**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 | 0/77  3 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 | 0/77  3 Lots |
| **High Humidity / High Temperature Reverse Bias (H3TRB)** | TA=85℃, RH=85%  V=80%VR (Max=100V) | 1000 Hours | 0/77  3 Lots |
| **Resistance to Solder Heat (RSH)** | T =260°C ±5°C Dwell time = 10 sec. | 1 Cycle | 0/30  3 Lots |
| **Intermittent**  **Operation Life (IOL)** | ΔTJ100°C  On time: 2mins at least,  Off time: 2mins at least | 15,000 Cycles | 0/77  3 Lots |
| **Autoclave (AC)** | Temperature = 121°C ± 2°C; relative humidity = 100%; vapor pressure = 29.7 psia (15psig) | 96 Hours | 0/77  3 Lots |
| **Temperature Humidity Storage (THS)** | TA=85℃, RH=85% | 1000 Hours | 0/77  3 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 | 0/10  3 Lots |
| **Thermal Shock Test (TST)** | TA=0℃ (5 min) ~ +100℃ (5 min) | 100 Cycles | 0/77  3 Lots |
| **High Temp. Storage Life (HTSL)** | TA= +150℃ | 1000 Hours | 0/77  3 Lots |
| **Continue Forward Operating Life (CFOL)** | TA=25°C  I=IO +/-10% DC Supply | 168 Hours | 0/77  3 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: |  |