



ASSOCIATION CONNECTING
ELECTRONICS INDUSTRIES®

IPC-1710A

OEM Standard for Printed Board Manufacturers' Qualification Profile

Developed by the OEM council of the IPC, the MQP sets the standard for assessing PWB manufacturers capabilities and allows PWB manufacturers to more easily satisfy customer requirements.

IPC-1710A
May 2004

A standard developed by IPC

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The material in this standard was developed by the OEM Council of the Institute for Interconnecting and Packaging Electronic Circuits.

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FOREWORD

It is not intended that this Manufacturers' Qualification Profile (MQP) satisfies all the requirements of the customer, however, conscientious maintenance of this document and or registration to ISO 9000 requirements should satisfy the major concerns. Thus, audits should be simpler, required less frequently, and facilitate less paper work as customers and suppliers work closer to meeting each others needs.

ACKNOWLEDGMENTS

The IPC is indebted to the members of the OEM council who participated in the development of this document. A note of thanks is also expressed to the members of the IPC Presidents Council for their review and critique and construction recommendations in finalizing the principles developed for the MQP.

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SECTION 1.1

COMPANY DESCRIPTION

DATE COMPLETED 08/19/2011

GENERAL INFORMATION

LEGAL NAME Best Circuit Boards, Inc. dba Global Innovation Corp.			
PHYSICAL ADDRESS 901 Hensley Lane			
CITY Wylie	STATE Texas	ZIP 75098	
PROVINCE	COUNTRY USA		
TELEPHONE NUMBER 214-291-1427	FAX NUMBER 214-291-1431	TELEX NUMBER	
E-MAIL ADDRESS *@gicpcb.com	MODEM NUMBER N/A	DATE FOUNDED <input checked="" type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE	
INTERNET URL http://www.gicpcb.com	FTP SITE ftp://ftp.gicpcb.com		

MANAGEMENT

PRESIDENT AND CHIEF OPERATING OFFICER Brent Nolan
CHIEF TECHNICAL OFFICER Greg Mitchell
DIRECTOR OF OPERATIONS Greg Mitchell (interim)
DIRECTOR OF SALES AND MARKETING Kevin Devine
DIRECTOR OF QUALITY Sven A. Bock
CUSTOMER SERVICE MANAGER Brent Nolan (interim)
WASTE TREATMENT MANAGER (POLLUTION PREVENTION) Manny Ortiz

CORPORATE DESCRIPTION	NUMBER OF EMPLOYEES		COMMENTS
	CORPORATE	SITE	
DESIGN AND DEVELOPMENT	N/A	N/A	N/A
ENGINEERING		4	
MANUFACTURING CONTROL		3	
MANUFACTURING	DIRECT	88	
	INDIRECT	22	
QUALITY CONTROL	QUALITY ENGINEERS	2	
	INTERNAL AUDITORS	2	
	GENERAL MANAGEMENT	3	
ADMINISTRATION		3	
TOTAL		120	

SECTION 1.2

DATE COMPLETED	08/19/2011
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MANUFACTURING FACILITY

COMPANY NAME			Best Circuit Boards, Inc. dba Global Innovation Corp.		
PHYSICAL ADDRESS			901 Hensley Lane		
CITY	Wylie	STATE	Texas	ZIP	75098
PROVINCE	n/a	COUNTRY	USA		
TELEPHONE NUMBER	214-291-1427	FAX NUMBER	214-291-1431	TELEX	n/a
E-MAIL ADDRESS	*@gicpcb.com	MODEM NUMBER	N/A	YEARS IN BUSINESS	21
INTERNET URL	http://www.gicpcb.com		FTP	ftp://ftp.gicpcb.com	
PRINCIPLE PRODUCTS/SERVICES/SPECIALTIES		BUSINESS CHARACTERIZATION (HIGH VOLUME, QUICK TURN-AROUND, ETC.)			
Manufacturer of Printed Circuit Boards Backplane Assembly		High/Mid volume, Quick turn, Prototype Backplane Assembly			

FACILITY MANAGEMENT	TITLE	REPORTS TO (Function/Job Title)
OVERALL OPERATION RESPONSIBILITY FOR THIS SITE Brent Nolan	President, COO	Brad Jacoby / CEO
MANUFACTURING Al Wilson	Manufacturing Manager	Brent Nolan / President, COO
ENGINEERING Skip Mora	Product Engineering Manager	Brent Nolan / President, COO
MATERIALS / PRODUCTION CONTROL Frank Nieto	Production Control Manager	Brent Nolan / President, COO
PURCHASING Manny Ortiz	Purchasing Manager	Brent Nolan / President, COO
TECHNOLOGY Greg Mitchell	Chief Technical Officer	Brent Nolan / President, COO
SALES REPRESENTATIVE Brent Nolan	Regional Sales Manager	Brent Nolan / President, COO
WASTE MANAGEMENT Manny Ortiz	Environmental Manager	Brent Nolan / President, COO

BUILDINGS	SYSTEMS (INDICATE % COVERAGE)									
	AGE	AREA (Sq. Ft.)	Construction (Wood/Brick)	Power Conditioning	Heating	Ventilation	Air Conditioning	Sprinklers	Waste Treatment	Other
Office	9	10000	Tilt Wall	Yes	100	100	100	100	0	
Manufacturing	9	80000	Tilt Wall	Yes	100	100	100	100	100	
Storage	9	11000	Tilt Wall	Yes	100	100	50	100	100	
Planned additions		41000	Tilt Wall	Yes						

SAFETY AND REGULATORY AGENCY REQUIREMENTS					
Are fire extinguishers functional and accessible to employees?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	What is the distance to the nearest fire station? (in minutes)	5 Minutes	
Do you conform to local/federal environment protection agency requirements?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	Date of last OSHA visit Date of last EPA visit	2005 2005	
Are you currently operating under a waiver or in violation of local government requirements?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	Other Agency Audits, UL, ISO 9000, NECQ, CSA Approval and Number	<input checked="" type="checkbox"/> UL # E71925 <input type="checkbox"/> CSA # _____ Military 31032 Qualification	<input checked="" type="checkbox"/> ISO 9000# TRC 00160 <input checked="" type="checkbox"/> Other _____ # VQE-04-005891
Do you have a safety program? Describe below.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	Hazardous Waste Number Trade Waste Account Number		

PLANT PERSONNEL (TOTAL EMPLOYEES)										
Regular	Contract	Office	Technical/Engineering	Production	Full-Time QA	Part-Time QA	Union	Non-Union	Union Name	Contract Expires (Date)
120		24	5	88	3			all		

COMMENTS

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SECTION 2.1

PROCESS

DATE COMPLETED 08/19/2011

This section is intended to provide overview information on the processes used to fabricate printed board products.

Site Capability Snapshot (Please Check all that apply)

	Designators		Remarks
A	Conductor Forming Processes	<input checked="" type="checkbox"/> Subtractive <input checked="" type="checkbox"/> Thin Foil Subtractive less than .5 oz. <input checked="" type="checkbox"/> Semi-Additive <input checked="" type="checkbox"/> Additive (Electro-less) <input type="checkbox"/> Black Hole <input type="checkbox"/> Thick Film Paste and Fire <input type="checkbox"/> Thin Film Semi-conductor Sputtering <input checked="" type="checkbox"/> Other: HDI	
B	PTH Materials and Processes	<input checked="" type="checkbox"/> Acid Copper <input type="checkbox"/> Pyro-Phosphate Copper <input type="checkbox"/> Full Built Electro-Less <input type="checkbox"/> Gold Paste <input type="checkbox"/> Copper Paste <input type="checkbox"/> Gold Conductor Sputtering <input type="checkbox"/> Nickel Conductor Sputtering <input type="checkbox"/> Other:	
C	Permanent Over-plating	<input checked="" type="checkbox"/> Tin <input checked="" type="checkbox"/> Tin-Lead <input type="checkbox"/> Tin-Nickel Alloy <input type="checkbox"/> Nickel <input checked="" type="checkbox"/> Nickel Gold (Hard) <input checked="" type="checkbox"/> Nickel Gold (Soft) <input type="checkbox"/> Nickel Rhodium <input checked="" type="checkbox"/> Conductive Polymer <input checked="" type="checkbox"/> Other: Carbon Ink	

D	Permanent Selective Plating	<input checked="" type="checkbox"/> Tin <input checked="" type="checkbox"/> Tin-Lead <input type="checkbox"/> Tin-Nickel Alloy <input type="checkbox"/> Nickel <input checked="" type="checkbox"/> Nickel Gold (Hard) <input checked="" type="checkbox"/> Nickel Gold (Soft) <input type="checkbox"/> Nickel Rhodium <input checked="" type="checkbox"/> Other: ENIG, Silver	
E	Permanent Mask or Coating	<input checked="" type="checkbox"/> Photo Dry Film <input checked="" type="checkbox"/> Photo Liquid <input checked="" type="checkbox"/> Image Transfer Screen Mask <input checked="" type="checkbox"/> Conformal Coating Solder Mask <input checked="" type="checkbox"/> Cover Coat <input checked="" type="checkbox"/> Other: Spray LPI	
F	Other Surface Finishes	<input checked="" type="checkbox"/> Tin-Lead Fused <input checked="" type="checkbox"/> Immersion Tin <input checked="" type="checkbox"/> Solder Leveled <input type="checkbox"/> Roll Soldered <input type="checkbox"/> Electro-less Solder Fused <input checked="" type="checkbox"/> Solder Bumped Lands <input type="checkbox"/> Solder Paste Fused <input checked="" type="checkbox"/> Azole Organic Protective Covering <input type="checkbox"/> Flux Protective Covering <input checked="" type="checkbox"/> Other: ENIG, Silver	

SECTION 2.2

ELECTRICAL TEST EQUIPMENT

DATE COMPLETED
08/19/2011

This section is intended to provide overview information on the test equipment and testing capability of the manufacturer.

Site Capability Snapshot (Please Check the column that applies furthest to the right.)

