

## Change Request

Project	Change Request No.
MAPS for CALICE	1

**Part A (to be completed by the Originator)**

Description of Change Requested								
<p>Investigate whether additional resistance can be added to preShape pixel feedback resistor.</p> <p>Suspected error in pcells means the original design value of 4Mohms was really 2.7Mohms. Target is to lengthen the feedback resistor so its value is closer to 4Mohm but with sensible layout (ie guard rings, not next to digital logic etc).</p> <p>Will be reviewed at FDR and approved for use or rejected, in which case the original design value (2.7Mohms) will be made instead.</p>								
Anticipated Benefits/Reason for Change								
Improvement to signal gain in preShape pixel (towards that originally designed)								
Please click on the box with the most likely result of the change in each row								
	Substantial Reduction	Reduction	No change	Increase	Substantial Increase			
<b>Cost</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<b>Schedule</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
<b>Performance</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<b>Resources</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<b>Risk</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
<p>Minor effort required ~1 day to make new layout as drop-in replacement for current (new) pixel design.</p> <p>Minor risk associated with modification to analog front-end circuits.</p>								
<b>Originator</b>			JC					
<b>Signature</b>			<b>Date</b>					
<b>Approval Required in (click on box)</b>	1 week	<input checked="" type="checkbox"/>	2 weeks	<input type="checkbox"/>	1 month	<input type="checkbox"/>	2 months	<input type="checkbox"/>

**Part B (to be completed by the Project Manager)**

Recommended for (click on box)		Project Manager Signature	Date
Implementation <input checked="" type="checkbox"/>	Rejection <input type="checkbox"/>		
Approval for Implementation		Customer/Sponsor Signature	Date
JC			
Action Required/Comments			
<p>Layout value of 3.3Mohm is feasible. Simulation of circuit with new values will be presented at FDR with layout for approval.</p>			