

Date Created : **2007/11/30**
Date Issued On : **2007/12/20**
PCN# : **Q4074814**

FORECAST CHANGE NOTIFICATION

This is to inform you that a design and/or process change will be made to the following product(s). This notification is for your information and concurrence. This is a preliminary notification. A Final PCN will be issued when qualification is complete and data is available.

If you require data or samples to qualify this change, please contact **Fairchild Semiconductor within 30 days of receipt of this notification.**

If you have any questions concerning this change, please contact:

Technical Contact:

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PCN Originator:

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Phone:

Implementation of change:

Expected 1st Device Shipment Date: 2008/03/20

Earliest Year/Work Week of Changed Product: 0812

Change Type Description: Lead Frame Composition

Description of Change (From): The material composition of lead frame is bare copper with full Ni-plating

Description of Change (To): The material composition of lead frame is bare copper without Ni-plating. lead frame Plating method change from Option 2(full nickle plating) to Option 1(bare copper). Refer to attached lead frame drawing. There is no change in package dimension, process and electrical specification.

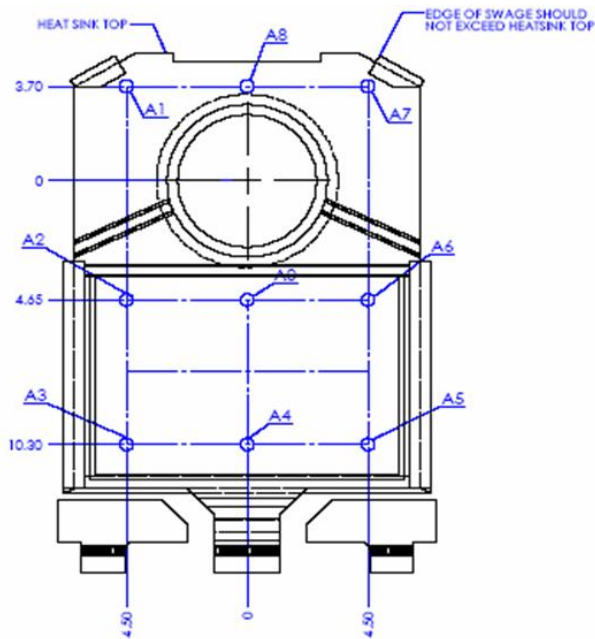
Reason for Change : Quality improvement to enhance the adhesion strength between EMC and lead frame

Qual/REL Plan Numbers : Q20070460

Qualification :

To qualify TO247 bare copper leadframe, improve quality to enhance the adhesion strength between EMC and lead frame, to prevent moisture enter into package

Change To



- LEADFRAME SPEC**
- MATERIAL - 12Sn 90Cu (H) or KFC (1/2H)
 - 0.600 \pm 0.02 THICK
 - 1.800 \pm 0.03 THICK
 - STANDARD TOLERANCE = \pm 0.05
 - STANDARD RADIUS = 0.30 MAX
 - STANDARD BURR = 0.03 MAX
 - HORIZONTAL BURR = 0.05 MAX
 - PUNCH MISMATCH = 0.10 MAX
 - COINED LEAD (WIDTH) = 80% OF NOMINAL WIDTH MIN.
 - LEAD TIP TILT = 3deg max
 - LEAD TIP PLANARITY = 0.05 MAX
 - DIE PAD TILT = \pm 1deg / -2deg
 - DIE PAD PLANARITY = 0.05
 - FRAME CROSS BOW = 0.25 MAX
 - CAMBER = 0.25 MAX
 - COIL SET = 0.50 MAX
 - FRAME TWIST = 0.80 MAX
 - UNITS PER STRIP = 10 UNITS
 - PLATING
 - OPTION 1 - BARE COPPER
 - OPTION 2 - FULL NICKEL PLATING OF 2 μ m MIN & 7 μ m MAX.
 - DIP GROOVE OPTION
 - OPTION 1 - ALL GROOVE FEATURES
 - OPTION 2 - NON GROOVE FEATURES (EXCEPT SECTION E-E)
- NOTE:**
- ALL UNSPECIFIED SPECIFICATIONS APPLY TO TRANSISTOR LEADFRAME GENERAL SPEC OF FAIRCHILD
 - DIMENSIONS ON LEAD TIP REPRESENT SHAPE BEFORE COINING
 - TOOL MARKS ARE VENDOR OPTION
 - DIMENSION WITH (T) SIGNIFIES GROOVE CENTER POINT
 - DIMENSION WITH () MEANS REFERENCE DIMENSION
 - RADIUS NOT EXTENDED ON TOP SURFACE OF LEADFRAME
 - BENDING CENTER POINT

Qualification Stress Test and Sample Size Detail

| | |
|-----------|------------|
| Device #1 | FGH50N6S2D |
| Package: | |
| #Leads: | |

Environment Stress Detail:

| Stress | P/C | Standard | Conditions | Readpoints | | Samples |
|--------|-----|------------------|--------------------------|------------|------|---------|
| | | | | TP1 | TP2 | |
| ACLV | | JESD22-A102 | 100%RH, 121C | 96 | | 77 |
| PRCL | | MIL-STD-750-1036 | Delta 100C, 5 Min on/off | 1000 | 5000 | 77 |
| TMCL1 | | JESD22-A104 | -65C, 150C | 200 | 500 | 77 |

| | |
|-----------|--------------|
| Device #2 | HGTG27N120BN |
| Package: | |
| #Leads: | |

