

# PROCESS QUALITY CONTROL

FC-255  
No.C-9901-ASE-1

2000/8/29

SEIKO EPSON Corp.  
Quartz Device Division

*[Signature]* *M. Nagai*

Manufacturing process chart		No.	Section In Charge	Standards	Inspection Control Item	Inspection Methods	Instruments	Record
	Crystal	1	Inspection Section (INA Plant QA)	Purchasing Specification Incoming Inspection Standard	Appearance Dimension	Sampling Sampling	Visual Inspection Tool Microscope	In-coming Inspection Data Sheet
	Base,Lid	2	Production Section	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	In-coming Inspection	3	Production Section	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	Base	4	Production Section	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	Lid	5	Production Section	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
		6	Production Section	Manufacturing Instruction Sheet	Frequency	100% Inspection	Frequency Adjustment Machine	Data Sheet
		7	Production Section	Manufacturing Instruction Sheet	Appearance Marking Strength	100% Inspection Sampling	Microscope Rubbing Test	Process Data Sheet Data Sheet
		8	Production Section	Manufacturing Instruction Sheet	Frequency Crystal Impedance Appearance	100% Inspection 100% Inspection 100% Inspection	Characteristics Inspection Machine Microscope	Process Data Sheet
		9	Inspection Section	Specification Outgoing Inspection Standard	Electrical Characteristics Appearance Dimension	Sampling Sampling Sampling	Measuring Equipment Microscope Tool Microscope	Outgoing Inspection Data Sheet
		10	Production Control Section	Packing Instruction Daily Shipping List	Customers Type Quantity			Shipment List

**PROCESS QUALITY CONTROL**

FC-255  
No.C-9901-AAE-1

2004/2/27

SEIKO EPSON Corp.  
Quartz Device Division

Manufacturing process chart		No.	Section In Charge	Standards	Inspection Control Item	Inspection Methods	Instruments	Record
	Crystal	1	Inspection Section (INA Plant QA)	Purchasing Specification Incoming Inspection Standard	Appearance Dimension	Sampling Sampling	Visual Inspection Tool Microscope	In-coming Inspection Data Sheet
	Base, Lid	2	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	1 In-coming Inspection	3	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	2 Crystal Setting	4	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	3 Mounting	5	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	Base	6	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Frequency	100% Inspection	Frequency Adjustment Machine	Data Sheet
	Lid	7	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance Marking Strength	100% Inspection Sampling	Microscope Rubbing Test	Process Data Sheet Data Sheet
	4 Lid Sealing	8	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Frequency Crystal Impedance Appearance	100% Inspection 100% Inspection 100% Inspection	Characteristics Inspection Machine Microscope	Process Data Sheet
	5 Hermetic Sealing	9	SUB-CONTRACTOR	Specification Outgoing Inspection Standard	Electrical Characteristics Appearance Dimension	Sampling Sampling Sampling	Measuring Equipment Microscope Tool Microscope	Outgoing Inspection Data Sheet
	6 Frequency Adjustment	10	SUB-CONTRACTOR	Packing Instruction Daily Shipping List	Customers Type Quantity	---	---	Shipment List
7 Marking								
8 Finish Products Inspection & Taping								
9 Outgoing Inspection								
10 Packing								

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2004/1/5

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Manufacturing process chart		No.	Section In Charge	Standards	Inspection Control Item	Inspection Methods	Instruments	Record
	1	Inspection Section (INA Plant QA)	Purchasing Specification Incoming Inspection Standard	Appearance Dimension	Sampling Sampling	Visual Inspection Tool Microscope	In-coming Inspection Data Sheet	
	2	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet	
	3	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet	
	4	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet	
	5	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet	
	6	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Frequency	100% Inspection	Frequency Adjust- ment Machine	Data Sheet	
	7	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance Marking Strength	100% Inspection Sampling	Microscope Rubbing Test	Process Data Sheet Data Sheet	
	8	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Frequency Crystal Impedance Appearance	100% Inspection 100% Inspection 100% Inspection	Characteristics In- spection Machine Microscope	Process Data Sheet	
	9	SUB-CONTRACTOR	Specification Outgoing Inspection Standard	Electrical Characteristics Appearance Dimension	Sampling Sampling Sampling	Measuring Equipment Microscope Tool Microscope	Outgoing Inspection Data Sheet	
	10	SUB-CONTRACTOR	Packing Instruction Daily Shipping List	Customers Type Quantity	--- --- ---	---	Shipment List	

**PROCESS QUALITY CONTROL**

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SEIKO EPSON Corp.  
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Manufacturing process chart	No.	Section In Charge	Standards	Inspection Control Item	Inspection Methods	Instruments	Record
	1	Inspection Section (INA Plant QA)	Purchasing Specification Incoming Inspection Standard	Appearance Dimension	Sampling Sampling	Visual Inspection Tool Microscope	In-coming Inspection Data Sheet
	2	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	3	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	4	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	5	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance	100% Inspection	Microscope	Process Data Sheet
	6	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Frequency	100% Inspection	Frequency Adjust- ment Machine	Data Sheet
	7	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Appearance Marking Strength	100% Inspection Sampling	Microscope Rubbing Test	Process Data Sheet Data Sheet
	8	SUB-CONTRACTOR	Manufacturing Instruction Sheet	Frequency Crystal Impedance Appearance	100% Inspection 100% Inspection 100% Inspection	Characteristics In- spection Machine Microscope	Process Data Sheet
	9	SUB-CONTRACTOR	Specification Outgoing Inspection Standard	Electrical Characteristics Appearance Dimension	Sampling Sampling Sampling	Measuring Equipment Microscope Tool Microscope	Outgoing Inspection Data Sheet
	10	SUB-CONTRACTOR	Packing Instruction Daily Shipping List	Customers Type Quantity	---	---	Shipment List