Designators			Remarks
A	Number of Nets	<input type="checkbox"/> <200 <input type="checkbox"/> 200 <input type="checkbox"/> 500 <input type="checkbox"/> 1000 <input type="checkbox"/> 2000 <input type="checkbox"/> 3000 <input type="checkbox"/> 4000 <input type="checkbox"/> 5000 <input checked="" type="checkbox"/> >5000 <input type="checkbox"/> Other:	
B	Number of Nodes	<input type="checkbox"/> <500 <input type="checkbox"/> 500 <input type="checkbox"/> 1000 <input type="checkbox"/> 2000 <input type="checkbox"/> 3000 <input type="checkbox"/> 4000 <input type="checkbox"/> 5000 <input type="checkbox"/> 6000 <input checked="" type="checkbox"/> >6000 <input type="checkbox"/> Other:	
C	Probe Point Pitch	<input type="checkbox"/> >1.0 [.040] <input type="checkbox"/> 1.0 [.040] <input type="checkbox"/> 0.8 [.032] <input type="checkbox"/> 0.65 [.025] <input type="checkbox"/> 0.50 [.020] <input type="checkbox"/> 0.40 [.016] <input type="checkbox"/> 0.30 [.012] <input type="checkbox"/> 0.20 [.008] <input checked="" type="checkbox"/> <0.20 [.008] <input type="checkbox"/> Other:	

D	Test % Single Pass	<input type="checkbox"/> None <input type="checkbox"/> <60% <input type="checkbox"/> 60% <input type="checkbox"/> 70% <input type="checkbox"/> 80% <input checked="" type="checkbox"/> 90% <input checked="" type="checkbox"/> 95% <input type="checkbox"/> 99% <input type="checkbox"/> 100% <input type="checkbox"/> Other:	
E	Probe Accuracy (DTP)	<input type="checkbox"/> >0.2 [.008] <input type="checkbox"/> 0.2 [.008] <input type="checkbox"/> 0.15 [.006] <input type="checkbox"/> 0.125 [.005] <input type="checkbox"/> 0.1 [.004] <input checked="" type="checkbox"/> 0.075 [.003] <input type="checkbox"/> <0.075 [.003] <input type="checkbox"/> Other:	
F	Grid Density	<input checked="" type="checkbox"/> Single Side Grid <input checked="" type="checkbox"/> Double Sided Grid <input type="checkbox"/> Double Density Grid <input type="checkbox"/> Double Density Double Sided <input type="checkbox"/> Quad Density <input type="checkbox"/> Double Sided Quad Density <input checked="" type="checkbox"/> Flying Probe <input type="checkbox"/> Other:	
G	Netlist Capability	<input checked="" type="checkbox"/> Golden Board <input checked="" type="checkbox"/> IPC-D-356 <input checked="" type="checkbox"/> Net List Extraction <input checked="" type="checkbox"/> CAD/CAM Net List Compare <input type="checkbox"/> Other:	

H	Test Voltage	<input type="checkbox"/> <20 VDC <input type="checkbox"/> 20 VDC <input type="checkbox"/> 40 VDC <input type="checkbox"/> 60 VDC <input type="checkbox"/> 80 VDC <input type="checkbox"/> 100 VDC <input type="checkbox"/> 500 VDC <input type="checkbox"/> 1000 VDC <input type="checkbox"/> >1000 VDC <input checked="" type="checkbox"/> Other: 250 VDC	
J	Impedance Meas	<input checked="" type="checkbox"/> Micro Section <input checked="" type="checkbox"/> Inboard Circuit <input checked="" type="checkbox"/> Coupon <input checked="" type="checkbox"/> Manual TDR <input type="checkbox"/> Automated TDR <input type="checkbox"/> Other:	
K	Impedance Tolerance	<input type="checkbox"/> None <input type="checkbox"/> >20% <input type="checkbox"/> 20% <input type="checkbox"/> 15% <input checked="" type="checkbox"/> 10% <input checked="" type="checkbox"/> 7% <input checked="" type="checkbox"/> 7% <input type="checkbox"/> 2% <input type="checkbox"/> <2% <input type="checkbox"/> Other:	

SECTION 2.3

PRODUCT TYPE

DATE COMPLETED 08/19/2011

This section is intended to provide overview information on the printed board product types being fabricated by the manufacturer.

Site Capability Snapshot (Please Check all that apply.)

Designators		Remarks
A	Product Type	<input checked="" type="checkbox"/> Rigid Printed Board <input checked="" type="checkbox"/> Flex Printed Board <input type="checkbox"/> Rigid/Flex Board <input checked="" type="checkbox"/> Rigid Back Plane <input type="checkbox"/> Molded Product <input checked="" type="checkbox"/> Ceramic Printed Board <input type="checkbox"/> Multichip Module <input type="checkbox"/> Laminated Multichip Module <input type="checkbox"/> Deposited Dielectric Multichip Modules <input checked="" type="checkbox"/> Other: Metalback /Heatsinks,
B	Circuit Mounting Type	<input checked="" type="checkbox"/> Single Sided <input checked="" type="checkbox"/> Double Sided <input checked="" type="checkbox"/> Multilayer <input checked="" type="checkbox"/> Single-sided Bonded to Substrate <input checked="" type="checkbox"/> Double-sided Bonded to Substrate <input checked="" type="checkbox"/> Multilayer Bonded to Substrate <input type="checkbox"/> Constrained Multilayer <input type="checkbox"/> Distributed Plane Multilayer <input type="checkbox"/> Other:
C	Via Technology	<input checked="" type="checkbox"/> No-Vias <input checked="" type="checkbox"/> Thru Hole Vias <input checked="" type="checkbox"/> Buried Vias <input checked="" type="checkbox"/> Blind Vias <input checked="" type="checkbox"/> Thru Hole & Blind Vias <input checked="" type="checkbox"/> Thru Hole & Buried Vias <input checked="" type="checkbox"/> Thru Hole Buried & Blind Vias <input checked="" type="checkbox"/> Buried & Blind Vias <input type="checkbox"/> Other:

D	Laminate Material	<input checked="" type="checkbox"/> Phenolic <input checked="" type="checkbox"/> Epoxy Paper <input checked="" type="checkbox"/> Epoxy Glass <input checked="" type="checkbox"/> Modified Epoxy Composite <input checked="" type="checkbox"/> Polyimide Film & Reinforce <input checked="" type="checkbox"/> Cyanate Ester <input checked="" type="checkbox"/> Teflon <input checked="" type="checkbox"/> Ceramic Glass Types <input checked="" type="checkbox"/> Various Combinations <input checked="" type="checkbox"/> Other: Metalback	
E	Core Material	<input checked="" type="checkbox"/> No Core <input checked="" type="checkbox"/> Polymer <input checked="" type="checkbox"/> Copper <input checked="" type="checkbox"/> Aluminum <input checked="" type="checkbox"/> Graphite <input type="checkbox"/> Copper Invar/Copper <input type="checkbox"/> Copper Moly/Copper <input type="checkbox"/> Other:	
F	Copper Thickness (Oz.)	<input type="checkbox"/> 1/8 Minimum <input checked="" type="checkbox"/> 1/4 Minimum <input type="checkbox"/> 3/8 Minimum <input checked="" type="checkbox"/> 1/2 Nominal <input checked="" type="checkbox"/> 1 Nominal <input checked="" type="checkbox"/> 2 Nominal <input checked="" type="checkbox"/> 3-5 Max <input checked="" type="checkbox"/> 6-9 Max <input type="checkbox"/> >10 <input type="checkbox"/> Other:	
G	Construction	<input checked="" type="checkbox"/> ≤4 Planes <input checked="" type="checkbox"/> >4 Planes <input checked="" type="checkbox"/> THK to TOL ≤0.2 mm <input checked="" type="checkbox"/> THK to TOL >0.2 mm <input checked="" type="checkbox"/> Bow/Twist ≤1% <input type="checkbox"/> Bow/Twist >1% <input type="checkbox"/> ≤0.3 mm Profile Tolerance <input checked="" type="checkbox"/> 0.3 mm Profile Tolerance <input type="checkbox"/> Other:	

H	Coatings and Markings	<input type="checkbox"/> ≤0.1 mm Mask Clearance <input checked="" type="checkbox"/> >0.1 mm Mask Clearance <input checked="" type="checkbox"/> One Side (Legend) <input checked="" type="checkbox"/> Two Side (Legend) <input type="checkbox"/> None (Legend) <input type="checkbox"/> UL Material Logo <input checked="" type="checkbox"/> U.L. V ₀ Logo <input type="checkbox"/> U.L. V ₁ Logo <input type="checkbox"/> U.L. V ₂ Logo <input type="checkbox"/> Other:	
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SECTION 2.4

PRODUCT COMPLEXITY

DATE COMPLETED
08/19/2011

This section is intended to provide overview information on product complexity being fabricated by the manufacturer.

(Please check the column that applies farthest to the right)

Designators			Remarks
A	Board Size Diagonal	<input type="checkbox"/> <250 [10.00] <input type="checkbox"/> 250 [10.00] <input type="checkbox"/> 350 [14.00] <input type="checkbox"/> 450 [17.50] <input type="checkbox"/> 550 [21.50] <input type="checkbox"/> 650 [25.50] <input type="checkbox"/> 750 [29.50] <input type="checkbox"/> 850 [33.50] <input checked="" type="checkbox"/> >850 [33.50] <input type="checkbox"/> Other:	
B	Total Board Thickness	<input type="checkbox"/> 1,0 [.040] <input type="checkbox"/> 1,0 [.040] <input type="checkbox"/> 1,6 [.060] <input type="checkbox"/> 2,0 [.080] <input type="checkbox"/> 2,5 [.100] <input type="checkbox"/> 3,5 [.135] <input type="checkbox"/> 5,0 [.200] <input type="checkbox"/> 6,5 [.250] <input checked="" type="checkbox"/> >6,5 [.250] <input type="checkbox"/> Other:	
C	Number Conductive Layers	<input type="checkbox"/> 1-4 <input type="checkbox"/> 5-6 <input type="checkbox"/> 7-8 <input type="checkbox"/> 9-12 <input type="checkbox"/> 13-16 <input type="checkbox"/> 17-20 <input type="checkbox"/> 21-24 <input type="checkbox"/> 25-28 <input checked="" type="checkbox"/> >28 <input type="checkbox"/> Other:	

D	Dia Drilled Holes	<input type="checkbox"/> >0,5 [.020] <input type="checkbox"/> 0,5 [.020] <input type="checkbox"/> 0,4 [.016] <input type="checkbox"/> 0,35 [.014] <input type="checkbox"/> 0,30 [.012] <input type="checkbox"/> 0,25 [.010] <input type="checkbox"/> 0,20 [.008] <input type="checkbox"/> 0,15 [.006] <input checked="" type="checkbox"/> <0,15 [.006] <input type="checkbox"/> Other:	
E	Total PTH TOL (Max-Min)	<input type="checkbox"/> >0,250 [.010] <input type="checkbox"/> 0,250 [.010] <input type="checkbox"/> 0,200 [.008] <input type="checkbox"/> 0,150 [.006] <input type="checkbox"/> 0,125 [.005] <input type="checkbox"/> 0,100 [.004] <input type="checkbox"/> 0,075 [.003] <input checked="" type="checkbox"/> 0,050 [.002] <input type="checkbox"/> <0,050 [.002] <input type="checkbox"/> Other:	
F	Hole Location TOL DTP	<input type="checkbox"/> >0,50 [.020] <input type="checkbox"/> 0,50 [.020] <input type="checkbox"/> 0,40 [.016] <input type="checkbox"/> 0,30 [.012] <input type="checkbox"/> 0,25 [.010] <input type="checkbox"/> 0,20 [.008] <input type="checkbox"/> 0,15 [.006] <input type="checkbox"/> 0,10 [.004] <input checked="" type="checkbox"/> <0,10 [.004] <input type="checkbox"/> Other:	
G	Internal Layer Clearance (Min)	<input type="checkbox"/> >0,350 [.014] <input type="checkbox"/> 0,350 [.014] <input type="checkbox"/> 0,250 [.010] <input type="checkbox"/> 0,200 [.008] <input type="checkbox"/> 0,150 [.005] <input type="checkbox"/> 0,125 [.005] <input type="checkbox"/> 0,100 [.004] <input checked="" type="checkbox"/> 0,075 [.003] <input type="checkbox"/> <0,075 [.003] <input type="checkbox"/> Other:	

