

## Product/ Process Change Notification

<b>1. PCN No.:</b>	<b>QPCN11031</b>
<b>2. Subject:</b>	TO-92 Package Copper Bond Wire
<b>3. To:</b>	Customers
<b>4. Issued by:</b>	PMD PM
<b>5. Issue date:</b>	November. 1, 2011
<b>6. Proposed first ship date for change:</b>	December. 31, 2011
<b>7. Affected Product Identification</b>	
MOSFET and Transistor Product Family ➤ TO-92 Package	
<b>8. Change Description : (OLD Vs. NEW Comparison)</b>	
Old:	New:
➤ Gold bond-wire	➤ Copper bond-wire
<b>9. Reason for Change:</b>	
Enhancement to long-term product reliability. (Copper offers lower Electrical Resistivity, high current capability than Gold wire)	
<b>10. Anticipated Impact:</b> (form, fit, function, quality or reliability)	
1. Data sheet:	No Change
2. Reliability/performance:	No Change
3. Packing code (order code):	No Change
4. Inner construction:	No Change
<b>11. Qualification plan/result:</b>	
Refer to the appendix A and B	
<b>12. Sample availability Date:</b>	Please contact your regional Taiwan Semiconductor Sales office for sample availability.
<b>13. Tentative implementation date:</b>	January. 2012
<b>14. Remarks</b>	
There will be no change to part numbering. Products converted to copper wire will have date code 2A1 or later.	
<b>15. Customer feedback required latest:</b> (should we receive no feedback; the change will be deemed as accepted!)	This PCN is considered approved, without further notification, unless we receive specific customer concerns before DEC end, 2011 as specified by contract.
<b>16. Approved by:</b>	

## Product/ Process Change Notification Customer Approval Form

(Please tick the field what is valid for you!)

<input type="checkbox"/>	<b>We agree with this proposed change and its schedule.</b>
<input type="checkbox"/>	<b>We have objections</b>
<input type="checkbox"/>	<b>We need more information:</b>
<input type="checkbox"/>	<b>We need sample:</b>
<b>Company:</b>	
<b>Name:</b>	
<b>Address:</b>	
<b>Signature:</b>	<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 40%;"></div> <div style="width: 20%; text-align: center;"><b>Date:</b></div> <div style="width: 40%;"></div> </div>

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### Appendix A

#### QPCN11031 PARTS LIST

TO-92 MOSFET	TO-92 TRANSISTOR
TSM1N45CT	TSC5988CT
TSM1N50CT	TS13002CT
TSM1N60SCT	TS13002ACT
TSM1N80SCT	TS13003BCT
TSM2N7000KCT	TS13003CT
	TSC5301DCT
	TS13003MVCT
	TS13003HVCT
	TSC10CT
	TSC5401CT
	TSA894CT
	TSD882SCT
	TSB772SCT

## Product/ Process Change Notification

### Appendix B

**Package: TO-92**

#### Qualification Result Summary:

NO.	ITEMS	TEST CONDITION	S.S	RESULT (S.S / REJECT)
1	TCT (Temperature Cycle Test)	Cold : -65°C (+0 / -10)°C Hot: 150°C (+15/-0)°C 500 cycles	77	77 / 0
2	HTSL (High Temperature Storage Life)	Temperature: 150°C Duration:1000hrs	77	77 / 0
3	Wire Pull test	>6g	60 wires	60 / 0
4	Ball Share test	>45g	25 wires	25 / 0