



**PPAP
Production Part Approval Process**

Quick Reference Guide

PPAP Requirements	Level 1	Level 2	Level 3	Level 4	Level 5	Approximate Completion Planning Times	Additional Comments & Clarity
Part Submission Warrant (PSW)	x	x	x	x	x	1 Business Day	This is the form that summarizes the whole PPAP package. This form shows the reason for submission (design change, annual revalidation, etc.) and the level of documents submitted to the customer. There is a section that asks for "results meeting all drawing and specification requirements: yes/no" refers to the whole package.
Balloon Drawing		x	x	x	x	4 Hours	A copy of the customers print that has been modified to include a numbering schema to record inspection results for use with the First Article Inspection Report.
Material Certificate(s) of Conformance		x	x	x	x	1 Business Day	Certificates from Allied suppliers showing the materials received meet PO requirements.
First Article Inspection Report (FAIR)		x	x	x	x	2 Business Days (3pcs)	A list of every dimension noted on the ballooned drawing. This list shows the product characteristic, specification, the measurement results and the assessment showing if this dimension is "ok" or "not ok".
Process Failure Mode Effects Analysis (PFMEA)			x	x	x	1 Business Day	The PFMEA follows the Process Flow steps, and indicate "what could go wrong" during the fabrication and assembly of each component.
Control Plan			x	x	x	4 Hours	The Control Plan follows the PFMEA steps, and provides more details on how the "potential issues" are checked in the incoming quality, assembly process or during inspections of finished products.
Process Flow Chart			x	x	x	2 Hours	A diagram or list indicating all steps in the manufacturing process.
Part Thickness Study				x	x	2 Business Days	The systematic measuring and reporting of part thickness at pre-defined areas.
30pcs Capability Study					x	8 business Days	The measuring and reporting of pre-defined critical areas on 30 parts to determine process variance. (CPK)
TOTAL PLANNING TIME (Days)	1	5	6	8	16	Planning times are approximate and may be shorter or longer based on complexity and number of parts required.	
Other Activities							
Reverse Engineering						2 Business Days	The process of discovering the mathematical properties of parts, fixtures or tools shape through CMM scanning and probing.
Color Map for Tools						2 Business Days	The process of overlaying the actual tool to the designed mathematical geometry to show variance using color.
Color Map for Parts						2 Business Days	The process of overlaying the actual part to the designed mathematical geometry to show variance using color.
Picture Approval						5 Business Day	A picture comparison of a customer supplied sample vs. a current Allied part for obtaining approval to proceed by the customer. This document is also accompanied by a PSW, PFMEA, Control Plan, Process Flow Chart and Material COCs.