Environment Stress Detail:

| Stress | P/C | Standard | Conditions | Readpoints | | Samples |
|--------|-----|------------------|--------------------------|------------|------|---------|
| | | | | TP1 | TP2 | |
| ACLV | | JESD22-A102 | 100%RH, 121C | 96 | | 77 |
| PRCL | | MIL-STD-750-1036 | Delta 100C, 5 Min on/off | 1000 | 5000 | 77 |
| TMCL1 | | JESD22-A104 | -65C, 150C | 200 | 500 | 77 |

| | |
|-----------|------------|
| Device #3 | HUF75344G3 |
| Package: | |
| #Leads: | |

Environment Stress Detail:

| Stress | P/C | Standard | Conditions | Readpoints | | Samples |
|--------|-----|-------------|---------------|------------|------|---------|
| | | | | TP1 | TP2 | |
| ACLV | | JESD22-A102 | 100%RH, 121C | 96 | | 77 |
| PRCL | | MIL- | Delta 100C, 5 | 1000 | 5000 | 77 |

| | | | | | | |
|-------|--|--------------|------------|-----|-----|----|
| | | STD-750-1036 | Min on/off | | | |
| TMCL1 | | JESD22-A104 | -65C, 150C | 200 | 500 | 77 |

| | |
|-----------|------------|
| Device #4 | HUF75652G3 |
| Package: | -1 |
| #Leads: | -1 |

Environment Stress Detail:

| Stress | P/C | Standard | Conditions | Readpoints | | Samples |
|--------|-----|------------------|--|------------|------|---------|
| | | | | TP1 | TP2 | |
| ACLV | | JESD22-A102 | 100%RH, 121C | 96 | | 77 |
| PRCL | | MIL-STD-750-1036 | 85%RH, 85C, 80% of related BV,Max=100V | 1000 | 5000 | 77 |
| TMCL1 | | JESD22-A104 | -65C, 150C | 200 | 500 | 77 |

| | |
|-----------|--------------|
| Device #5 | ISL9K30120G3 |
| Package: | |
| #Leads: | |

Environment Stress Detail:

| Stress | P/C | Standard | Conditions | Readpoints | | Samples |
|--------|-----|------------------|--------------------------|------------|------|---------|
| | | | | TP1 | TP2 | |
| ACLV | | JESD22-A102 | 100%RH, 121C | 96 | | 77 |
| PRCL | | MIL-STD-750-1036 | Delta 100C, 5 Min on/off | 1000 | 5000 | 77 |
| TMCL1 | | JESD22-A104 | -65C, 150C | 200 | 500 | 77 |

| | |
|-----------|------------|
| Device #6 | RHRG3060CC |
| Package: | |
| #Leads: | |

Environment Stress Detail:

| Stress | P/C | Standard | Conditions | Readpoints | | Samples |
|--------|-----|------------------|--------------------------|------------|------|---------|
| | | | | TP1 | TP2 | |
| ACLV | | JESD22-A102 | 100%RH, 121C | 96 | | 77 |
| PRCL | | MIL-STD-750-1036 | Delta 100C, 5 Min on/off | 1000 | 5000 | 77 |
| TMCL1 | | JESD22-A104 | -65C, 150C | 200 | 500 | 77 |

Product Id Description :

Affected FSIDs :

| | | |
|--------------------|---------------|---------------|
| FDH038AN08A1 | FDH047AN08A0 | FDH210N08 |
| FDH27N50 | FDH3632 | FDH44N50 |
| FFH15S60STU | FFH30S60STU | FFH30US30DN |
| FFH50US60S | FGH30N60LSDTU | FGH30N6S2D |
| FGH30N6S2D_W49009A | FGH40N120ANTU | FGH50N3 |
| FGH50N6S2 | FGH50N6S2D | HGTG10N120BND |
| HGTG11N120CN | HGTG11N120CND | HGTG12N60A4 |
| HGTG12N60A4D | HGTG12N60B3 | HGTG12N60C3D |
| HGTG18N120BN | HGTG18N120BND | HGTG20N60A4 |
| HGTG20N60A4D | HGTG20N60B3 | HGTG20N60B3D |
| HGTG20N60C3D | HGTG27N120BN | HGTG30N60A4 |
| HGTG30N60A4D | HGTG30N60B3 | HGTG30N60B3D |

| | | |
|-------------------|-------------------|--------------|
| HGTG30N60C3D | HGTG40N60A4 | HGTG40N60B3 |
| HGTG40N60C3_R4752 | HGTG5N120BND | HGTG7N60A4 |
| HGTG7N60A4D | HUF75339G3 | HUF75344G3 |
| HUF75345G3 | HUF75639G3 | HUF75652G3 |
| HUF75852G3 | ISL9K1560G3 | ISL9K18120G3 |
| ISL9K30120G3 | ISL9K3060G3 | ISL9R1560G2 |
| ISL9R18120G2 | ISL9R2480G2_S2611 | ISL9R30120G2 |
| ISL9R3060G2 | RFG70N06 | RHRG1560CC |
| RHRG30120 | RHRG3060 | RHRG3060CC |
| RHRG5060 | RHRG75120 | RURG1520CC |
| RURG3020CC | RURG3060 | RURG3060CC |
| RURG5060 | RURG5060_R4857 | RURG80100 |
| RURG8060 | | |