

HIPRO
PMP (PROCESS MANAGEMENT PLAN)

MODEL :YO_0B012A03	Supplier : HIPRO ELECTRONIC PUBLIC COMPANY LIMITED	DOCUMENT CENTER 2001.3.20	Control Location		PAGE:2	REV:0	
	Facility : CHINA		- In-Process - Final Inspection				
			Plan Effective Date:3/16/2001		DOC NO:I-ENG-77		
Process	Control Points	Methods				Frequency	Reactions if out of control
		Control limits	Evaluation	Responsibility	Sample size		
Hand Insertion	BOM	Pilot run	Check List	IPQC	5	Once/day and Change model	Find Root cause problem
	ESD - Wrist strap	Pass/Fail	Check List	IPQC	100%	Once/day	Replace
Wave Solder	Solder temp.	240~250 Deg c	X-R Chart	Engineering	100%	Once/2Hrs	Adjust,stop operation
	Preheat temp.	250~500 Deg c	Check List	Engineering	100%	Once/2Hrs	Adjust,stop operation
	Flux gravity	0.818~0.822	Check List	Engineering	100%	Once/2Hrs	Adjust,stop operation
	Chain speed	1.0~1.6M/min	Check List	Engineering	100%	Once/2Hrs	Adjust,stop operation
Touch-up	Solder iron temp.	343~440 DEG C	Check List	IPQC	100%	Once/shift	Change solder iron
	Solder iron temp(SMT).	250~260 DEG C	Check List	IPQC	100%	Once/shift	Change solder iron
ICT Test	ICT Program	YO_0B012A03	Check List	IPQC	100%	Twice/shift and Change model	Stop operation
	Component polarity	Defect unit>3(Continus)	Check List	MFG	100%	Once/2Hrs	Corrective action
	Missing component	Defect unit>3(Continus)	Check List	MFG	100%	Once/2Hrs	Corrective action
	Value	Defect unit>3(Continus)	Check List	MFG	100%	Once/2Hrs	Corrective action
	Wire Test	Defect unit>3(Continus)	Check List	MFG	100%	Once/2Hrs	Corrective action
ACT Test	Correction	fixture corelation	Verify fixture	Engineering	100%	Once/day	Replace fixture
			Check List	IPQC	100%	Once/shift	Replace fixture
Case Assy	Screw driver torque	4-5kg.cm(s/c)	Check List	IPQC	100%	Once/shift	Adjust torque
Hipot Test	Set up parameter	I<=10mA @ 1.5sec 3600VAC	Check List	IPQC	100%	Twice/shift	Corrective action
		Breakdown Arc	Check List	IPQC	100%	Twice/shift	Stop operation
	Fixture	Pass/Fail	Check List	IPQC	100%	Twice/shift	Stop operation
Final Test	Correction	fixture corelation	Verify Fixture	Engineering	100%	Once/day	Stop operation
	File name	YO_0B012A03	Check List	IPQC	100%	Twice/shift and change model	Stop operation
Packing	Label,Clean	Pass/Fail	Check List	MFG	100%	Once/day	Stop operation
Out of box	Q-QRA-48-01	I<=10mA @ 1.5sec 3600VAC	Check List	OOBA	AQL=0.4	Once/Lot	Corrective action
	G-QRA-06	Pass/Fail	Check List	OOBA	AQL=0.4	Once/Lot	Corrective action
		YO-12W	Check List	OOBA	AQL=0.4	Once/Lot	Corrective action
	Defect criteria-Major -Minor	C=MA=0.4 MI=1.0	Check List	OOBA	AQL=1.0	Once/Lot Lot size=3000	Corrective action
Shipping	Shipping information	Shipping information	Check list	OOBA	100%	Lot	Stop Shipping

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PS1043A Process Management Plan