H	Internal Layer Conductor Width (Min)	<input type="checkbox"/> >0,250 [.010] <input type="checkbox"/> 0,250 [.010] <input type="checkbox"/> 0,200 [.008] <input type="checkbox"/> 0,150 [.006] <input type="checkbox"/> 0,125 [.005] <input type="checkbox"/> 0,100 [.004] <input checked="" type="checkbox"/> 0,075 [.003] <input type="checkbox"/> 0,050 [.002] <input type="checkbox"/> <0,050 [.002] <input type="checkbox"/> Other:	
J	Internal Layer Process Allowance	<input type="checkbox"/> >0,100 [.004] <input type="checkbox"/> 0,100 [.004] <input type="checkbox"/> 0,075 [.003] <input type="checkbox"/> 0,050 [.002] <input type="checkbox"/> 0,040 [.0015] <input type="checkbox"/> 0,030 [.0012] <input checked="" type="checkbox"/> 0,025 [.001] <input type="checkbox"/> 0,020 [.0008] <input type="checkbox"/> <0,020 [.0008] <input type="checkbox"/> Other:	
K	External Layer Clearance (Min)	<input type="checkbox"/> >0,350 [.014] <input type="checkbox"/> 0,350 [.014] <input type="checkbox"/> 0,250 [.010] <input type="checkbox"/> 0,200 [.008] <input type="checkbox"/> 0,150 [.006] <input type="checkbox"/> 0,125 [.005] <input checked="" type="checkbox"/> 0,100 [.004] <input type="checkbox"/> 0,075 [.003] <input type="checkbox"/> <0,075 [.003] <input type="checkbox"/> Other:	

L	External Layer Conductor Width (Min)	<input type="checkbox"/> >0,250 [.010] <input type="checkbox"/> 0,250 [.010] <input type="checkbox"/> 0,200 [.008] <input type="checkbox"/> 0,150 [.006] <input type="checkbox"/> 0,125 [.005] <input type="checkbox"/> 0,100 [.004] <input checked="" type="checkbox"/> 0,075 [.003] <input type="checkbox"/> 0,050 [.002] <input type="checkbox"/> <0,050 [.002] <input type="checkbox"/> Other:	
M	External Layer Process Allowance	<input type="checkbox"/> >0,100 [.004] <input type="checkbox"/> 0,100 [.004] <input type="checkbox"/> 0,075 [.003] <input type="checkbox"/> 0,050 [.002] <input type="checkbox"/> 0,040 [.0015] <input type="checkbox"/> 0,030 [.0012] <input checked="" type="checkbox"/> 0,025 [.001] <input type="checkbox"/> 0,020 [[.0008] <input type="checkbox"/> <0,020 [.0008] <input type="checkbox"/> Other:	
N	Feature Location DTP	<input type="checkbox"/> >0,50 [.020] <input type="checkbox"/> 0,50 [.020] <input type="checkbox"/> 0,40 [.016] <input type="checkbox"/> 0,30 [.012] <input type="checkbox"/> 0,25 [.010] <input type="checkbox"/> 0,20 [.008] <input type="checkbox"/> 0,15 [.006] <input checked="" type="checkbox"/> 0,10 [.004] <input type="checkbox"/> <0,10 [.004] <input type="checkbox"/> Other:	

All Dimensions are in millimeters [inches shown in brackets]

SECTION 2.5

QUALITY DEVELOPMENT

DATE COMPLETED 08/19/2011

This section is intended to provide overview information on the quality systems in place in the manufacturing facility.

Site Capability Snapshot (Please Check all that apply.)

Designators			Remarks
A	Strategic Plan	<input type="checkbox"/> Functional Steering Committee Formed <input type="checkbox"/> TQM Plan & Philosophy Established & Published <input checked="" type="checkbox"/> Documented Quality Progress Review <input checked="" type="checkbox"/> Implementation & review of Project Team Recommendations <input type="checkbox"/> TQM Communicated throughout organization <input type="checkbox"/> Controlled New process Start-up <input type="checkbox"/> Management Participates in TQM Audits <input type="checkbox"/> Employee Recognition Program <input type="checkbox"/> Total TQM Plan/Involvement Customer Training <input type="checkbox"/> Other:	
B	Employee Involvement	<input checked="" type="checkbox"/> Certified Training Available <input checked="" type="checkbox"/> Training of Employee Base <input type="checkbox"/> TQM Team Trained <input type="checkbox"/> Design of Experiment Training and Use <input checked="" type="checkbox"/> New Process Implementation Training <input type="checkbox"/> Support Personnel Training <input type="checkbox"/> Advanced Statistical Training <input type="checkbox"/> Quality Functional Deployment <input type="checkbox"/> Ongoing Improvement Program for Employees <input type="checkbox"/> Other:	
C	Quality Manual	<input type="checkbox"/> Quality Manual Started <input checked="" type="checkbox"/> Generic Quality Manual for Facility <input type="checkbox"/> 10% of manufacturing depts. have process specifications <input type="checkbox"/> 25% of manufacturing depts. have process specifications <input type="checkbox"/> 50% of manufacturing depts. have process specifications <input type="checkbox"/> Non-manufacturing Manuals Developed <input type="checkbox"/> 25% of all departments have quality manuals <input type="checkbox"/> 50% of all departments have quality manuals <input checked="" type="checkbox"/> All Manufacturing and support depts. have controlled quality manual <input type="checkbox"/> Other:	

D	Instructions	<input type="checkbox"/> Work Instructions Started <input type="checkbox"/> Quality Instructions Started <input type="checkbox"/> 10% Work Instructions Completed <input type="checkbox"/> 10% Quality Instructions Completed <input type="checkbox"/> 25% Work Instructions Completed, Controlled <input type="checkbox"/> 25% Quality Instructions Completed, Controlled <input type="checkbox"/> 50% Work Instructions Completed, Controlled <input type="checkbox"/> 50% Quality Instructions Completed, Controlled <input checked="" type="checkbox"/> Quality and work Instruct. Completed, Controlled <input type="checkbox"/> Other:	
E	SPC Implementation IPC-PC-90	<input checked="" type="checkbox"/> Plan Exists <input checked="" type="checkbox"/> Training Started <input checked="" type="checkbox"/> Process Data Collected & Analyzed <input type="checkbox"/> All Employees Trained <input type="checkbox"/> First Process Stable & Capable <input checked="" type="checkbox"/> Several Major Processes Stable & Capable <input checked="" type="checkbox"/> Continued Improvement of Stable Processes <input type="checkbox"/> Additional Mfg Processes under Control <input type="checkbox"/> All Processes Under Control <input type="checkbox"/> Other:	
F	Supplier Programs/Controls	<input checked="" type="checkbox"/> Supplier Rating Program <input type="checkbox"/> Monthly Analysis Program <input type="checkbox"/> Key Problems Identified <input checked="" type="checkbox"/> Supplier Reviews Performance Data provided <input type="checkbox"/> TQM Acceptance by suppliers <input type="checkbox"/> 10% of Suppliers Using SPC <input type="checkbox"/> 25% of Suppliers Using SPC <input type="checkbox"/> 50% of Suppliers Using SPC <input checked="" type="checkbox"/> All Key Suppliers using Certified parts program <input type="checkbox"/> Other:	
G	Third Party IPC-QS-95	<input type="checkbox"/> Instrument Controls in Place <input type="checkbox"/> Measurement System in Control IPC-PC-90 <input checked="" type="checkbox"/> Document Controls in Place <input checked="" type="checkbox"/> Reduced Lot Sampling <input type="checkbox"/> 10% of Processes Under Audit Control <input checked="" type="checkbox"/> 50% or Greater of Processes Under Audit Control <input type="checkbox"/> ISO-9003 Certified <input type="checkbox"/> ISO-9002 Certified <input checked="" type="checkbox"/> ISO-9001 <input checked="" type="checkbox"/> Other: MIL PRF 31032	ISO 9001:2008; AS9100, Rev. B

SECTION 3**EQUIPMENT PROFILE (Pre-Site Audit)**

DATE COMPLETED 08/19/2011

* Examples of equipment limitations include:
min/max board size & min/max working area

3.1 PHOTOTOOL CAPABILITY	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) AOI of phototool	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
B) AOI CAD reference (CAM)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Camtek	2	
C) Photoplotting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Camtek Barco	1 2	Max 26" x 30" Max 26" x 28"
D) Photo reductions	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
E) Film scan and conversion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Contract Service		
F) Film processing <input type="checkbox"/> air-dried <input type="checkbox"/> force-dried <input checked="" type="checkbox"/> processed in automatic processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Camtek Kodak	1 1	Max 26" x 30" Max 26" x 28"
G) Media types <input checked="" type="checkbox"/> silver halide film <input type="checkbox"/> glass <input checked="" type="checkbox"/> diazo	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

Laser Direct Imaging**Orbotech****1**

3.2 DRILLING EQUIPMENT	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Manual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Scope Drill Laser Drill	1	.004 mils
B) Optical (single spindle)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lenz, Excellon	8	
C) N.C. drill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Spindles	38	.008 mils

3.3 ROUTING EQUIPMENT	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Edge beveler	<input checked="" type="checkbox"/>	<input type="checkbox"/>	BevelMate	2	
B) Hand router (pin router)	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
C) N.C. router	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Spindles	19	
D) N.C. driller/router	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Spindles	4	
E) Scoring (profile)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	AccuScore	1	
F) Scoring (straight line)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	AccuScore	1	

3.4 MECHANICAL EQUIPMENT	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Punch press	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
B) Shear	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1	
C) Milling machine	x	<input type="checkbox"/>	Outsourced		

3.5 HOLE PREPARATION (DESMEAR)	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Permagnate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Horizontal	1	
B) Plasma	<input checked="" type="checkbox"/>	<input type="checkbox"/>	March	1	
C) Mechanical	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FSI	1	
D) Etchback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Horizontal	1	

3.6 PRIMARY IMAGE APPLICATION	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Dry film	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Laminators CSL Expose	2 6	
B) Hand screening	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
C) Machine screening	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
D) Wet film	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
E) Laser Direct Imaging	x		LDI Orbotech	1	

3.7 TYPE OF TREATMENT FOR MULTILAYER INNERLAYERS	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Black oxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
B) Red oxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
C) Copper scrub	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
D) Durabond	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
E) Other - Alternative oxide	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Alpha-Prep Hollmuller	1 1	

3.8 LAMINATION	YES	NO	MATERIAL	QTY	APPLICATION TECHNIQUE
A) High pressure	<input checked="" type="checkbox"/>	<input type="checkbox"/>		6	
B) High temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>		6	
C) Vacuum	<input checked="" type="checkbox"/>	<input type="checkbox"/>		6	
D) Vacuum assist	<input checked="" type="checkbox"/>	<input type="checkbox"/>		6	
E) Foil heat assist	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
F) Separate cool-down	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4	

3.9 ELECTROLESS COPPER PLATING	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Fully additive application	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
B) Electroless deposition (semiadditive)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hand Line	1	
C) Through-hole and via	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HDI Conductive Polymer	1	

3.10 COPPER ELECTROPLATING	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Copper sulfate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Automatic Plate Line PAL	1	
B) Pyrophosphate	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
C) Copper fluoroborate	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
D) Other – Copper Via Fill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hand Line	1	

3.11 TIN/LEAD SURFACE PLATINGS/COATINGS	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Tin/lead electroplated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Automatic Plate Line	1	
B) Immersion tin or tin/lead (electroless)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Omicron 10 FST	1 1	
C) Hot air solder leveled (HASL)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Teledyne Unicote 175	1	

3.12 FUSING PROCESSES	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) I.R. reflow	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
B) Hot oil reflow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hand Tank	1	
C) Horizontal (hot air level)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Halco Teledyne, Unicote 175	1	
D) Vertical (hot air level)	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

3.13 NICKEL SURFACE PLATING	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Electroless nickel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hand Tank	1	
B) Electroplated nickel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hand Tank	1	

3.14 GOLD SURFACE PLATING	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Electroless gold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hand Tank	1	
B) Electroplated gold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hard Soft	1 1	

3.15 PALLADIUM SURFACE PLATING	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Electroless palladium (immersion)	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
B) Electroplated palladium	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

3.16 SOLDERMASK	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Screened deposited image	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DP5000	3	
B) Dry film photoimageable	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1	
C) Liquid photoimageable	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1	
D) Spray LPI				1	
E) Dry film/liquid combination	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

3.17 ORGANIC SURFACE PROTECTION	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Benzotriazole	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
B) Imidazole	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OSP	1	
C) Benzimidazole	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

3.18 MICROSECTION CAPABILITY	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Manual	<input checked="" type="checkbox"/>	<input type="checkbox"/>		2	
B) Single cavity automated	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1	
C) Multiple cavity automated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Struers	1	
D) Plating thickness analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	X-Ray, X-section Fisher CU Scope PTH, CMI	5	Microderm, MP 700 CPR CMI XRX - Tin, Gold, Nickel

3.19 CHEMICAL ANALYSIS	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Etching chemistry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Alkaline	4	
B) Plating chemistry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Acid Cu, Sn, Au, Ni, Ag	15	
C) Effluent (PPM) analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

3.20 ELECTRICAL TEST EQUIPMENT	YES	NO	EQUIPMENT	QTY	EQUIPMENT LIMITS
A) Continuity and shorts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Flying Probe Bed-of-Nail	3 4	
B) Fixture development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/C Drill	2	
C) Flying probe test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Microcraft	3	
D) Impedance control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Polar	1	

MASTER EQUIPMENT LISTINGDATE COMPLETED
08/19/2011**FORM MQP 10**

Please complete a Master Equipment List. You may use your own form or the MQP Form 10.

