6.1.2 *Cleaning*

List the equipments used:

Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.

What are the controlling documents ?

Method	Document No.	Issue No.
Method	Document No.	Issue No.
Method	Document No.	Issue No.
Are all cleaning stages identified within the manufacturing sequence ?	YES/NO.*	

Are there controls for:

Chemical contamination ?	YES/NO.*	Document No.	Issue No.
Time/frequency ? (ultrasonic)	YES/NO.*	Document No.	Issue No.
Power/time/gas ? (plasma)	YES/NO.*	Document No.	Issue No.
Calibration ?	YES/NO.*	Document No.	Issue No.
Prevention of accidental adjustment ?	YES/NO.*		
Is there a maintenance procedure for the cleaning equipment?	YES/NO.*	Document No.	Issue No.
Do ESD precautions conform with CECC 00 015 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards ?	*YES/NO.**	*Document No.*	*Issue No.*

*delete as appropriate.

6.1.3 *Component Placement*

List the main equipments used:

Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.

Are substrates printed with solder paste ?	YES/NO.*	Document No.	Issue No.
Do screens have unique reference and revision control ?	YES/NO.*	Document No.	Issue No.
Is the number of prints/or wear allowed per screen monitored and recorded ?	YES/NO.*	Document No.	Issue No.
Is a usage log kept per machine ?	YES/NO.*	Document No.	Issue No.
Are there procedures for restricting adjustments by the operator ?	YES/NO.*	Document No.	Issue No.
Is lot traceability maintained on solder paste used ?	YES/NO.*	Document No.	Issue No.
Are thickness measurements carried out ?	YES/NO.*	Document No.	Issue No.

*delete as appropriate.

6.1.3 Component Placement, continued

Are components tinned prior to placement ?	YES/NO.*		
Are there controls for:			
Time/temperature ?	YES/NO.*	Document No.	Issue No.
Calibration ?	YES/NO.*	Document No.	Issue No.
Contamination ?	YES/NO.*	Document No.	Issue No.
Prevention of accidental adjustment ?	YES/NO.*	Document No.	Issue No.
Is automatic pick and place employed and are parameters defined (Collet, vaccuum, pressure etc.) ?	YES/NO.*	Document No.	Issue No.
Are pick and place machines regularly maintained ?	YES/NO.*	Document No.	Issue No.
Does this include vacuum pick-up nozzles ?	YES/NO.*		
Is software revision controlled ?	YES/NO.*		
Is there a Quality Assurance check on component orientation ?	YES/NO.*	Document No.	Issue No.
Do ESD precautions conform with EN 100015 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards ?	*YES/NO.**	*Document No.*	*Issue No.*

6.1.4 *Substrate Attach*

Are substrates attached to hardware (e.g. heatsinks) with epoxy preforms ?	YES/NO.*		
Are there controls for:			
Lot traceability ?	YES/NO.*	Document No.	Issue No.
Cure temp/time ?	YES/NO.*	Document No.	Issue No.
Are temperature settings protected from accidental adjustment ?	YES/NO.*		
Are devices protected from human contamination ?	YES/NO.*	Document No.	Issue No.
Is there a Quality Assurance check?	YES/NO.*	Document No.	Issue No.
Are substrates soldered into packages ?	YES/NO.*		
Are there controls for:			
Lot traceability ?	YES/NO.*	Document No.	Issue No.
Reflow time/temp ?	YES/NO.*	Document No.	Issue No.
Are temperature settings protected from accidental adjustment ?	YES/NO.*		
Are devices protected from human contamination ?	YES/NO.*	Document No.	Issue No.
Is there a Quality Assurance check ?	YES/NO.*	Document No.	Issue No.
If flux is used, is cleaning performed in a segregated cleaner ?	YES/NO.*	Document No.	Issue No.
Are products not actively being worked on stored under dry conditions ?	YES/NO.*		
Do ESD precautions conform with EN 100015 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are visual inspections performed to EN 165000-2 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards ?	*YES/NO.**	*Document No.*	*Issue No.*

*delete as appropriate.

6.1.5 *Soldering*

List equipment and type used:

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

List solders used:

Manufacturer. Type No. Composition. Use.

Manufacturer. Type No. Composition. Use.

Manufacturer. Type No. Composition. Use.

Manufacturer. Type No. Composition. Use.

Are there controls for the following:

Materials ?	YES/NO.*	Document No.	Issue No.
Contamination ?	YES/NO.*	Document No.	Issue No.
Temperature/time ?	YES/NO.*	Document No.	Issue No.
Stress evaluation ?	YES/NO.*	Document No.	Issue No.
Component limitations ?	YES/NO.*	Document No.	Issue No.
Is a usage log kept per equipment ?	YES/NO.*	Document No.	Issue No.
Prevention of accidental adjustment ?	YES/NO.*		
Do ESD precautions conform with EN 100015 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are visual inspections performed to EN 165000-2 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards ?	*YES/NO.**	*Document No.*	*Issue No.*

*delete as appropriate.

6.1.6 *Encapsulation*

List encapsulation equipment:

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

List encapsulants used:

Manufacturer. Type No. Use.

Manufacturer. Type No. Use.