Model Name : PS1043A
Customer : YOKOGAWA

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Process	Man	Machine	Material	Frequency	Method / Remarks
SEQ	Production	-SEQ		100%	-BOM
				-1x/shift	- 1st article check before line start
					-first article inspection report
					-programme name/revision
	IPQC			-1x/change model	-wrist strap
A/I	Production	-VCD	-reel of material	100%	- 1st article check before line start
			-A/I check fixture		-first article inspection report
					- Missing /Wrong component
					- Component height & alignment
	IPQC			-1x/shift	-programme name/revision
				-1x/change model	-wrist strap
Glue Normalization	Production	-glue auto-mixer	-glue	100%	- gule storage temp 2 - 10 C
					- At room temperature => 4 hours
					- Stir glue by using mixer,'3-5min.
					-glue FIFO control
					- Scrapping of glue after 48 hrs of usage
	IPQC	-Temp Meter		-1x /shift	- U-chart
Glue	Production	-GL-541E	-Glue	100%	- Fiducial mark check
			-Ethanol		- Disposal of excess glue after used
			-Lint free cloth		-x,y dispenser
					-programme name/revision
Chip Component Placement	Production	-FuJi CP-642/CP742	-C, R	100%	- 1st pcs inspection&each reel
			-Small IC		- Correct Program
IR Reflow	Production	-Reflow Oven		100%	- Reflow Parameter Setup
					- Conveyor Speed
					- Pre-Heat temp
					- Cooling zone
	IPQC	-Temp Profile Plotter	-Profile Template	-1X /day	- Temp profile&check monitor
Post IR Inspection	Production	-Inspection Template	-Sub ass'y	100%	- Missing /Wrong component
					- Component height & alignment
					- Component placement
					- 1st article check before line start
					- ESD Free, Rev. control inspection template
	IPQC	-10X, 3D Microscope		-4x /shift	- P chart
SMT FQC	IPQC	-Inspection Template	-Sub ass'y	AQL= 0.4	- SMT FQC inspection report & QA rejection Form
					-QA Insdpector ID(For accepted lots only)
					- Lot Tracibility Stamping
Material Preparation	Production	-Folding machine	-Sub ass'y	100%	- Hand insertion PCB verification
		-Jig			- ESD free jig

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Process	Man	Machine	Material	Frequency	Method / Remarks
Manual insertion	Production IPQC	Material check		100% -5pcs/shift	-BOM -First article check report
Wave soldering	Production IPQC	-High Temp Glass plate -Wave temp meter -Temp Profile plotter -Solderability -1st pcs inspection	-Profile Template	100% -1x /shift -2x /shift -1x /week -2x /shift -10pcs /2hrs -1x /shift	- Wave parameter setting instruction sheet by model - Wave height check with X-Bar R-Chart - Pre-Heat 1&2 Temp with X-Bar R-Chart - Correlation between temp profile and wave temp meter - Wave conveyor speed - Solderability check with DPPM report - 1st article check before line start
Visual Inspection & Touch-Up	Production IPQC IPQC	-Visual	-Lead length test fixture -Temperature measurement meter	100% 100% -1x /shift -1x /shift	- Solderability check per IPC standard&YOKOGAWA production specification - Wrong/Missing component check - Solder tip temp(250-260DEG C for SMT components) - Solder tip temp(343-440DEG C) - Solder iron GND check
ICT Test	Production IPQC	ICT test fixture Ionizer	-Program -Template	100% -1x /shift	- Programme name/revision check - Fixture correlation check -Component polarity/Wrong component/Missing component -Value check(Focus on components which ICT or ATE 'need components list)
ACT Test	Production IPQC	-Elec loading -Test Fixture	-Program	-100% -1x /shift	- Programme name/revision check -According to YOKOGAWA elec specification -Equipment correlation check -First article check report
Glue	Production IPQC		-Glue	-100% -1x/2hrs	-Glue location&quantity -According to YOKOGAWA document -Wrist strap
Pre-B/I Test	Production IPQC	-NHR-525 -Test Fixture		100% -1x /shift	- Programme name/revision check -According to YOKOGAWA elec specification -Equipment correlation check
Burn-In	Production Production IPQC	-B/I cart -Temp control		100% -1x/1Hrs	- 4 hrs @ 45 +15/-0 C; > 10% Loading;LED display On/Off - Burn-in report - B/I fixture, connector check - Temp check @ 45 +15/-0C;
Hi-pot Test	Production IPQC	-Extech 7440	-Program	100% -1x /shift	- Programme name/revision check -According to YOKOGAWA elec specification -Input voltage/Leakage current -First article check report
ATE test	Production	-Chroma -Test Fixture	-Program	100%	- Programme name check -According to YOKOGAWA elec specification

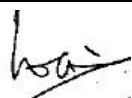
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Process	Man	Machine	Material	Frequency	Method / Remarks
	IPQC			-1x /shift	-Equipment correlation check -First article check report
Packing	Production IPQC		-Detergent	100%	-Heatsink / scratch -Packing method -Special mark traceability
OOBA -Functional test -Visual Inspection	QC	-Hi-pot tester -ATE tester -Visual	-Program -Golden sample	AQL: CR=0.1 MA=0.4 MI=1.0	- Programme name/revision check -According to YOKOGAWA elec specification -Equipment correlation check -G-QRA-06 -Products Checking list -Final inspection report
Shipment	QC		-Shipping information	-100% for every pallet	-Shipping mark -According to YOKOGAWA packing procedure -Visual inspection

Checked by :



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