IDENTIFICATION	EQUIPMENT NAME/DESCRIPTION	MANUFACTURER TYPE/MODEL	EQUIPMENT LIMITS	ACCURACY	CALIBRATION FREQUENCY	REMARKS
SN 17627	Shear	Tennsmith Shear Model A5216				SHR
Clean Line	Layer Clean Line	Hollmuller				
SN 2497-124XD-322	Tacky Roller	Technic				
SN 129-1	Laminator	HAKUTO 1500B				
Tamarack-1	Photo Image	Tamarack 161B				
Tamarack-2	Photo Image	Tamarack 161B				
Tamarack-3 SN 161-9255	Photo Image	Tamarack				
Colight-1 SN 7415-257	Photo Image	Colight 1630				
LDI SN PA 071006	Laser Direct Image	Orbotech LDI Paragon 6600				
D/E/S Line	Develop/Etch/Strip	ASI				
D/E/S Line	Develop/Etch/Strip	Hollmuller				
D/E/S Line	Develop/Etch/Strip	Dalux				
SN ATP-3023	Layer Punch	Multiline Technology Optiline PE-ATP 3000				
SN XPE-950851A08-01	Layer Punch	CAP1CARD PinLam PF XPE-9598SA08				
SN 17010	AOI – Automated Optical Inspection	Camtek Orion 838				
SN 17011	AOI – Automated Optical Inspection	Camtek Orion 838				
PCD Punch NSN	Punch	TMP				
SN 273 ACC-2	Punch	Multiline Technology AccuLine				
TMP-1 SN CH-18200	Press	TMP Press				
SN 610301	Oven	Grieve SA-550				
SN DP C-0069	Panel Defacer	Johnston & Johnston Associates				
SN 3 601 353 A	Overarm Micrometer	Carter Engineering				

		235-322 22				
SN 8055	CNC Router	Advance Vero Products Model D.R.2. 1300				
NSN	CNC Router	Advance Vero Products Model D.R.2. 1300				
SN 150	Beveler	Edgemate 045				
SN 3095	Tacky Roller	Teknek CM 3600P				
CN 1081 SN 06899	Omega Ω Meter Ionic Cleanliness Tester	Alpha Metals 600R				QC
SN SVN5002004	Optical Gauging Products	OGP Smartscope Flash 500	SN 021041		1 X Per Year	QC
CN 4024 SN 49879-08-104	Ram Optical Inspection	ROI OMIS III			1 X per Year	QC
SN 510-448	5 speed drill	Shearline Model 4000				ET
NSN	5 speed drill	Ryoki DP 80				ET
Drill Set #1	Technic Drill	SE Systems CNC 35.00				ET
Drill Set # 2	Vero Advanced Products	Model DR400				ET
CN 3001	Drill	Dynamotion / ATI DNC 11				ET
SN 8911 A518 359	Electrical Tester	ATG Type 518				ET
CN 1096 SN T-9090-036	Electrical Tester	Everett Charles Model 9090 Series 0080				ET
CN 1095 SN T-9090-0188	Electrical Tester	Everett Charles Model 9090				ET
CN 1098 SN E8856500	Flying Probe tester	Emma (Microcraft) EMX 6151				ET
CN 1097 SN B4695400	Flying Probe tester	Emma (Microcraft) EMX 5141				ET
CN 1099 SN B4846400	Flying Probe tester	Emma (Microcraft) ELX 6146				ET
SN RTA-A-66	Circuit Repair Welder	Hughes				ET
SN F4-1363 CN 10311	Oven	Grieve Model 350				FNSH
SN 159	Air Vac Rework Station	DRS-22				FNSH
SN 548-IPS-01260	ISOMET 1000 Precision SAW	Buehler Model 11-2180				FNSH
CN 3063 SN 014640	TDR Tester	Polar Instruments CITS				CAM

SN 85-L-542	Shipmate III Skin Packager	Ampak SG-1824A				SHP
NSN	UV Curing System	CoLight				SHP
SN F4-136 (PCD 000062)	PEMSETER Series 4 Press	Penn Engineering & Mfg Corp				FNSH
SN 04226236	Auto Polisher	Struers Abrapol -2				Lab
NSN	Ecomet Single head Grinder	Buehler 2				Lab
NSN	Ecomet Duel head Grinder	Buehler 5				Lab
SN 2G2G243006	10 uv Spectrometer	Genesys Thermo Spectronic				Lab
NSN	Oven	Grieve LG 2016				Lab
NSN	Oven	Cole Palmer 05015-50				Lab
NSN	Scale Wt loss	Sartorius				Lab
NSN	Scale Wt loss	Adventurer				Lab
SN 332031048	Spectrometer	Milton Roy Spectronic 20D				Lab
NSN	pH Meter	Accumet Fisher Scientific 25				Lab
SN 311W4091506	Atomic Absorption	Perkin Elmer 3110				Lab
SN 0336568	Board washer	International Supplies				PF
SN 458450	Scope Drill	Posalux 17P				PF
SN 217	Bevelmate	Radoll Designs				PF
SN 0005177	Score machine # 2	Accu-score AS-175R				PF
SN 25555	Router	Excellon Concept I				PF
Router # 1 SN 8053	Router 2 spindle	Vero Advanced Products LTD DR900				PF
Router # 2 SN 8502	Router 2 spindle	Vero Advanced Products				PF
CN 1029 SN 2334	Accugage	Accugage Model AG24-2-LMZ				PF
CN 4056 SN 2102	Accugage	Accugage Model AG 60-1-ST				PF
#1	CNC Router	Technic				PF

NSN	3 spindle				
NSN	CNC Router 2 spindle	Technic			PF
SN 8551	Router	Vero Advanced Products 900			PF
SN 8069	Router	Vero Advanced Products Model D.R.2 1300			PF
SN 1001	Accumulator	Eidschun E90T			SM
SN 5926	Tacky Roller	Teknek CM4600			SM
NSN	Screen Coater	Circuit Automation DP1000			SM
NSN	Screen Coater	Circuit Automation DP1000			SM
NSN	Screen Coater	Circuit Automation DP1000			SM
# 1 SN TRC-120-70137	Conveyor Oven	TC 120			SM
# 2 SN TC-120-074	Conveyor Oven	TC 120			SM
# 3 SN 7415-216	Photo Image	CoLight 1600			SM
# 2 SN 4711-229	Photo Image	CoLight 1630			SM
# 1 SN 7415-223	Photo Image	CoLight 1600			SM
SN 1001469	Spray Coater	Argus International Model 95245			SM
SN 01601009	Soldermask Applicator	Dynachem Vacuumex-30			SM
CN 3010	Oven	Grieve			LEG
NSN	Legend	Printar LGP-509			LEG
NSN	Plate Maker	Ultraplus Fliptop Plate maker			LEG
SN 10MH-C92-001	Exposure Unit	Fliptop Exposure System Model 631			LEG
SN 0104	Diazo Dry Developer	Technilith Model 6000			OL
SN 7403-322	Photo Image	CoLight DMVL Model 1530			OL
SN 7003-295D	Photo Image	CoLight DMVL Model 1530			OL

SN 7403-329	Photo Image	CoLight DMVL Model 1530				OL
SN 7415-255	Photo Image	CoLight Model 1600				OL
SN 7415-256	Photo Image	CoLight Model 1600				OL
SN 291097	Exposure Unit	Accuvac Exposure System Model OV29				OL
SN 000058 SN LC2400	Riston Laminator	Dupont Model42036				OL
SN 000055	Riston Laminator	Dupont				OL
SN 123	Automatic Sheet Laminator	Automatic Sheet Laminator Model AS-24				OL
NSN	Tacky Roller	Western Magnum				OL
NSN	Tacky Roller	Western Magnum				OL
SN 000017	Exposure Unit	Scanex II				OL
SN 696	Electro Optical Registration	Spartronics Model 83CE				OL
SN 30300M343	Plotter	Finetrak				Film Room
SN 001064	Silver resist	Omni Batch 5 BW				Film Room
NSN		Kodamatic Processor Model 7200				Film Room
SN 172	Automatic Sheet Laminator	Automatic Sheet Laminator Model AS-24				Film Room
SN 063-201	Bondfilm Line	Atotech, Inc. Model UN99				
SN LUS/0221	Lay-up station	Multiline Technology				
SN LUS/0220	Lay-up station	Multiline Technology				
SN 10105933EA	Freezer	Maytag Model MQC 1557AEW				
SN DPO-0075	Depinner	Multiline Technology				
SN 20835-1	Press # 4	TMP Press				
SN 20835-2	Press # 5	TMP Press				
SN 21286 CN 6007	Press # 3	TMP Press				
SN 21140 (21630) CN 11115	Press # 2	TMP Press				
SN 21628 CN 2140	Press # 1	TMP Press				
SN 4590195	Press / Autoclave	TMP Press				
SN 167	Plasma Machine	Advanced Plasma Systems				

		Model PWB16				
SN TEL 9904	Drill # 1	Technic Model 1500				DRL
SN TEL 9903	Drill # 2	Technic Model 1500				DRL
SN TEL 9609	Drill # 3	Technic Model 1700-3				DRL
SN TEL 9809	Drill # 4	Technic Model Delta 4SP				DRL
SN TEL 9703	Drill # 5	Technic Model Delta 4				DRL
SN TEL 9901	Drill # 6	Technic Model 1800/14				DRL
SN TEL 9902	Drill # 7	Technic Model DR 2600				DRL
SN GL 9505	Drill # 8	Technic Model DR 1200-3				DRL
SN TEL 9512	Drill # 9	Technic Model DR 1200-3				DRL
SN 201418	Drill # 10	Lenz Model DLG 615-1-M-AL				DRL
SN 201480	Drill # 11	Lenz Model DLG 550-2-AL				DRL
SN 201483	Drill # 12	Lenz Model DLG 615-1-AL				DRL
SN 201479	Drill # 13	Lenz Model DLG 550-2-AL				DRL
SN 201481	Drill # 14	Lenz Model DLG 550-2-AL				DRL
SN 028-03688701006	Drill # 1	Dynamotion/ATI Model MSA6706				DRL
SN 028-03688701004	Drill # 2	Dynamotion/ATI Model MSA6706				DRL
SN 028-0311040101	Drill # 3	Dynamotion/ATI Model MSA6706				DRL
SN 028-0331760103	Drill # 4	Dynamotion/ATI Model MSA6706				DRL
SN 028-03748701033	Drill # 5	Dynamotion/ATI Model MSA6706				DRL
SN 028-0331950103	Drill # 6	Dynamotion/ATI Model MSA6706				DRL
SN 028-03744801006	Drill	Dynamotion/ATI Model MSA6706				DRL
SN 130	Tape Machine	Teknek Quick Tape				DRL

