## PRODUCT/PROCESS CHANGE NOTICE (PCN)

### PCN #: TB1901-03
### DATE: 24-Jan-2019

#### MEANS OF DISTINGUISHING CHANGED DEVICES:
- **Product Mark**
- **Back Mark**
- **Date Code**
- **Other**

Traceability to the test location is maintained by IDT and available on request.

<table>
<thead>
<tr>
<th>Contact:</th>
<th>IDT PCN DESK</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail:</td>
<td><a href="mailto:pcndesk@idt.com">pcndesk@idt.com</a></td>
</tr>
</tbody>
</table>

Attachment:  
- Yes
- No

Samples: Please contact your local sales representative for sample request.

### DESCRIPTION AND PURPOSE OF CHANGE:

- **Die Technology**
- **Wafer Fabrication Process**
- **Assembly Process**
- **Equipment**
- **Material**
- **Testing**
- **Manufacturing Site**
- **Data Sheet**
- **Other**

This notification is to advise our customers that IDT is adding Giga Solution, Taiwan as an alternate facility for Test process for the selective products that are presently tested in IDT Penang, Malaysia facility.

Attachment I details the change.

### RELIABILITY/QUALIFICATION SUMMARY:

There is no expected change to the product quality or reliability performance. Please refer to Attachment I for Electrical correlation data.

### CUSTOMER ACKNOWLEDGMENT OF RECEIPT:

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.

IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

Customer: ________________________________  

Approval for shipments prior to effective date.

Name/Date: ________________________________  

E-Mail Address: ________________________________

Title: ________________________________  

Phone# /Fax# : ________________________________

### CUSTOMER COMMENTS:

__________________________________________

__________________________________________

__________________________________________

__________________________________________

### IDT ACKNOWLEDGMENT OF RECEIPT:

RECD. BY: ________________________________  

DATE: ________________________________

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ATTACHMENT I - PCN # : TB1901-03

PCN Type: Manufacturing Site - Alternate Test Location
Data Sheet Change: None
Detail Of Change:

This notification is to advise our customers that IDT is adding Giga Solution, Taiwan as an alternate facility for Test process for the selective products that are presently tested in IDT Penang, Malaysia facility.

This change will allow IDT the flexibility to ship from either facility and will provide the increased capacity, flexibility and shorter lead time to meet market demand.

There is no change in the Test processing flows. Load boards are the same at both qualified facilities. IDT has completed the electrical test correlation and based on the test results we do not anticipate any impact on device performance. The testing is fully compatible and transferrable between the test facilities with no change to the test coverage.

If you require samples to conduct evaluations, please contact your local sales representative to acknowledge this PCN and request samples.
Qualification Information and Qualification Data:
Electrical Test Correlation Results

Vehicle: F2972NEGK, F2976NEGK
Sample size: 10 good and 5 reject units tested by hand test
10 loop test correlation

<table>
<thead>
<tr>
<th>Description</th>
<th>Existing Test (IDT - IDT, Penang)</th>
<th>Alternate Test (Giga Solution, Taiwan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tester Platform</td>
<td>J750</td>
<td>LTX</td>
</tr>
<tr>
<td>Test Program</td>
<td>F2972_rev2.0.xls</td>
<td>F2972_rev01.eva</td>
</tr>
<tr>
<td></td>
<td>F2976_rev2.0.xls</td>
<td>F2976_rev01.eva</td>
</tr>
<tr>
<td>Test Site</td>
<td>Quad Site</td>
<td>Quad Site</td>
</tr>
<tr>
<td>Test Temperature</td>
<td>Ambient</td>
<td>Ambient</td>
</tr>
<tr>
<td>Test Correlation Results</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Number of Good Units (Hand Tested)</td>
<td>10 pcs</td>
<td>10 pcs</td>
</tr>
<tr>
<td>10 good units datalog correlation</td>
<td>Passed</td>
<td>Passed</td>
</tr>
<tr>
<td>Number of Loop Test (Hand Tested)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>1 good unit datalog correlation</td>
<td>Passed</td>
<td>Passed</td>
</tr>
<tr>
<td>Number of Reject Units (Hand Tested)</td>
<td>5 pcs</td>
<td>5 pcs</td>
</tr>
<tr>
<td>5 reject units datalog correlation</td>
<td>Passed</td>
<td>Passed</td>
</tr>
</tbody>
</table>