

PCN# : P53LAAB

Issue Date : Jul. 20, 2015

## **DESIGN/PROCESS CHANGE NOTIFICATION**

This is to inform you that a change is being made to the products listed below.

Unless otherwise indicated in the details of this notification, the identified change will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will remain fully compliant to all published specifications. Products incorporating this change may be shipped interchangeably with existing unchanged products.

This change is planned to take effect in 90 calendar days from the date of this notification. Please work with your local Fairchild Sales Representative to manage your inventory of unchanged product if your evaluation of this change will require more than 90 calendar days.

Please contact your local Customer Quality Engineer within 30 days of receipt of this notification if you require any additional data or samples. Alternatively, you may send an email request for data, samples or other information to PCNSupport@fairchildsemi.com.

## **Implementation of change:**

Expected First Shipment Date for Changed Product : Oct. 18, 2015

Expected First Date Code of Changed Product :1541

Description of Change (From):

Package SOT23 Assembly site: Fairchild In-house Manufacturing site in Cebu, Philippines

Description of Change (To):

Package SOT23 Assembly Site: Subcontractor assembly manufacturing sites in China, Fairchild In-house Manufacturing site in Cebu, Philippines

| Item                   | Change from   | Change to   |                                   |                                    |
|------------------------|---|---|-----------------------------------|------------------------------------|
| SOT23<br>Assembly site | Inhouse<br>Manufacturing<br>Site in Cebu<br>Philippines | Inhouse<br>Manufacturing<br>Site in Cebu<br>Philippines | Subcontractor in<br>Dalian, China | Subcontractor in<br>Chuzhou, China |
| Molding<br>Compound    | CK5000A   | CK5000A   | KTMC-1050GR                       | ELER-8-100HFE                      |

## Reason for Change:

- To increase its manufacturing capacity

- To meet additional demand for SOT-23 products by having additional flexibility in manufacturing locations.

These changes will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will be fully compliant to all published data sheet specifications. Quality and reliability will remain at the highest standards already demonstrated with Fairchild's existing products.

Affected Product(s): Please refer to the list of affected products in the addendum attached in the PCN email you received. This list is based on an analysis of your company's procurement history.

| <b>Qualification Plan</b> | Device  | Package  | <b>Process</b> | No. of Lots |
|---------------------------|---------|----------|----------------|-------------|
| Q20150078                 | MMBTA92 | SOT23-3L | Bipolar        | 1           |

| Test Description:              | Condition:                        | Standard:        | Duration:     | Results: |
|--------------------------------|-----------------------------------|------------------|---------------|----------|
| MSL(1), PKG(Small),            |                                   |                  |               |          |
| PeakTemp(260c), Cycles(3)      | NA                                | JESD22-A113      | 5 cyc, 24 hrs | 0/231    |
| (Precondition)                 |                                   |                  |               |          |
| High Temperature Reverse Bias  | 150C, 80% rated BV                | JESD22-A108      | 1000 hrs      | 0/77     |
| Highly Accelerated Stress Test | 110C, 85%RH, 80% rated BV,MAX=42V | JESD22-A110      | 264 hrs       | 0/77     |
| Power Cycle                    | Delta 100CC, 2 Min cycle          | MIL-STD-750-1036 | 10000 cyc     | 0/77     |
| Temperature Cycle              | -65C, 150C                        | JESD22-A104      | 1000 cyc      | 0/77     |

| <b>Qualification Plan</b> | Device     | Package  | <b>Process</b> | No. of Lots |
|---------------------------|------------|----------|----------------|-------------|
| Q20150078                 | KST5551MTF | SOT23-3L | SSTR           | 1           |

| Test Description:  | Condition:                        | Standard:   | Duration:     | Results: |
|--|-----------------------------------|-------------|---------------|----------|
| MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition) | NA                                | JESD22-A113 | 5 cyc, 24 hrs | 0/231    |
| Highly Accelerated Stress Test                               | 110C, 85%RH, 80% rated BV,MAX=42V | JESD22-A110 | 264 hrs       | 0/77     |
| Temperature Cycle  | -65C, 150C                        | JESD22-A104 | 1000 cyc      | 0/77     |

| <b>Qualification Plan</b> | Device | Package  | Process        | No. of Lots |
|---------------------------|--------|----------|----------------|-------------|
| Q20150078                 | BAT54S | SOT23-3L | Schottky Diode | 1           |

| Test Description:  | Condition:                        | Standard:        | Duration:     | Results: |
|--|-----------------------------------|------------------|---------------|----------|
| MSL(1), PKG(Small),<br>PeakTemp(260c), Cycles(3)<br>(Precondition) | NA                                | JESD22-A113      | 5 cyc, 24 hrs | 0/231    |
| High Temperature Reverse Bias                                      | 150C, 80% rated BV                | JESD22-A108      | 1000 hrs      | 0/77     |
| Highly Accelerated Stress Test                                     | 110C, 85%RH, 80% rated BV,MAX=42V | JESD22-A110      | 264 hrs       | 0/77     |
| Power Cycle  | Delta 100CC, 2 Min cycle          | MIL-STD-750-1036 | 10000 cyc     | 0/77     |
| Temperature Cycle  | -65C, 150C                        | JESD22-A104      | 1000 cyc      | 0/77     |

| <b>Qualification Plan</b> | Device    | Package  | Process         | No. of Lots |
|---------------------------|-----------|----------|-----------------|-------------|
| Q20150078                 | MMBD1404A | SOT23-3L | Switching Diode | 1           |

