum storage temp; -40°C ± 3°C

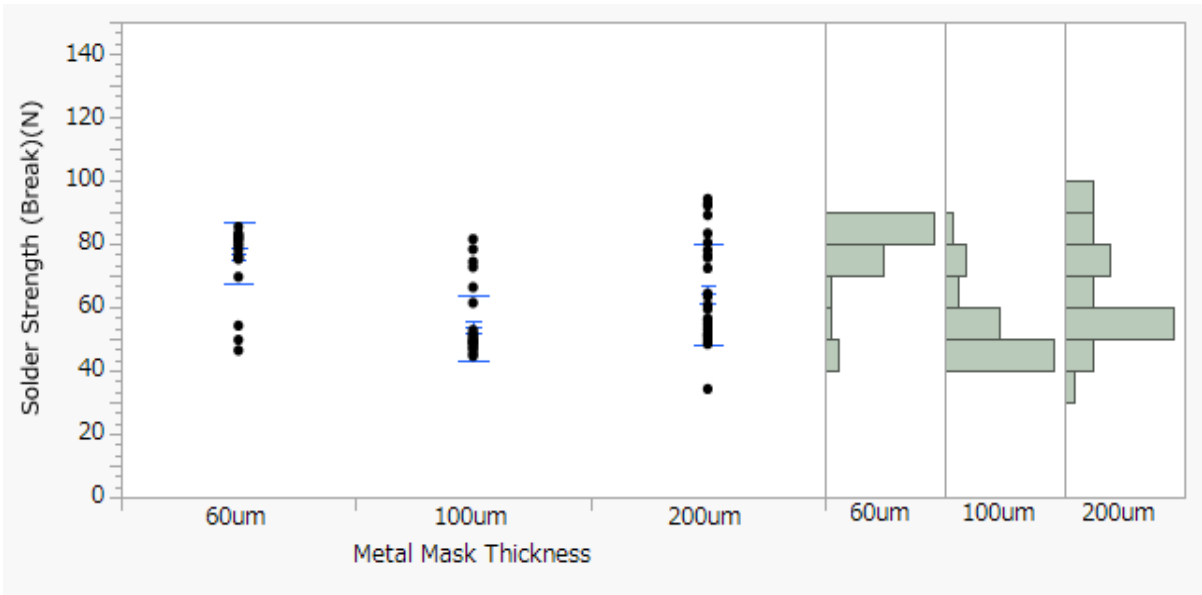
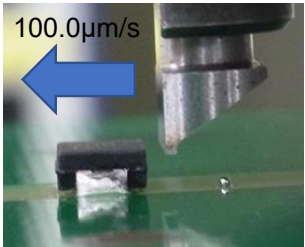
Maximum storage temp; +105°C ± 2°C

Storage Duration; 30min/each

Cycle; 200 times

Solder strength

Equipment; Bondtester (DAGE4000)



