**Product / Process Change Notice**

**Parts Affected:**

All products manufactured in the SMAFL case.

**Extent of Change:**

Change in internal lead frame to increase contact area with silicon die and enhance consistency in forward surge and forward voltage performance. A small notch on lead termination enhances solderability during reflow processes.

**Reason for Change:**

In order to enhance manufacturability and minimize potential supply disruption, Central Semiconductor has made changes to the internal lead frame design of the subject devices. Electrical performance and overall mechanical outline of the package are unchanged.  A small notch may be observed at the termination ends. This does not change the overall dimension of the terminations and it enhances solderability.

**Effect of Change:**

This change does not affect the fit, form or function of the devices.

**Qualification:**

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| **Test** | **Condition** | **Duration** | **Failure rate** |
| **Pre Conditioning (PC) (SMD qualification parts before test TC, AC, H3TRB, IOL and RSH）**  | 1. TCT -55~+150 ℃ ,5 cycle 2. Bake 125 +5/-0 ℃ , 24hours 3. Temperature humidity 85℃/85%RH, 168hours 4. Reflow 3 times  | 1 Cycle | 0/773 Lots  |
| **Temperature Cycling (TC)** | TA= -55+0℃/-10℃ 10min(Min) TA= +150+15℃/-0℃ 10min(Min) Transfer time less than 1min. The load should reach temp. within 15min  | 1000 Cycles | 0/773 Lots  |
| **High Humidity / High Temperature Reverse Bias (H3TRB)** | TA=85℃, RH=85%V=80%VR (Max=100V)  | 1000 Hours | 0/773 Lots  |
| **Resistance to Solder Heat (RSH)** | T =260°C ±5°CDwell time = 10 sec. | 1 Cycle | 0/303 Lots  |
| **Intermittent****Operation Life (IOL)** | ΔTJ100°COn time: 2mins at least, Off time: 2mins at least  | 15,000 Cycles | 0/773 Lots  |
| **Autoclave (AC)** | Temperature = 121°C ± 2°C; relative humidity = 100%; vapor pressure = 29.7 psia (15psig) | 96 Hours | 0/773 Lots  |
| **Temperature Humidity Storage (THS)** | TA=85℃, RH=85%   | 1000 Hours | 0/773 Lots  |
| **Solderability (SD)**  | Temperature of solder Pb free: POT=245±5℃ Solder immersion time=5±0.5 sec Dipping depth= within 1.27mm of the body.  | 1 Cycle | 0/103 Lots  |
| **Thermal Shock Test (TST)** | TA=0℃ (5 min) ~ +100℃ (5 min)  | 100 Cycles | 0/773 Lots  |
| **High Temp. Storage Life (HTSL)** | TA= +150℃ | 1000 Hours | 0/773 Lots |
| **Continue Forward Operating Life (CFOL)** | TA=25°CI=IO +/-10% DC Supply | 168 Hours | 0/773 Lots |

**Effective Date of Change:**

Existing inventory will be shipped until depleted.

**Sample Availability:**

Please contact your salesperson or manufacturer’s representative for samples.

**Part Numbers Affected:**

Rectifiers

Schottky Rectifiers

Transient Voltage Supressors (TVS)

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| --- | --- | --- | --- | --- |
| C4SMAFL13A | C4SMAFL24A | C4SMAFL45A | C4SMAFL75A | C4SMAFL150A |
| C4SMAFL14A | C4SMAFL26A | C4SMAFL48A | C4SMAFL78A | C4SMAFL160A |
| C4SMAFL15A | C4SMAFL28A | C4SMAFL51A | C4SMAFL85A | C4SMAFL170A |
| C4SMAFL16A | C4SMAFL30A | C4SMAFL54A | C4SMAFL90A |  |
| C4SMAFL17A | C4SMAFL33A | C4SMAFL58A | C4SMAFL100A |  |
| C4SMAFL18A | C4SMAFL36A | C4SMAFL60A | C4SMAFL110A |  |
| C4SMAFL20A | C4SMAFL40A | C4SMAFL64A | C4SMAFL120A |  |
| C4SMAFL22A | C4SMAFL43A | C4SMAFL70A | C4SMAFL130A |  |

As per JEDEC standard JESD46, Customer Notification of Product/Process Changes by Solid-State Suppliers, a lack of acknowledgement of a PCN within thirty (30) days constitutes acceptance of the change.

The undersigned acknowledges and accepts Central Semiconductor’s Product/Process Change Notification (PCN).

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| Company Name: |  |
| Address: |  |
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| Printed Name: |  |
| Title: |  |
| Signature: |  |
| Date: |  |