Manufacturer. Type No. Use.

Manufacturer. Type No. Use.

Are there controls for lot traceability ?	YES/NO.*	Document No.	Issue No.
Are there controls for storage ?	YES/NO.*	Document No.	Issue No.
Do they include,			
Temperature range ?	YES/NO.*		
Expiration date ?	YES/NO.*		
Freezing limitations ?	YES/NO.*		
Do you mix encapsulants ?	YES/NO.*	Document No.	Issue No.
Does this include a new expiration date ?	YES/NO.*		
Do ESD precautions conform with EN 100015 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are visual inspections performed to CECC 65000-2 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards ?	*YES/NO.**	*Document No.*	*Issue No.*

*delete as appropriate.

6.1.7 *Rework*

List equipment used:

Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.

Are there procedures for controlling rework ?	YES/NO.*	Document No.	Issue No.
		Document No.	Issue No.
Do they include,			
Definitive statement on what is/is not reworkable ?	YES/NO.*		
Visual criteria ?	YES/NO.*		
Traceability ?	YES/NO.*		
Number/area of permissible reworks per substrate ?	YES/NO.*		
Restriction of heat to localised areas ?	YES/NO.*		
*Are rework limitations in accordance with **2.1.6** of EN 165000-1 ?*	*YES/NO.**	*Document No.*	*Issue No.*
Are visual inspections performed in accordance with EN 165000-2 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards ?	*YES/NO.**	*Document No.*	*Issue No.*

*delete as appropriate.

6.1.8 *Marking*

List equipment used:

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Manufacturer. Type Serial/Plant No.

Are there controls for the materials used ? YES/NO.* Document No. Issue No.

Do they include,

Storage conditions? YES/NO.*

Expiration date? YES/NO.*

Cure temperature/time? YES/NO.*

Are resistance to solvents evaluations performed ? YES/NO.* Document No. Issue No.

Do screens have unique reference and revision control ? YES/NO.* Document No. Issue No.

Is the number of prints/wear allowed per screen monitored and recorded ? YES/NO.* Document No. Issue No.

Is a usage log kept per machine ? YES/NO.* Document No. Issue No.

Is laser marking employed ? YES/NO.*

Is software revision controlled ? YES/NO.* Document No. Issue No.

Do ESD precautions conform with EN 100015 ? YES/NO. Document No. Issue No.*

Are the appropriate staff formally trained on procedures, equipment and visual standards ? YES/NO. Document No. Issue No.*

*delete as appropriate.

6.2 Chip and Wire Assembly

6.2.1 *Kitting*

Is traceability maintained to incoming inspection lots ?	*YES/NO.**	*Document No.*	*Issue No.*
Is drawing and substrate revision status recorded ?	YES/NO.*	Document No.	Issue No.
Is there a procedure to ensure that any surplus parts are returned to the bonded stores ?	YES/NO.*	Document No.	Issue No.
Are there procedures for handling bars die ?	YES/NO.*	Document No.	Issue No.
Do they include,			
Opening of waffle packs?	YES/NO.*		
Protection from human contamination?	YES/NO.*		
Is there a Quality Assurance check?	YES/NO.*	Document No.	Issue No.
Do ESD precautions conform with EN 100015 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards.	*YES/NO.**	*Document No.*	*Issue No.*

*delete as appropriate.

6.2.2 *Cleaning*

List the equipments used:

Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.

What are the controlling documents ?

Method	Document No.	Issue No.
Method	Document No.	Issue No.
Method	Document No.	Issue No.

Are all cleaning stages identified within the manufacturing sequence ?	YES/NO.*		
Are there controls for:			
Chemical contamination ?	YES/NO.*	Document No.	Issue No.
Time/frequency (ultrasonic) ?	YES/NO.*	Document No.	Issue No.
Precludes bonded devices ?	YES/NO.*	Document No.	Issue No.
Power/time/gas (plasma) ?	YES/NO.*	Document No.	Issue No.
Calibration ?	YES/NO.*	Document No.	Issue No.
Are equipment controls protected from accidental adjustment ?	YES/NO.*		
Is there a maintenance procedure for the cleaning equipment?	YES/NO.*	Document No.	Issue No.
Do ESD precautions conform with EN 100015 ?	*YES/NO.**	*Document No.*	*Issue No.*
Are the appropriate staff formally trained on procedures, equipment and visual standards ?	*YES/NO.**	*Document No.*	*Issue No.*

*delete as appropriate.

6.2.3 *Component Placement*

List the main equipments used:

Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.
Manufacturer.	Type	Serial/Plant No.

Are components epoxy attached ? YES/NO.*

List Epoxies used:

Type No.	Conductive/Non conductive*
Type No.	Conductive/Non conductive*
Type No.	Conductive/Non conductive*
Type No.	Conductive/Non conductive*

Is epoxy screen printed ?	YES/NO.*	Document No.	Issue No.
Do screens have unique reference and revision control ?	YES/NO.*	Document No.	Issue No.
Is the number of prints or wear allowed per screen monitored and recorded ?	YES/NO.*	Document No.	Issue No.
Is a usage log kept per machine ?	YES/NO.*	Document No.	Issue No.

*delete as appropriate.