

PROJECT LEADER: X

DATE: X

PRODUCT CODE NAME: X

CHECKPOINT	ITEM ID	REQUIRED?		COMPLETED?		CHECKPOINT STEPS & ITEM DESCRIPTIONS	EXPLANATIONS (Reason for excluding an item must be explained)	APPROVERS				
		Y	N	Y	N							
1. CONCEPT DEFINITION	<b>Checkpoint Steps</b>								<ul style="list-style-type: none"> <li>• President</li> <li>• VP of Engineering</li> <li>• CFO</li> <li>• Product/Program Mgr</li> </ul> Approval indicates checkpoint steps are complete and resources to conduct market research is granted.			
	a					Initiate NPI checklist (This form)						
	b					Present product concept to approvers						
	c					Other (explain here)						
	d					Other (explain here)						
	e					Obtain approval to proceed to next checkpoint						
2. INVESTIGATION	<b>Checkpoint Steps</b>								<ul style="list-style-type: none"> <li>• President</li> <li>• VP of Engineering</li> <li>• CFO</li> <li>• Product/Program Mgr</li> </ul> Approval indicates checkpoint steps are complete and project may proceed based on results of market analysis.			
	a					Conduct market analysis and present findings to approvers						
	b					Complete form SOPO (financial justification)						
	c					Create project folder in workspace						
	d					Other (explain here)						
	e					Other (explain here)						
3. PRODUCT DEFINITION	<b>Checkpoint steps</b>								<ul style="list-style-type: none"> <li>• VP of Engineering</li> <li>• Product/Program Mgr</li> <li>• Sales/Cust. Svc Mgr</li> <li>• QA Mgr</li> <li>• Operations Mgr</li> <li>• Materials Mgr</li> <li>• NPI Mgr</li> </ul> Approval indicates that funding is granted, development of project may proceed, and all agree to the requirements chosen to release the product.			
	a					Generate program plan/Schedule						
	b					Complete forms (Requirements) and (Schedule)						
	c					Conduct PDR (Note that PDR attendees determine items required to release product)						
	d					Other (explain here)						
	e					Other (explain here)						
	f					Obtain approval to proceed to next checkpoint						
	<b>Marketing Requirements</b>											
	g					Target price and release date (market window)						
	h					Other (explain here)						
	i					Other (explain here)						
	<b>Special Contractual Requirements</b>											
	j					Does customer want design control or notice of changes?						
	k					Other (explain here)						
	l					Other (explain here)						
<b>Regulatory Requirements</b>												
m					CE certification							
n					UL approval							
o					RoHS compliance							
p					WEEE compliance							
q					Other (explain here)							

<b>&amp; PROJECT REQUIREMENTS</b>	r				Other (explain here)				
	<b>Applicable Military Standards</b>								
	s				Specify here				
	t				Specify here				
	u				Specify here				
	v				Specify here				
	<b>Describe Product Options and Accessories</b>								
	w				USB Cable				
	x				GUI Disk				
	y				Users Manual				
	z				Eval Kit				
	aa				Foreign Speed Option				
	ab				Pulse Modulation ?				
	ac				Specify here				
	<b>Software &amp; Firmware Requirements</b>								
	ad				PROMs				
	ae				PLDs				
	af				FPGAs				
ag				Drivers					
ah				3rd-party extensions					
ai				Application programming interface (API)					
aj				Other (explain here)					
ak				Other (explain here)					
<b>4. DEVELOPMENT</b>	<b>Checkpoint Steps</b>								
	a				Conduct CDRs as needed		<ul style="list-style-type: none"> <li>• VP of Engineering</li> <li>• Product/Program Mgr</li> <li>• NPI Mgr</li> </ul> <p>Approval indicates that the product and its ATE are ready for testing, qualification criteria have been established, and the development of the product can be announced to the marketplace.</p> <p><b>Note that testing and beta testing may occur concurrently with development.</b></p>		
	b				Develop ATP				
	c				Build prototype units				
	d				Other (explain here)				
	e				Other (explain here)				
	f				Ensure that adequate ATE or test equipment with $\geq 3:1$ ratio is available for testing prototypes				
	g				Other (explain here)				
	h				Other (explain here)				
	i				Obtain approval to proceed to next checkpoint				
	<b>Marketing Requirements</b>								
j				Can "product development" be announced to the marketplace?					
k				Industry preliminary info' release?					
l				Re-Release Collateral					
	<b>Checkpoint Steps</b>								
	a				Generate QTP (modules and instruments)		<ul style="list-style-type: none"> <li>• VP of Engineering</li> <li>• Product/Program Mgr</li> <li>• QA Mgr</li> <li>• Operations Mgr</li> <li>• NPI Mgr</li> </ul> <p>Approval indicates that all</p>		
	b				Other (explain here)				
	c				Other (explain here)				
	d				Obtain approval to proceed to next checkpoint				
<b>Environmental Testing Requirements</b>									

5.  
QUALIFICATION  
TESTING

e					Shock	
f					Vibration	
g					Temperature	
h					Humidity	
i					Salt spray	
j					Storage	
k					Altitude	
l					Hi-pot	
m					ESD susceptibility	
n					Other (explain here)	
o					Other (explain here)	
<b>EMI/RFI Testing Requirements</b>						
p					Conducted emissions	
q					Radiated emissions	
r					Susceptibility	
s					CE EMC & Safety	
t					Other (explain here)	
<b>Requirements for Testing of Product Options and Accessories</b>						
u					Specify here	
v					Specify here	
w					Specify here	
x					Specify here	
y					Specify here	
z					Specify here	
aa					Specify here	
<b>Software &amp; Firmware Testing Requirements</b>						
ab					Low-level drivers	
ac					High-level drivers	
ad					Software for firmware	
ae					PROMs, PLDs, and FPGAs	
af					CPU Control Code Testing	
ag					Other (explain here)	
<b>Other Testing Requirements</b>						
ah					Inter-operability testing	
ai					New packaging testing	
aj					Do test results match ATP	
ak					Other (explain here)	
al					Other (explain here)	

qualification testing (software and hardware) is completed and product is ready to be built in production for 1st article qualification. Product can be sent for beta testing.