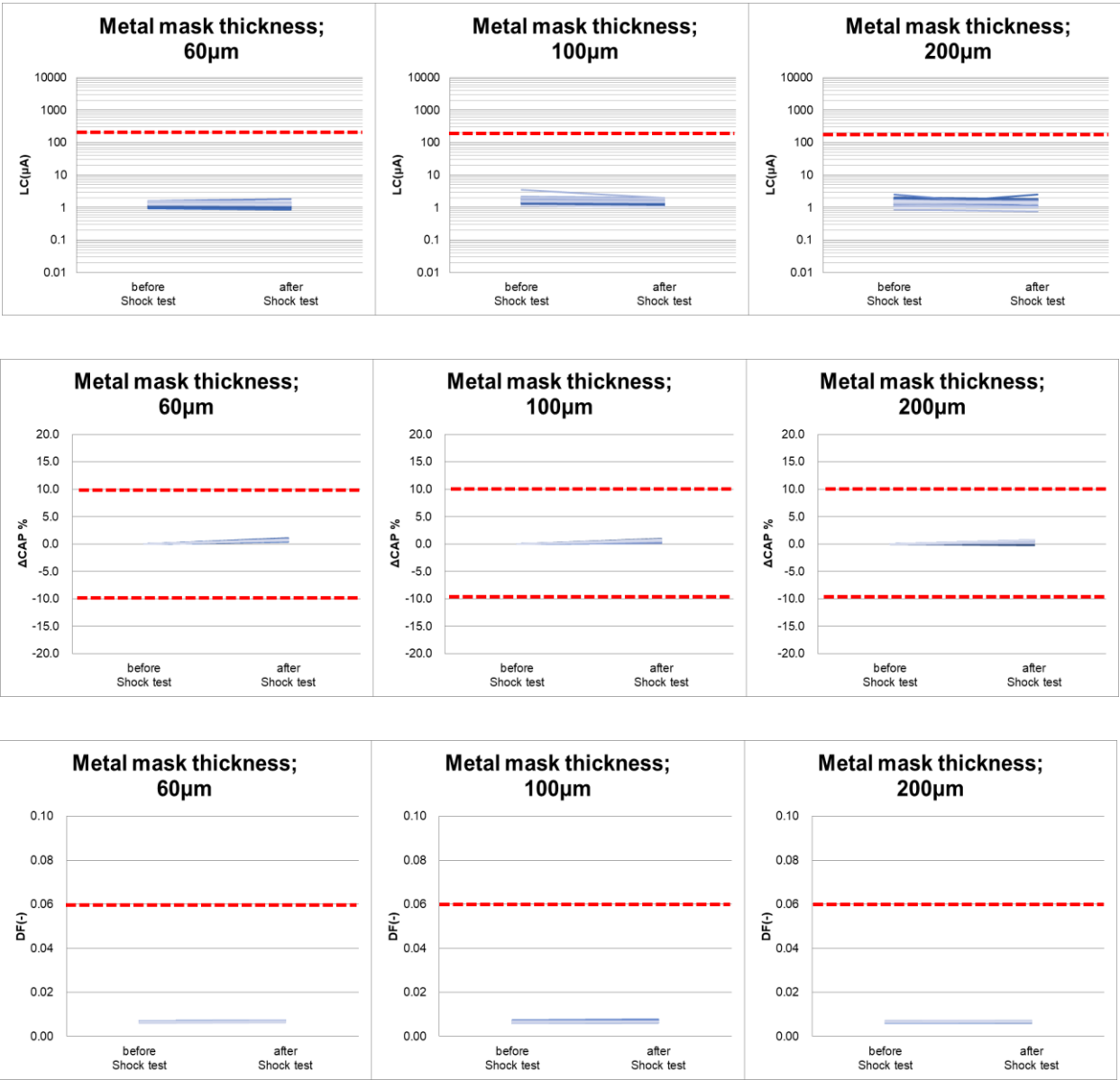
n=30

Mechanical Shock Resistance 耐衝擊性

Murata Global Part No	Size (mm)	Cap.	Cap. Tol.	Volt.
ECASD60J337M009KA0	7343	330μF	±20%	6.3V

Test condition

MIL-STD-202G Method 213. Condition C
Half-wave sine wave
Max acceralation: 1000m/s²、100G
keep time: 6ms
direction: X1,X2,Y1,Y2,Z1,Z2、3times/each direction
total: 18 times



----- Criteria
n=30

All measurement data are reference values.
Therefore, please approve our product specification or transact the approval sheet for product specification before ordering.
They are subject to change or our products in it may be discontinued without advance notice

