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**PCN #151**

**Notification Date:**
**18 June 2014**

# Product / Process Change Notice

**Parts Affected:**

Chip process CP188 (NPN) and chip process CP588 (PNP) silicon, small signal transistors, wafers, and bare die.

**Extent of Change:**

The CP188 and CP588 wafer processes have been discontinued and replaced with the CP388X and CP788X process respectively.

The overall wafer diameter was increased from 4 inch to 5 inch.

The overall wafer thickness was reduced from 9 mils to 5.9 mils.

The topside bond pad metallization (Al) was reduced from 30,000 Å to 17,000Å.

The backside metallization (Au) was reduced from 18,000Å to 9,000Å.

The die size and die pattern were changed; see figures 1 and 2 for details.

**Reason for Change:**

Process transfer from the 4” wafer fab to the 5” wafer fab.

**Effect of Change:**

The new wafer processes meet or exceed the electrical performance of the prior processes.

**Qualification:**

Standard evaluation and qualifications completed resulting in no performance differences compared to current product.

**Effective Date of Change:**

Existing inventory will be shipped until depleted.

**Part Numbers Affected and Sample Availability:**

Please contact Salesperson or Manufacturer’s Representative.

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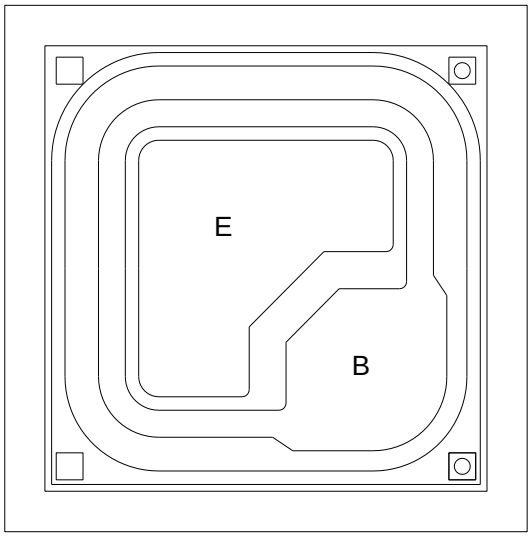
## Figures:

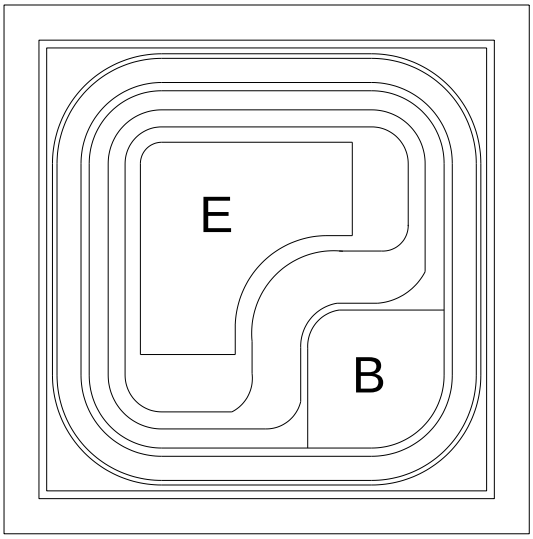
### Figure 1: CP188 and CP588 Chip Geometry (Discontinued)




BACKSIDE COLLECTOR R1

| | |
|---|---|
| Wafer Diameter: | 4 inch |
| Die Size: | 14.6 x 14.6 mils |
| Die Thickness: | 9.0 mils |
| Bond Pad Size (Emitter): | 5.5 x 5.5 mils |
| Bond Pad Size (Base): | 3.9 x 3.9 mils |
| Topside Metal: | Al (30,000Å) |
| Backside Metal: | Au (18,000Å) |

### Figure 2:CP388X and CP788X Chip Geometry




BACKSIDE COLLECTOR R0

| | |
|---|---|
| Wafer Diameter: | 5 inch |
| Die Size: | 13.7 x 13.7 mils |
| Die Thickness: | 5.9 mils |
| Bond Pad Size (Emitter): | 5.5 x 5.5 mils |
| Bond Pad Size (Base): | 3.9 x 3.9 mils |
| Topside Metal: | Al (17,000Å) |
| Backside Metal: | Au (9,000Å) |