**Note pre-released documentation needs to be sufficient for product to be built in production.**

6.  
Beta  
Testing

<b>Checkpoint Steps</b>						
a					Establish formal agreement w/customer	
b					Develop "Want to Identify" Check List	
c					Obtain feedback and test data and updated documentation	
d					Other (explain here)	
e					Obtain approval to proceed to next checkpoint	
<b>Checkpoint Steps</b>						
a					Determine sample quantity	

- VP of Engineering
- Product/Program Mgr
- NPI Mgr

Approval indicates that results of beta testing have been incorporated to the design and documentation of the product.

- VP of Engineering

<b>7.</b> <b>First Article Qualification (Pilot Run)</b> <b>Characterization (Clarify Who is to Build)</b>	b				Schedule pilot run (pre-released documentation)		<ul style="list-style-type: none"> <li>• Product/Program Mgr</li> <li>• QA Mgr</li> <li>• Operations Mgr</li> <li>• NPI Mgr</li> </ul> <p>Approval indicates that product has successfully been built in production, tested with its appropriate ATE, and documented results have been incorporated in documentation.</p>		
	c				Identify engineers who will assist mfg w/pilot run				
	d				Analyze a statistically relevant sample of units to determine final specs and final test paramters				
	e				Set final test specifications (ATP)				
	f				Set final product specifications for generation of datasheets.				
	g				Capture production feedback and update documentation				
	h				Other (explain here)				
	i				Other (explain here)				
	j				Obtain approval to proceed to next checkpoint				
<b>8.</b> <b>RELEASE TO PRODUCTION</b>	<b>Checkpoint Steps</b>						<ul style="list-style-type: none"> <li>• VP of Engineering</li> <li>• Product/Program Mgr</li> <li>• QA Mgr</li> <li>• Operations Mgr</li> <li>• Materials Mgr</li> <li>• NPI Mgr</li> </ul> <p>Approval indicates that all items in check points 1 through 8 have been completed, the product can be released to production control, and an ECN releasing all of the documentation may be implemented.</p> <p><b>Note that approval of this check point does not indicate that the product is released. Implementation of the ECN indicates the official release to production.</b></p>		
	a				Conduct FDR (Demonstrate to approvers that all requirements for release have been met)				
	b				Submit ECR to Doc. Control				
	c				Other (explain here)				
	d				Other (explain here)				
	e				Obtain approval to proceed to next checkpoint				
	<b>Documentation Requirements</b>								
	f				Product tree				
	g				Spec. control DWGs				
	h				Fabricated part DWGs				
	i				Label DWGs and artwork				
	j				PCB ASSY DWGs				
	k				Substrate ASSY DWGs				
	l				Cable ASSY DWGs				
	m				Hybrid ASSY DWGs - Process				
	n				Top ASSY DWG				
	o				Mechanical SUB-ASSY DWGs				
	p				Pick-and-place files				
	q				ASSY instructions				
	r				Schematics				
	s				Test procedure				
	t				Software & driver files				
	u				BOMs				
	v				CCN				
	w				MRP codes				
	x				Lead times				
	y				Material costs				
	z				Labor costs				
	aa				Approved vendors				
	ab				Other (explain here)				
ac				Other (explain here)					
<b>Facility Requirements</b>									
ad				Facility modifications complete					

	ae				Final ATE system (hardware & software) ready				
	af				New equipment purchased, calibrated, and qualified				
	ag				Other (explain here)				
	ah				Other (explain here)				
	<b>Customer Service Requirements</b>								
	ai				Product service plan in place				
	aj				Diagnostic resolution document published				
	ak				Other (explain here)				
	al				Other (explain here)				
	<b>Personnel Requirements</b>								
	am				Production personnel trained				
	an				Engineering team members identified to assist mfg w/early production and ongoing problem resolution				
	ao				Other (explain here)				
	ap				Other (explain here)				
<b>9. PRODUCT LAUNCH</b>	<b>Checkpoint Steps</b>						<ul style="list-style-type: none"> <li>• VP of Engineering</li> <li>• Product/Program Mgr</li> <li>• Sales/Cust. Svc Mgr</li> <li>• Marcom Mgr</li> <li>• NPI Mgr</li> </ul> <p>Approval indicates that the chosen requirements in this check point have been scheduled or completed.</p>		
	a				Conduct sales training				
	b				Determine final price and delivery				
	c				Other (explain here)				
	d				Other (explain here)				
	e				Obtain approval to proceed to next checkpoint				
	<b>Sales &amp; Marketing Requirements</b>								
	f				New sales reps				
	g				Style guide update				
	h				Product brochure				
	i				Product datasheets				
	j				FAQs				
	k				Application notes				
	l				Press release				
	m				PowerPoint presentation (sales tool)				
	n				Operation manual				
	o				Demo. Units				
	p				Product featured on home page				
q				Other (explain here)					
r				Other (explain here)					
<b>END OF CHECKLIST</b>									