**Product / Process Change Notice**

**Revision 1 April 27, 2020:** Issued to include additional devices not on the initial PCN. Newly added devices are shown below marked with an asterisk\*.

**Parts Affected:**

The following TO-92 products are affected:

**Part Numbers:**

|  |  |  |  |
| --- | --- | --- | --- |
| MPS6507 | MPS6511 | MPS6541 | PN3563 |
| PN3563-18 | PN3563-5 | PN5127 | PN5130 |
| PN5130-18 | PN5132 | PN918 | 2N5770 |
| CEN553 | CEN758 | CEN1280\* | PN4091\* |
| PN4092\* | PN4093\* | PN4391\* | PN4392\* |
| PN4393\* | CEN1292\* | CEN1414\* | CEN554\* |
| CEN811\* | CEN888\* | CEN976\* | MPS3704\* |
| MPS3706\* | MPS6531\* | MPS6532\* | PN3566\* |
| PN3569\* | PN3642\* | PN3643\* | PN5135\* |
| PN5136\* | PN5816\* | PN5818\* | 2N3704\* |
| 2N4400\* | 2N5225\* | PN5137\* |  |

**Extent of Change:**

Silver epoxy die attach process has been qualified as an additional die attach method for the devices above.

**Reason for Change:**

This change will help insure an uninterrupted flow of product and provide increased supply chain management flexibility.

**Effect of Change**

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

### Qualification:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | P/N: | 2N5770 |  | Package: | TO-92 |
|  |  |  |  |  |  |  |
| **No.** | | **Test** | **Conditions** (Reference standards are in bold) | **Qty** | **Pass/Fail** | **Test Results** |
| **1** | | **Device Life Tests** | | | | |
|  | a | **High Temperature Reverse Bias (HTRB)** | T=125°C, t = 1000 hours Bias Conditions per Device Datasheet **JESD22-A108** | 77 | Pass | 77/77 |
|  | b | **High Temperature Storage Life (HTSL)** | T=150°C, t = 1000 hours **JESD22-A103** | 77 | Pass | 77/77 |
|  | C | **Thermal Shock** | 100 cycles, dwell time = 5 min,  -65°C to +150°C, max transfer time = 20 sec. **JESD22-A106** | 77 | Pass | 77/77 |
|  | D | **Temperature Cycling (TC)** | -65°C to +150°C,  Tdwell = 15min, 1000 cycles  **MIL-STD-750 TM1051** | 77 | Pass | 77/77 |
|  | E | **Die Shear** | Apply force sufficient to shear the die from its mounting.  **MIL-STD-750 TM2017,**  **Condition A** | 5 | Pass | 5/5 |
|  | F | **Resistance To Solder Shock** | Pb free: T =270°C ±5°C, Dwell=7s +2/-0 Thru-hole devices submerge to case, **JESD22-B106** | 5 | Pass | 5/5 |
|  | G | **Solderability** | Steam Age: T=93°C +3/-5°C. Pb-free Dip: T=245°C +/-5°C, Dwell time = 5+/-0.5sec **MIL-STD-750 TM2026** | 15 | Pass | 15/15 |
|  | H | **Temperature Humidity Bias**  **(THB)** | T = 85°C, RH = 85%, t = 1000 hrs  **JESD22-A101.** | 77 | Pass | 77/77 |
|  | I | **Autoclave** | Temperature = 121°C ± 2°C; relative humidity = 100%; vapor pressure, 29.7 psia (15 psig),  t = 96 hrs.  **JESD22-A102** | 77 | Pass | 77/77 |

**Effective Date of Change:**

March 3, 2020

**Sample Availability:**

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

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).

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