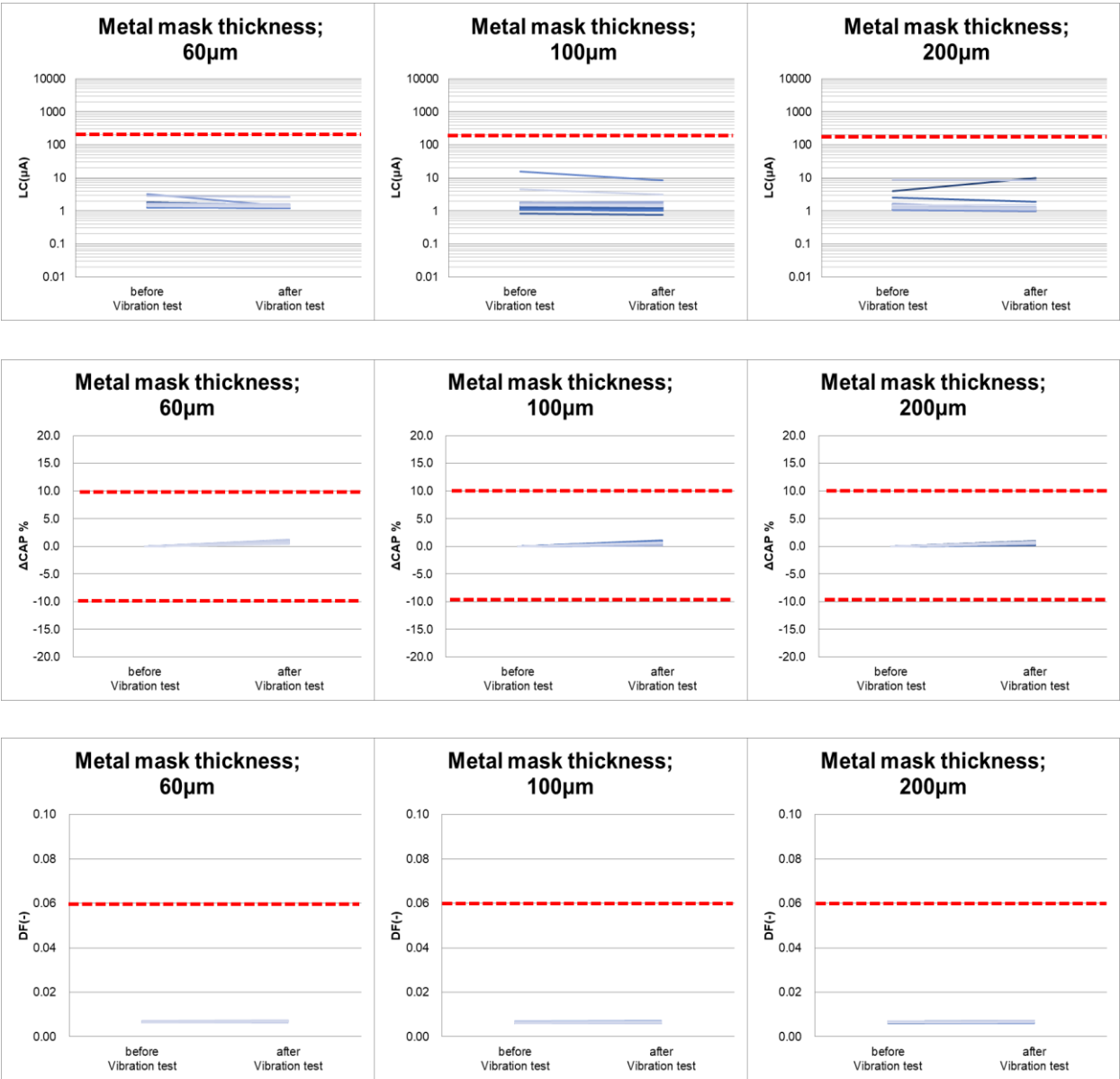
Vibration Resistance 耐振性



Murata Global Part No	Size (mm)	Cap.	Cap. Tol.	Volt.
ECASD60J337M009KA0	7343	330μF	±20%	6.3V

Test condition

MIL-STD-202G Method204
sine wave motion: 10~2000~10Hz
acceralation: 20G、total amplitude: 3mm
sweep time: 20min
direction: X,Y,Z、time:4hr/each direction、total 12hrs



----- Criteria
n=30

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