| Test Description:              | Condition:                        | Standard:        | Duration:     | Results: |
|--------------------------------|-----------------------------------|------------------|---------------|----------|
| MSL(1), PKG(Small),            |                                   |                  |               |          |
| PeakTemp(260c), Cycles(3)      | NA                                | JESD22-A113      | 5 cyc, 24 hrs | 0/231    |
| (Precondition)                 |                                   |                  |               |          |
| High Temperature Reverse Bias  | 150C, 80% rated BV                | JESD22-A108      | 1000 hrs      | 0/77     |
| Highly Accelerated Stress Test | 110C, 85%RH, 80% rated BV,MAX=42V | JESD22-A110      | 264 hrs       | 0/77     |
| Power Cycle                    | Delta 100CC, 2 Min cycle          | MIL-STD-750-1036 | 10000 cyc     | 0/77     |
| Temperature Cycle              | -65C, 150C                        | JESD22-A104      | 1000 cyc      | 0/77     |

| <b>Qualification Plan</b> | Device  | Package | <b>Process</b> | No. of Lots |
|---------------------------|---------|---------|----------------|-------------|
| Q20130064                 | MMBTA92 | SOT23   | Bipolars       | 1           |

| Test Description:                  | Condition:              | Standard:        | <b>Duration:</b> | Results: |
|------------------------------------|-------------------------|------------------|------------------|----------|
| MSL1 Precondition                  | 260C, 3 cycles          | JESD22-A113      |                  | 0/231    |
| Temperature Humidity Bias Test     | 85%RH, 85C, 80% BV      | JESD22-A101B     | 1000 hrs         | 0/77     |
| High Temperature Reverse Bias Test | 150C, 80% BV            | JESD22-A108      | 1000 hrs         | 0/77     |
| High Temperature Storage Life      | 150C                    | JESD22-A103      | 1000 hrs         | 0/77     |
| Power Cycle                        | Delta 100C, 2 Min cycle | MIL-STD-750-1036 | 10000 cyc        | 0/77     |
| Temperature Cycle                  | -65C, 150C              | JESD22-A104      | 500 cyc          | 0/77     |

| <b>Qualification Plan</b> | Device  | <b>Package</b> | <b>Process</b> | No. of Lots |
|---------------------------|---------|----------------|----------------|-------------|
| Q20130064                 | FDV301N | SOT23          | LV Mosfet      | 1           |

| Test Description:                  | Condition:              | Standard:        | <b>Duration:</b> | Results: |
|------------------------------------|-------------------------|------------------|------------------|----------|
| MSL1 Precondition                  | 260C, 3 cycles          | JESD22-A113      |                  | 0/231    |
| Temperature Humidity Bias Test     | 85%RH, 85C, 80% BV      | JESD22-A101B     | 1000 hrs         | 0/77     |
| High Temperature Reverse Bias Test | 150C, 80% BV            | JESD22-A108      | 1000 hrs         | 0/77     |
| High Temperature Gate Bias Test    | 150C, 80% of BV         | JESD22-A108      | 1000 hrs         | 0/77     |
| High Temperature Storage Life      | 150C                    | JESD22-A103      | 1000 hrs         | 0/77     |
| Power Cycle                        | Delta 100C, 2 Min cycle | MIL-STD-750-1036 | 10000 cyc        | 0/77     |
| Temperature Cycle                  | -65C, 150C              | JESD22-A104      | 500 cyc          | 0/77     |

| <b>Qualification Plan</b> | Device  | <b>Package</b> | Process   | No. of Lots |
|---------------------------|---------|----------------|-----------|-------------|
| Q20130064                 | FDV304P | SOT23          | LV Mosfet | 1           |

| Test Description:                  | Condition:              | Standard:        | <b>Duration:</b> | Results: |
|------------------------------------|-------------------------|------------------|------------------|----------|
| MSL1 Precondition                  | 260C, 3 cycles          | JESD22-A113      |                  | 0/231    |
| Temperature Humidity Bias Test     | 85%RH, 85C, 80% BV      | JESD22-A101B     | 1000 hrs         | 0/77     |
| High Temperature Reverse Bias Test | 150C, 80% BV            | JESD22-A108      | 1000 hrs         | 0/77     |
| High Temperature Gate Bias Test    | 150C, 80% of BV         | JESD22-A108      | 1000 hrs         | 0/77     |
| High Temperature Storage Life      | 150C                    | JESD22-A103      | 1000 hrs         | 0/77     |
| Power Cycle                        | Delta 100C, 2 Min cycle | MIL-STD-750-1036 | 10000 cyc        | 0/77     |
| Temperature Cycle                  | -65C, 150C              | JESD22-A104      | 500 cyc          | 0/77     |

| <b>Qualification Plan</b> | Device       | Package | Process    | No. of Lots |
|---------------------------|--------------|---------|------------|-------------|
| Q20130064                 | LM431SACM32X | SOT23   | Std Linear | 1           |

| Test Description:              | Condition:         | Standard:    | <b>Duration:</b> | Results: |
|--------------------------------|--------------------|--------------|------------------|----------|
| MSL1 Precondition              | 260C, 3 cycles     | JESD22-A113  |                  | 0/231    |
| Temperature Humidity Bias Test | 85%RH, 85C, 80% BV | JESD22-A101B | 1000 hrs         | 0/77     |
| High Temperature Op Life       | 125C, Vbias= 35V   | JESD22-A108  | 1000 hrs         | 0/77     |
| High Temperature Storage Life  | 150C               | JESD22-A103  | 1000 hrs         | 0/77     |
| Temperature Cycle              | -65C, 150C         | JESD22-A104  | 500 cyc          | 0/77     |