SN 4763	Pin Press	Barnaby Model 802F				DRL
SN XRT-3404	X-Ray Unit	Multiline Technology XRT				DRL
SN A0012-6975	X-Ray	Glennbrook Technologies RTX-113				DRL
NSN	Deburr	IS International 0193468				
NSN	Hole Cleaning System	Finishing Services, Inc. MK-2				
SN 0102040	Pumice Scrubber	IS International Pumex SHD/A				
SN 074-259	Electroless Cu Line	Chemcut CS 517				
SN 02.92261	Scrubber	IS International Scrubbox SHD/A				
SN34843B/12-22	HDI Conductive Polymere Line	Hollmuller				
NSN	Desmear Line, Permanganate	Hollmuller				
NSN	Developer	Coates ASI				OL
NSN	Ni/Au Tab plate Line	Eidschun E120 Automatic				
NSN	Electrolytic Ni/Au Plate line	Cuircuit Chemistry Equip. 35-304-ECCC-001				
SN 2045	Electrolyte Cu Line	Eidschun E220				
NSN	Board Washer	Entek/Silver/Immersion Au				
NSN	Entek Line					
NSN	Immersion Silver Line					
NSN	Omikron White Tin Line					
NSN	Immersion Tin Line					
NSN	Combiner Tin Lead Line					
NSN	ENIG Line					
NSN	Electrolytic Cu (Hand line)					
NSN	Zincate Line					
NSN	Board washer (by stripper)					
NSN	Resist Stripper machine					
NSN	Pumice Scrubber	IS International				
NSN	Tin lead Strip	Coates ASI				
SN 074-272	Stripper	Chemcut CS 811-30				
NSN	Etcher	Quartech Corp				
NSN SN 9806PX514093	Copper Via Fill Line SM Developer	Coates ASI Model Phoenix				

NSN	Oven	Circuit Automation TC 120				
NSN	Oven	Circuit Automation TC 120				
NSN	PAL Final Plate Line	Process Automation Int'l Ltd.				
SN 5119	Horizontal Hot Air Solder Level	Teledyne Halco Unicote 175				
SN 5005	Horizontal Hot Air Solder Level	Teledyne Halco Unicote 175				
	Flouroetch Line					
CN 10212	Oven	Greive				
SN 457-891061	Contour Machine	Doall Mfg Model 2013V				
SN 18210	Press	Gerver Type GP-21				
SN 9-089M	Reflow Oil WS220	Proheco Mfg Co. Model HOP-30256				
SN F49100	Oven	CSUN Mfg Ltd. Model S140-SA				
NSN	Laser Drill, Dual Mode	Excellon Cobra				
NSN	Drill, High Speed w/Vision	Excellon C129				

SECTION 4

TECHNOLOGY PROFILE SPECIFICS

DATE COMPLETED 08/19/2011

4.1 ADMINISTRATION

4.1.1 CAPACITY PROFILE	EST %	COMMENTS
A) Total annual capacity in square meters (surface area) per month	2146	
B) Presently running at ____ % of capacity	70	

4.1.2 PERCENTAGE OF DOLLAR VOLUME	EST %	COMMENTS
A) Single sided (rigid)	<1	
B) Double sided (rigid)	14	
C) Multilayer (rigid)	85	
D) Single side (unreinforced-flex)	0	
E) Double sided (unreinforced-flex)	0	
F) Multilayer (unreinforced-flex)	0	
G) Multilayer (rigid/flex)	0	

4.1.3 PANEL PRODUCTION PROFILE	UNITS PER MONTH
A) Size of a production lot in panels	
1) Normal	32
2) Smallest	1
B) Number of layers per month	
1) High Production	Layers = 7700 Panels = 2450
2) Medium Production	Layers = 11000 Panels = 3500
3) Low Production	Layers = 3300 Panels = 1050
3) Short run	2500 panels per month
4) Prototype	1050 panels per month

C) Average lead time (delivery) as defined in B)			
1) High Production	3-5 weeks		
2) Medium Production	3 weeks		
3) Low Production	2 weeks		
3) Short run	1 week		
4) Prototype	24 hours – 2 weeks		
Quick turn - No. of days_____.			
D) Product delivered in full panel or array sub-panel format			
1) Total in panel or array format	30 %		
2) Scored format	30 %		
3) Tab breakaway format	30 %		
4) Other	10 %		
5) Total to customer layout	100 %		
6) Total to manufacturing layout			
E) Product delivered in board format			
1) Total in board format	To customer specification		
2) Extracted: scored to size	To customer specification		
3) Extracted: sheared to size	To customer specification		
4) Extracted: routed to size	To customer specification		
4.1.4 APPROVAL AND CERTIFICATION	YES	NO	COMMENTS
A) Company approvals			
1) UL approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	94V Level_O
2) Canadian standards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3) MIL-P-55110	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4) MIL-PRF-31032	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5) ISO-9002	<input type="checkbox"/>	<input type="checkbox"/>	
6) ISO-9001:2000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7) ISO-14000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8) BABT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

9) EEC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10) Customer satisfaction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B) Other certification information			
1)Laminate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	UL 170 degree C FR4/FR1/CEM1/ RoHS compliant
2)Quality standards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	QS9000
3)Equipment calibration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Third Party 70% In-House 30%

4.1.5 CUSTOMER INTERFACE PROFILE	YES	NO	COMMENTS
A) Modem capability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Email, FTP site
B) Baud rate			N/A
C) Data verification technique	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Net List/ IGI Software
D) Engineering change order process	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E) Job status reporting to customers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Customer Service

4.1.6 OTHER CAPABILITIES	YES	NO	COMMENTS
A) Facility research and development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B) (Automated) On-line shop floor control/MRP system	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Paradigm
C) Process control system	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D) Operator training system	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

4.2 PROCESS ORIENTATION

4.2.1 LAMINATE MATERIAL	EST %	COMMENTS
A) Most commonly used laminates (G10, FR4, etc.)	80 4 6	Brand name Isola/ Type FR4 Arlon Nelco
B) Other laminate material		Dupont/Rogers/Taconic/Arlon
1) Planar resistor layers		UL approved <input type="checkbox"/>
2) BT epoxy	1	UL approved <input type="checkbox"/>
3) Kevlar		UL approved <input type="checkbox"/>
4) Teflon	10	UL approved <input type="checkbox"/>
5) Polyimide	4	UL approved <input type="checkbox"/>
6) Cyanate ester		UL approved <input type="checkbox"/>
7) Other	3	UL approved <input type="checkbox"/>
C) Specification to which laminate is purchased (check all that apply) <input checked="" type="checkbox"/> MIL-P-13949 <input type="checkbox"/> IPC-4204 <input checked="" type="checkbox"/> IPC-4101 <input checked="" type="checkbox"/> UL Approved <input checked="" type="checkbox"/> IPC-4103 <input type="checkbox"/> Other <input type="checkbox"/> IPC-4202 <input type="checkbox"/> IPC-4203		
D) Laminate storage <input checked="" type="checkbox"/> Uncontrolled <input type="checkbox"/> Humidity controlled <input type="checkbox"/> Temperature controlled <input type="checkbox"/> Dry box <input checked="" type="checkbox"/> JIT inventory		Prepreg, B Stage in Temp/humidity controlled area
E) Panel size configurations in X, Y dimensions maximum X <u>533</u> Y <u>609</u> mm minimum X <u>406</u> Y <u>157</u> mm other X <u>457</u> Y <u>609</u> mm		

4.2.2 PROCESS PRECISION SPECIFICS	YES	NO	VALUE	COMMENTS
A) Maximum printed board thickness built in volume				
1) Single sided	x		.125	
2) Double sided	x		.093	
3) Multilayer	x		.125	
4) Rigid flex	x			
B) Printed board electrical performance capability				
1) Impedance control	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2) Capacitance control	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
3) Microstrip boards	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
C) Tooling system description				
1) Same holes in panels used for all processes	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2) Optical registration	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Process: CA Picard, PEP. LDI Real time X-Ray, Optical Drill, Multiline Optimizer
3) Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Optical Tooling

4.2.3 OTHER PROCESS ORIENTATION SPECIFICS	YES	NO	SYSTEM	COMMENTS
A) Solder mask over bare copper	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
B) Plating/coating information				
1) Tin/lead reflow	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2) Hot air leveling	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3) Azole organic	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4) Conductive	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
C) Hole formation				
1) Hole cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2) Hole cleanliness verified	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

4.3 PRODUCT DESCRIPTION

*CONSISTENCY IMPLIES YIELDS IN EXCESS OF 80%

4.3.1. THROUGH HOLE INSERTION	EST %	SIZE (MM) - +/- TOL	COMMENTS
A) Smallest conductor width and tolerance produced with consistency			
1) Outer layers (print and etch)		Size <u>101</u> mm Tol \pm <u>25</u> mm	
2) Inner layers (print and etch)		Size <u>76</u> mm Tol \pm <u>13</u> mm	
3) Outer layers (plated)		Size <u>101</u> mm Tol \pm <u>25</u> mm	
4) Inner layers (plated)		Size <u>101</u> mm Tol \pm <u>25</u> .mm	
5) Outer layers (additive plating)		Size <u>101</u> mm Tol \pm <u>50</u> mm	
6) Inner layers (additive plating)		Size <u>101</u> mm Tol \pm <u>25</u> mm	
B) Smallest plated-through hole (PTH) and tolerance consistently produced in 1.5mm thickness material or multilayer board			
1) Minimum PTH diameter		Size <u>152</u> mm Tol \pm <u>76</u> mm	
2) Largest panel where this hole can be controlled (across diagonal)		Size <u>457 x 609</u> mm Tol \pm _____ .mm	
C) Largest hole size that can be drilled and plated through in a 1.25mm diameter land while maintaining an annular ring of 0.125mm in large/small boards			
1) Largest board size (across diagonal)		Size <u>571 x 800</u> mm	
2) Largest hole diameter		Size _____ mm	Print specified finished hole size
3) Smallest board size (across diagonal)		Size _____ mm	5 x 17 mm in array form
4) Largest hole diameter		Size _____ mm	Print specified finished hole size
D) Surface mount land pattern pitch (check all that apply)			
<input checked="" type="checkbox"/> 1.27mm [.050] <input checked="" type="checkbox"/> 0.63mm [.025]			
<input checked="" type="checkbox"/> 0.5mm [.020] <input checked="" type="checkbox"/> 0.4mm [.016]			
<input checked="" type="checkbox"/> 0.3mm [.012] <input checked="" type="checkbox"/> 0.25mm [.010]			
<input type="checkbox"/> Other _____ .			

E) Solder mask dam between lands (check all that apply) <input checked="" type="checkbox"/> 1.27mm [.050] <input checked="" type="checkbox"/> 0.63mm [.025] <input checked="" type="checkbox"/> 0.5mm [.020] <input checked="" type="checkbox"/> 0.4mm [.016] <input checked="" type="checkbox"/> 0.3mm [.012] <input checked="" type="checkbox"/> 0.25mm [.010] <input type="checkbox"/> Other _____						
F) Flatness tolerance (bow & twist) after reflow or solder coating <input type="checkbox"/> 1.5% <input checked="" type="checkbox"/> 1.0% <input type="checkbox"/> 0.5% <input type="checkbox"/> Other ____						
4.3.2 PRODUCT QUALITATIVE AND QUANTITATIVE INFORMATION	YES	NO	QUANTITY OF PANELS	NUMBER or DIMENSION	COMMENTS	
A) Multilayer layer count						
1) Maximum layers fabricated in volume (Maximum Lot)			22			
2) Maximum layers fabricated in prototype (Minimum Lot)			32			
B) Buried vias produced consistently in volume	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
1) Size				.012"	Drilled, depending on board thickness	
2) Number of layers			22			
B) Blind vias produced consistently in volume	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
1) Size				.008"	Drilled	
2) Number of layers					Customer specific based on dielectric requirements	
1) Controlled depth drilling	<input checked="" type="checkbox"/>	<input type="checkbox"/>			Plated countersinks / counterbores / edge milling	
2) Total number of layers					Customer specific	

4.4. TESTING CAPABILITY

4.4.1 TEST AND TEST EQUIPMENT CAPABILITY	YES	NO	COMMENTS
A) SMT centerline pitch that can be electrically tested <input checked="" type="checkbox"/> 0.63mm [.025] <input checked="" type="checkbox"/> 0.5mm [.020] <input checked="" type="checkbox"/> 0.4mm [.016] <input checked="" type="checkbox"/> 0.3mm [.012] <input checked="" type="checkbox"/> 0.25mm [.010] <input type="checkbox"/> Other			
B) Double sided simultaneous electrical testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1) Equipment type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Everett Charles - Double sided; TTI; Microcraft ATG - Single sided
2) X-ray fluorescence inspection equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Glenbrook
3) TDR equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Polar Instruments
4) Hi-pot test equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5000 volt
5) Four-wire kelvin tester	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6) Inductance Testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Loaded core; automated inductance testing
7) Cleanliness testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Omega 600

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4.4.2 AUTOMATED OPTICAL INSPECTION USAGE	EST %	COMMENTS
A) Before etching		
B) After etching	10	Camtek Orion
C) Internal layers	100	Camtek Orion
D) Final inspection		
E) Other		
F) Conductor/clearance normally inspected by AOI equipment		
1) <input checked="" type="checkbox"/> 0.05mm [.002]		All Signal layers
2) <input checked="" type="checkbox"/> 0.05-.10mm [.002-.004]		All Signal layers
3) <input checked="" type="checkbox"/> >.10mm [.004]		All Signal layers
4) <input checked="" type="checkbox"/> Planes		AQL
G) CAD download to AOI	100	Yes

SECTION 5

QUALITY PROFILE

DATE COMPLETED 08/19/2011

GENERAL INFORMATION

COMPANY NAME Best Circuit Boards, Inc. dba Global Innovation Corp.	
CONTACT Sven A. Bock	
TELEPHONE NUMBER 214-291-1427 main Ext 107	FAX NUMBER 214-291-1431 main

This section of the Manufacturer's Qualification Profile is intended to describe the Total Quality Management (TQM) activity in place of being implemented at the manufacturing facility identified in the site description of this MQP.

To ease in the task of identifying the TQM program being planned or underway at the manufacturing site, the activities have been divided into twenty sections which when completed, provide the total picture of the posture toward managing quality issues. Each section contains a number of questions with regard to the topic under review.

It is not the intent to have the questions be all encompassing, nor is every question applicable to all manufacturers. However, identification of the status, related to each questions, when considered as a whole will convey an impression of the progress that the company has achieved in adopting the principles of total quality management.

The twenty sections, in order of the occurrence are:

- | | |
|---------------------------------------|--|
| 5.1 General Quality Programs | 5.11 Statistical Process Control |
| 5.2 New Products/Technical Services | 5.12 Problem Solving |
| 5.3 Customer Satisfaction | 5.13 In-Process Control |
| 5.4 Computer Integrated Manufacturing | 5.14 Receiving Inspection |
| 5.5 Process Documentation | 5.15 Material Handling |
| 5.6 Quality Records | 5.16 Non-Conforming Material Control |
| 5.7 Skill, Training & Certification | 5.17 Inspection and Test Plan |
| 5.8 Subcontractor Control | 5.18 Product Inspection/Final Audit |
| 5.9 Calibration Control | 5.19 Tooling Inspection, Handling, & Storage |
| 5.10 Internal Audits | 5.20 Corrective Action |

Each section provides a status report related to each question. The question may not be applicable, no activity has started as yet, or the company may have developed an approach to the issues raised by the questions. An (X) is indicated in the appropriate column. If deployment/implementation has started, the status is reported as percent deployment; this is indicated in column 4. The percentage number closely approximates the status of deployment. If deployment exists, the percentage results that have been achieved is indicated in column 5. Results are based on expected goals. Not providing percent information in either the deployment or results column implies a lack of activity in the particular area.

The quality descriptions requested are completed on the following pages by checking (X) the appropriate column to reflect the status of the manufacturing facility TQM program. Additional information may be provided as comments shown below, or on individual sections, or additional sheets as necessary.

COMMENTS

5.1 GENERAL QUALITY PROGRAMS		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are quality objectives and responsibilities clearly stated, widely distributed and understood through the company?			X	100	100
2.	Is there a quality function or well defined organization which provides customer advocate guidance to the total organization and is this position fully supported by management?			X	100	100
3.	Does a quality measurement system exist with clearly defined metrics and is it utilized as a management tool?			X	100	100
4.	Are work instructions approved and controlled; and are they under revision control?			X	100	100
5.	Are the quality procedures and policies current and available at the point of application; and are they under revision control?			X	100	100
6.	Are benchmark and customer satisfaction studies done to determine best in class for all products, services, and administrative functions; and are quality goals set?			X	15	10
7.	Are Statistical Process Control (SPC) principles understood by all levels of management?			X	90	90
8.	Are there programs with sufficient resources assigned to support corrective actions and prevention?			X	100	100
9.	Does management solicit and accept feedback from the work force?			X	100	100
10.	Is there management support of ongoing training (including quality training), and is it documented by an organizational training plan?			X	100	100
11.	Are there regular management reviews of elements of the quality improvement process, including feedback for corrective action, and are the results acted upon?			X	90	90
12.	Are the quality and reliability goals aggressive relative to customer expectations and targeted at continuous improvement?			X	100	100
13.	Are the people who are responsible for administering the quality assurance function technically informed?			X	100	100
14.	Does Management have a "defect prevention" attitude to achieve continuous improvement?			X	100	100

5.2 NEW PRODUCTS/TECHNICAL SERVICES		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Do new product/technology/service development policies and procedures exist, and do they result in clearly defined project plans with appropriate measureables and approvals?	X				
2.	Is quantitative benchmarking used to evaluate all new products/technologies/services in comparison to best-in-class offerings?	X				
3.	Does a roadmap exist to ensure continued development of leading edge, best-in-class products/technology/services?	X				
4.	Is the capability of each operation which controls critical-to-function characteristics for new products, fully certified?	X				
5.	Are statistical tools used in the development of robust (high yield) new processes, products, and services?	X				
6.	When new product/technology/service requires a new process, is it developed jointly and concurrently with the customer and/or suppliers?	X				
7.	Are design reviews conducted on a scheduled basis which properly address the process capability indices of critical-to-function and product/service characteristics?	X				
	Is the new product/technology/service, as produced by the process, verified to meet all customer satisfaction requirements?	X				

COMMENTS

5.3 CUSTOMER SATISFACTION		STATUS				
		DESCRIPTION OF PROGRAM				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
1.	Is there a measurement system in place to assess the customer's perception of complete performance?			X	80	80
2.	Is an independent (unbiased) customer survey routinely conducted?			X	50	50
3.	Is there an internal measurement system within the organization which correlates to the level of customer satisfaction?			X	75	75
4.	Are there specific goals for achieving Total Customer Satisfaction, both internal and external?		X			
5.	To what extent are customer satisfaction goals disseminated and understood by everyone in the organization?			X	100	100
6.	Does management regularly review and assess all operating systems to determine if barriers to customer satisfaction exist and are appropriate action plans then implemented?			X	100	100
7.	Is there a method in place to obtain future customer requirements?			X	100	100
8.	Are all findings of customer dissatisfaction reported back to the proper organization for analysis and corrective action?			X	100	100
9.	Are customer satisfaction requirements formally defined and documented, and are they based on customer input?			X	100	100
10.	Do all support organizations understand their role in achieving total customer satisfaction?			X	100	100

5.4 COMPUTER INTEGRATED MANUFACTURING		STATUS				
		DESCRIPTION OF PROGRAM				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
1.	Are systems integrated to allow electronic transfer of information between multiple systems to eliminate redundant data entry?			X	100	100
2.	Can customers electronically transfer CAD/CAM directly into manufacturing?			X	100	100
3.	Can customers electronically transfer order information directly into the business system?			X	100	100
4.	Is data electronically shared between shop floor control and process control systems (i.e., CNC, SPC, Electrical Test, AOI, etc.)?			X	100	100
5.	Are planning systems (MRP, forecasting, capacity planning, financial planning, etc.) electronically integrated with operation systems (order processing, purchasing, inventory management, shop floor control, financial/cost control, etc.)?			X	80	80
6.	Is information available from system processes in real time (vs. batch processing)?			X	80	80
7.	Are processes and procedures documented and available on-line?			X	100	100
8.	Do all functional departments have system access to key financial, manufacturing, sales, and operational data, as it relates to their functional objectives?			X	100	100
9.	Are computer simulation and design tools used to the maximum extent practicable in the design of new products/technologies/services			X	100	100

COMMENTS

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5.5 PROCESS DOCUMENTATION		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are manufacturing product, process, and configuration documents under issue control?			X	100	100
2.	Are "preliminary" and "special product" specifications controlled?			X	100	100
3.	Does the system ensure that the most current customer specifications are available to the manufacturing personnel?			X	100	100
4.	Does the system ensure that the most current material specifications are available to the procurement function?			X	100	100
5.	Are incoming orders reviewed for revisions and issue changes?			X	100	100
6.	Is conformance to customer specifications assured before an order is accepted?			X	100	100
7.	Is customer feedback provided when designs do not meet manufacturability requirements?			X	100	100
8.	Are critical characteristics classified, relative to impact on product performance?			X	100	100
9.	Are customers informed of changes made to products controlled by customer drawings or specifications?			X	100	100
10.	Is there an effective internal deviation control procedure and, are customer requested deviations documented and followed?			X	100	100
11.	Do new product development procedures exist, and are they followed in the design development process?	X				

5.6 QUALITY RECORDS		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are records of inspection and process control maintained and available for review?			X	100	100
2.	Are records of equipment and equipment maintenance kept?			X	100	100
3.	Is the record and sample retention program defined?			X	100	100
4.	Are quality data used as a basis for corrective action?			X	100	100
5.	Are quality data used in reporting performance and trends to management?			X	100	100
6.	Are quality data used in supporting certifications of quality furnished to customers?			X	100	100
7.	Is field information used for corrective action?	X				
8.	Does a cost of quality measurement system exist?			X	100	100
9.	Are customer reported quality problems responded to, and resolved in the time period requested?			X	100	100
10.	Is quality information on production material rejects provided to sub-suppliers with required corrective action?			X	100	100
11.	Are computers used to collect and analyze quality data?			X	100	100

COMMENTS

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5.7 SKILLS, TRAINING, & CERTIFICATION		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Does management ensure that all personnel are trained in their role for achieving Total Customer Satisfaction?			X	100	100
2.	Do all personnel understand how their performance impacts internal and external customer satisfaction?			X	100	100
3.	Do all personnel who contact external customers reflect quality improvement programs?			X	100	100
4.	Do personnel participate in professional societies and growth programs?			X	100	100
5.	Are all personnel trained in sufficient detail to support key initiatives?			X	70	70
6.	Are the results of training evaluated and indicated program changes made?			X	100	100
7.	Does a policy exist which encourages the cross training and rotation of personnel, and is this policy used as the basis of job progression?		X			
8.	Are performance standards participatively developed, and regularly applied for all personnel?			X	100	100
9.	Are Total Customer Satisfaction programs and resulting successes publicized to all personnel?			X	100	100
10.	Do goal setting and reward/incentive programs support the quality improvement process?			X	100	100

5.8 SUBCONTRACTOR CONTROL		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are requirements defined, communicated, and updated to ensure that the supplier understands expectations?			X	100	100
2.	Does a system exist which measures the performance of the supplier and communicates such information to the supplier? (i.e., supplier rating system)		X			
3.	Have the organization's processes been characterized to identify the critical requirements for the suppliers products?		X			
4.	Have the capabilities of the supplier's processes been assessed and considered in the establishment of the requirements?			X	100	100
5.	Have partnerships been established with suppliers, and is assistance provided to ensure that each supplier has the capability to consistently supply conforming products?			X	100	100
6.	Have quality and cycle time metrics and improvement goals been established participatively with the supplier?	X				
7.	Has a system been established with the supplier for identification and verification of corrective action?				100	100
8.	Have the requirements for supplier materials been properly characterized and specified to ensure conformance of the product/service to the customer satisfaction requirements?				100	100
9.	Is there a supplier certification program or equivalent procured material/service continuous quality improvement program?			X	100	100
10.	Can all personnel who contract suppliers properly reflect appropriate quality improvement programs and status to them?			X	100	100

COMMENTS

5.9 CALIBRATION CONTROL		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are calibration and preventative maintenance programs in place and documented?			X	100	100
2.	Are calibration and maintenance personnel trained?			X	100	100
3.	Is traceability to NIST maintained?			X	100	100
4.	Is quality measurement and control equipment current, effective, and sufficiently integrated with production equipment?			X	100	100
5.	Is the history of quality measurement and control equipment documented?			X	100	100
6.	Has repeatability of measuring devices and inspection or testing processes been established and monitored; are gauge capability studies conducted and GR&R ratios acceptable(<10%)?			X	100	100
7.	Are calibration and preventative maintenance cycles on schedule?			X	100	100
8.	Is the use of non-calibrated equipment for design and production purposes prohibited?			X	100	100
9.	Are tools and fixtures used as criteria or acceptability of product/work fully qualified and identified?			X	100	100
10.	Are calibration intervals defined in accordance with industry standards or manufacturer's recommendations and the calibration history of the equipment?			X	100	100

5.10 INTERNAL AUDITS		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are regular reviews of the product/process conducted and are goals/plans established to continually improve?			X	100	100
2.	Are the processes/products properly documented and controlled? Do they include appropriate customer requirements and are they executed in conformance to the documentation?			X	100	100
3.	Are the required quality checks built into the operations within the manufacturing, field installation, and service process, and is the resulting data maintained and promptly acted upon?			X	100	100
4.	Are all pertinent methods of statistical quality control properly, effectively and efficiently used?			X	80	80
5.	Does a process change control system exist, and are customers informed of changes made to products and processes with customer approval prior to the change, when required?			X	100	100
6.	Are the operators within the process provided with written work instructions and are they trained?			X	100	100
7.	Is the receipt, handling, storage, packaging and release of all material, including customer provided items, at all stages, specified and controlled to prevent damage or deterioration, and to address obsolete material?			X	100	100
8.	Is there a first in/first out (FIFO) system in place, and is it followed?			X	100	100

COMMENTS

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5.11 STATISTICAL PROCESS CONTROL		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Have the personnel who will be responsible for guiding the implementation of SPC been designated?			X	100	100
2.	Are statistical techniques used to reduce variation in the engineering process before the start of production?			X	100	100
3.	Is the quality system dependent upon process rather than product controls?			X	100	100
4.	Is the capability of critical processes and machines measured and monitored with CPK's >1.5, and targeted with CP of 2.0?			X	100	100
5.	Are incapable processes or machines targeted for improvement or replacement?			X	100	100
6.	Is SPC implemented for all critical processes?			X	100	100
7.	Are procedures that control the reaction to out-of-control situations adequate and effective?			X	100	100
8.	Are operators trained in the use of appropriate statistical techniques, and are they properly applying them?			X	70	70
9.	Are advanced problem solving techniques used by engineers to solve problems? (Design of Experiments, planned experimentation, advanced diagnostic tools, etc.)			X	100	100
10.	Are control charts and other process controls properly implemented?			X	100	100
11.	Is statistical process control being practiced in work centers and are yields being recorded and plotted on a scheduled basis, with respect to upper and lower control limits?			X	100	100

5.12 PROBLEM SOLVING		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are employees trained in problem solving techniques, in comparison to the needs of the organization?			X	80	80
2.	Does the organization utilize participative problem solving techniques to identify, measure and resolve internal and external problems?			X	100	100
3.	Are problem solving efforts timely and effective?			X	100	100
4.	Are applied resources sufficient to remove problem solving constraints?			X	100	100
5.	Are statistical techniques used for problem solving?			X	80	80
6.	Are quality data used to identify barriers, and to determine the priority of problems?			X	80	80
7.	Is there a policy/procedure that includes the use of problem solving techniques to systematically drive reduction in variability?			X	100	100

COMMENTS	

5.13 IN-PROCESS CONTROL		STATUS				
		DESCRIPTION OF PROGRAM				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
1.	Are process capabilities established and maintained on all major processes? (critical parameters)			X	100	100
2.	Are in-process inspections, test operations, and processes properly specified and performed?			X	100	100
x	Are in-process inspection facilities and equipment adequate?			X	100	100
4.	Are the results of in-process inspections used in the promotion of effective preventative action and corrective action?			X	100	100
5.	Is preventative maintenance performed on the equipment and facilities?			X	100	100
6.	Are housekeeping procedures adequate and how well are they followed?			X	100	100
7.	Are process management plans established, and are critical parameters followed?			X	100	100
8.	Are work areas uncluttered and free of excess work-in-process, supplies, debris, etc? Is the environment conducive to producing quality work? Is proprietary information adequately protected?			X	100	100
9.	Are certifications and in-process inspection results used in making final acceptance decisions?			X	100	100
10.	Are methods and procedures for the control of metallurgical, chemical, and other special processes established and followed?			X	100	100

5.14 RECEIVING INSPECTION		STATUS				
		DESCRIPTION OF PROGRAM				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
1.	Are receiving inspection facilities and equipment adequately and properly maintained?			X	100	100
2.	Are receiving inspection procedures documented and followed?			X	100	100
3.	Are receiving inspection results used for corrective and preventive action?		X			
4.	Are the procedures for storage and timely disposition of discrepant material in place and followed?			X	80	80

COMMENTS

5.15 MATERIAL HANDLING		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are procured material releases from receiving inspection clearly identified, as to acceptance status?			X	100	100
2.	Are procedures to facilitate limited life materials, such as prepreg, in place, properly controlled, and monitored?			X	100	100
3.	Are procured items identified with some means of traceability (serial number, lot number, date code, etc.)?			X	100	100
4.	Are procedures and facilities adequate for storage, release and control of materials?			X	100	100
5.	Are in-store and in-process materials properly identified and controlled?			X	100	100
6.	Is in-process material protected from corrosion, deterioration, and damage?			X	100	100

5.16 NON-CONFORMING MATERIAL CONTROL		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Is non-conforming material identified, segregated from regular production material, and properly dispositioned?			X	100	100
2.	Are non-conforming materials properly identified and controlled to prevent inadvertent use?			X	100	100
3.	Is the review and disposition of non-conforming materials defined, and are provisions made for inclusion of the customer in disposition decision?			X	100	100
4.	Are procedures for controlling non-conforming materials, and for ensuing corrective action, in place and followed?			X	100	100
5.	Do procedures provide for material review by a committee consisting of Quality and Engineering (as a minimum), to determine the disposition of non-conforming materials? (deviating from drawings or specification)			X	100	100
6.	Do supplier's procedures and controls for corrective action prevent recurrence of non-conformances?			X	100	100
7.	Is there a system for coordinating necessary corrective action with purchasing personnel?		X			
8.	Does the corrective action extend to all applicable causes of non-conformance (e.g., design, workmanship, procedures, equipment, etc.)?			X	100	100

COMMENTS

5.17 INSPECTION AND TEST PLAN		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are statistical techniques used in determining the acceptability of finished goods to customer requirements?			X	100	100
2.	Are periodic tests conducted to audit reliability and environmental performance of the final product?			X	100	100
3.	Is CPK tracking performed for critical characteristics, with plans to achieve CPK = 1.5 with a target of CP of 2.0?			X	100	100
4.	Is root cause failure analysis performed for internal and external failures, and is appropriate corrective action implemented?			X	100	100
5.	Are test and inspection personnel trained in the procedures of their operations, and are those procedures being followed?			X	100	100
6.	Is the new product/technology/service, as produced by the processes, verified to meet all customer satisfaction requirements?			X	100	100

5.18 PRODUCT INSPECTION/FINAL AUDIT		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are final product acceptance procedures documented and followed?			X	100	100
2.	Are all specific customer product audits conducted, as required?			X	100	100
3.	Are inspectors trained for the tasks performed?			X	100	100
4.	Are flow charts or milestones developed with checkpoints readily available?			X	100	100
5.	Is a system in place which denotes inspection performed; e.g., use of initials, stamps, labels, bar codes, etc., affixed to production documentation?			X	100	100
6.	Is a quality system established and maintained for control of product/production documentation?			X	100	100
7.	Is "accept/reject" criteria defined and available for use?			X	100	100
8.	Is a final audit performed to ensure that all required verifications and tests, from receipt of materials through point of product completion, have been accomplished?			X	100	100
9.	Are packing and order checking procedures documented and followed?			X	100	100

COMMENTS

5.19 TOOLING INSPECTION, HANDLING, & STORAGE		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are temperature, humidity, laminar flow controls in place to prevent contamination, and to assure dimensional stability?			X	100	100
2.	Do operators use hairnets, gloves & lab coats in all photolab and photoexposure areas?			X	100	100
3.	Are work instructions and related forms in place to control all applicable tooling requirements, as stated in the customer's purchase order?			X	100	100
4.	Are customer provided artworks controlled with regard to handling, storage, revision control and relationship to converted production phototools (working films)?			X	100	100
5.	Are production phototools (working films) controlled with regard to handling, storage, use life, and relationship to customer purchase order?			X	90	90
6.	Are customer provided artworks and production phototools (working films) inspected, including dimensional checks?			X	90	90
7.	Are all tools, fixtures, and other devices, used for tooling inspection and control, maintained under the calibration control procedure?			X	100	100
8.	Are records showing initial acceptance, periodic checks, and any needs for rework and/or modification available?			X	100	100

5.20 CORRECTIVE ACTION		STATUS				
		Not Applicable	Not Started	Approach Developed	Percent Deployed	Percent Results
DESCRIPTION OF PROGRAM						
1.	Are final acceptance inspection results used for corrective and preventative action?			X	100	100
2.	Is root-cause analysis performed for non-conformances? This includes, but is not limited to, non-conformances (problems) caused by suppliers, found/caused "in-house" during processing, or those reported by the customer.			X	100	100
3.	Is positive action taken to prevent recurrence of problems, and are there documented reports/records of each occasion?			X	100	100
4.	Do procedures and systems provide for ensuring that replies are made to customer requests for correction action within the time limit specified?			X	100	100
5.	Is corrective action controlled and documented for all applicable work centers?			X	100	100
6.	When corrections are made, is their effectiveness subsequently reviewed and monitored?			X	100	100

COMMENTS	

SECTION 6 (CHECK ONE IN EACH LINE THAT APPLIES)

MANUFACTURING HISTORY (See Section 2 Site Capability)

DATE COMPLETED
08/19/2011

Please complete as many history profiles so that the total descriptions of products you manufacture account for production orders that reflect 70% of your business. History profiles are for board or board family (board types may be grounded together if they are similar).

BOARD TYPE	DATE OF ORDER	MATERIAL	HISTORY #
VIA TYPE	PRODUCTION QUANTITY	TOTAL YEARLY PRODUCTION %	

Dimensions in millimeters (inches in brackets)

BOARD			HOLES		
BOARD SIZE DIAGONAL	TOTAL BOARD THICKNESS	NUMBER CONDUCTIVE LAYERS	DIA DRILLED HOLES	TOTAL PTH TOL (MAX-MIN)	LOCATION TOL DTP
<input type="checkbox"/> <250 [<10.00]	<input type="checkbox"/> <1,0 [$<.040$]	<input type="checkbox"/> 1-4 [1-4]	<input type="checkbox"/> >0,5 [$>.020$]	<input type="checkbox"/> >0,250 [$>.010$]	<input type="checkbox"/> >0,50 [$>.020$]
<input type="checkbox"/> 250 [10.00]	<input type="checkbox"/> 1,0 [.040]	<input type="checkbox"/> 5-6 [5-6]	<input type="checkbox"/> 0,5 [.020]	<input type="checkbox"/> 0,250 [.010]	<input type="checkbox"/> 0,50 [.020]
<input type="checkbox"/> 350 [14.00]	<input type="checkbox"/> 1,6 [.060]	<input type="checkbox"/> 7-8 [7-8]	<input type="checkbox"/> 0,4 [.016]	<input type="checkbox"/> 0,200 [.008]	<input type="checkbox"/> 0,40 [.016]
<input type="checkbox"/> 450 [17.50]	<input type="checkbox"/> 2,0 [.080]	<input type="checkbox"/> 9-12 [9-12]	<input type="checkbox"/> 0,35 [.014]	<input type="checkbox"/> 0,150 [.006]	<input type="checkbox"/> 0,30 [.012]
<input type="checkbox"/> 550 [21.50]	<input type="checkbox"/> 2,5 [.100]	<input type="checkbox"/> 13-16 [13-16]	<input type="checkbox"/> 0,30 [.012]	<input type="checkbox"/> 0,125 [.005]	<input type="checkbox"/> 0,25 [.010]
<input type="checkbox"/> 650 [25.50]	<input checked="" type="checkbox"/> 3,5 [.135]	<input type="checkbox"/> 17-20 [17-20]	<input type="checkbox"/> 0,25 [.010]	<input type="checkbox"/> 0,100 [.004]	<input type="checkbox"/> 0,20 [.008]
<input checked="" type="checkbox"/> 750 [29.50]	<input type="checkbox"/> 5,0 [.200]	<input checked="" type="checkbox"/> 21-24 [21-24]	<input checked="" type="checkbox"/> 0,20 [.008]	<input type="checkbox"/> 0,075 [.003]	<input type="checkbox"/> 0,15 [.006]
<input type="checkbox"/> 850 [33.50]	<input type="checkbox"/> 6,5 [.250]	<input type="checkbox"/> 25-28 [25-28]	<input type="checkbox"/> 0,15 [.006]	<input checked="" type="checkbox"/> 0,050 [.002]	<input type="checkbox"/> 0,10 [.004]
<input type="checkbox"/> >850 [>33.50]	<input type="checkbox"/> >6,5 [$>.250$]	<input type="checkbox"/> >28 [>28]	<input type="checkbox"/> <0,15 [.006]	<input type="checkbox"/> <0,050 [$<.002$]	<input checked="" type="checkbox"/> <0,10 [$<.004$]
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

CONDUCTORS

INTERNAL ELEC CLEARANCE (MIN)	INTERNAL COND WIDTH (MIN)	INTERNAL PROCESS ALLOWANCE	EXTERNAL ELEC CLEARANCE (MIN)	EXTERNAL COND WIDTH (MIN)	EXTERNAL PROCESS ALLOWANCE	FEATURE LOCATION DTP
<input type="checkbox"/> >0,350 [$>.014$]	<input type="checkbox"/> >0,250 [$>.010$]	<input type="checkbox"/> >0,100 [$>.004$]	<input type="checkbox"/> >0,350 [$>.014$]	<input type="checkbox"/> >0,250 [$>.010$]	<input type="checkbox"/> >0,100 [$>.004$]	<input type="checkbox"/> >0,50 [$>.020$]
<input type="checkbox"/> 0,350 [.014]	<input type="checkbox"/> 0,250 [.010]	<input type="checkbox"/> 0,100 [.004]	<input type="checkbox"/> 0,350 [.014]	<input type="checkbox"/> 0,250 [.010]	<input type="checkbox"/> 0,100 [.004]	<input type="checkbox"/> 0,50 [.020]
<input type="checkbox"/> 0,250 [.010]	<input type="checkbox"/> 0,200 [.008]	<input type="checkbox"/> 0,075 [.003]	<input type="checkbox"/> 0,250 [.010]	<input type="checkbox"/> 0,200 [.008]	<input type="checkbox"/> 0,075 [.003]	<input type="checkbox"/> 0,40 [.016]
<input type="checkbox"/> 0,200 [.008]	<input type="checkbox"/> 0,150 [.006]	<input type="checkbox"/> 0,050 [.002]	<input type="checkbox"/> 0,200 [.008]	<input type="checkbox"/> 0,150 [.006]	<input type="checkbox"/> 0,050 [.002]	<input type="checkbox"/> 0,30 [.012]
<input type="checkbox"/> 0,150 [.005]	<input type="checkbox"/> 0,125 [.005]	<input type="checkbox"/> 0,040 [.0015]	<input type="checkbox"/> 0,150 [.006]	<input checked="" type="checkbox"/> 0,125 [.005]	<input type="checkbox"/> 0,040 [.0015]	<input type="checkbox"/> 0,25 [.010]
<input type="checkbox"/> 0,125 [.005]	<input checked="" type="checkbox"/> 0,100 [.004]	<input type="checkbox"/> 0,030 [.0012]	<input checked="" type="checkbox"/> 0,125 [.005]	<input type="checkbox"/> 0,100 [.004]	<input type="checkbox"/> 0,030 [.0012]	<input type="checkbox"/> 0,20 [.008]
<input type="checkbox"/> 0,100 [.004]	<input type="checkbox"/> 0,075 [.003]	<input checked="" type="checkbox"/> 0,025 [.001]	<input type="checkbox"/> 0,100 [.004]	<input type="checkbox"/> 0,075 [.003]	<input checked="" type="checkbox"/> 0,025 [.001]	<input type="checkbox"/> 0,15 [.006]
<input checked="" type="checkbox"/> 0,075 [.003]	<input type="checkbox"/> 0,050 [.002]	<input type="checkbox"/> 0,020 [.0008]	<input type="checkbox"/> 0,075 [.003]	<input type="checkbox"/> 0,050 [.002]	<input type="checkbox"/> 0,020 [.0008]	<input checked="" type="checkbox"/> 0,10 [.004]
<input type="checkbox"/> <0,075 [$<.003$]	<input type="checkbox"/> <0,050 [$<.002$]	<input type="checkbox"/> <0,020 [$<.0008$]	<input type="checkbox"/> <0,075 [$<.003$]	<input type="checkbox"/> <0,050 [$<.002$]	<input type="checkbox"/> <0,020 [$<.008$]	<input type="checkbox"/> <0,10 [$<.004$]
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

SECTION 7

DATE COMPLETED

IDENTIFICATION OF PREVIOUS AUDITS (Optional)

Please complete as many forms as you feel reflect the intensity of your customer visits.

COMPANY AUDITORS	DATE OF AUDIT
AUDIT TEAM MEMBERS	AUDITOR REMARKS
	SPECIFICATIONS USED IN AUDIT
LENGHT OF AUDIT	
TEAM MEMBERS MAY BE CONTACTED AT	
COMPANY AUDITORS	DATE OF AUDIT
AUDIT TEAM MEMBERS	AUDITOR REMARKS
	SPECIFICATIONS USED IN AUDIT
LENGHT OF AUDIT	
TEAM MEMBERS MAY BE CONTACTED AT	
COMPANY AUDITORS	DATE OF AUDIT
AUDIT TEAM MEMBERS	AUDITOR REMARKS
	SPECIFICATIONS USED IN AUDIT
LENGHT OF AUDIT	
TEAM MEMBERS MAY BE CONTACT AT	

*REPEAT THIS FORM AS NECESSARY

SECTION 8

FINANCIAL REVIEW (OPTIONAL)

DATE COMPLETED

Please complete the following financial information that coincides with the company description and site information provided in section 1.

COMPANY FINANCIAL DESCRIPTION		
LEGAL NAME		
TAXPAYER ID NUMBER	DUNS NUMBER	TRADING SYMBOL
ANNUAL SALES	PRIOR YEAR	YEAR-TO-DATE
FISCAL YEAR		
BANK	ACCOUNT NUMBER	
BANK ADDRESS	STATE	ZIP
PROVINCE	COUNTRY	
BANK TELEPHONE NUMBER	FAX NUMBER	
COMMENTS		
SITE FINANCIAL DESCRIPTION		
SITE NAME		
TAXPAYER ID NUMBER	DUNS NUMBER	TRADING SYMBOL
ANNUAL SALES	PRIOR YEAR	YEAR-TO-DATE
FISCAL YEAR		
BANK	ACCOUNT NUMBER	
BANK ADDRESS	STATE	ZIP
PROVINCE	COUNTRY	
BANK TELEPHONE NUMBER	FAX NUMBER	
COMMENTS		

SECTION 9

MQP ELECTRONIC EDITING

This MS Word template comes with editable fields. IPC has made this electronic document available for ease of completing, updating, and filing the MQP, as well as to give the laminate manufacturer and customer a common interface. Using the template enables laminate manufacturers to maintain several customer specific files without the endless stream of paperwork.

Editable fields are highlighted in gray. To complete the fields in the template, use the TAB key to toggle from field to field, entering the information as instructed in the introductory text for each section.

The developers of this MQP strongly suggest the person at the laminate manufacturing facility responsible for creating and maintaining the MQP write protect the file to be sent.