

**Product / Process Change Notice**

**Parts Affected:**

The NPN power transistor wafer process, in a TO-126 Case.

**Extent of Change:**

The NPN power transistor chip has changed from 1.5mm x 1.5mm to 1.37mm x 1.37mm. See figures 1 and 2 for more information.

**Reason for Change:**

The NPN power transistor wafer has been modified in order to enhance the manufacturing process controls and performance. The wafer size has increased from 4 inch to 5 inch in order to improve throughput and leadtime.

**Effect of Change:**

The wafer process meets all electrical specifications of the individual device listed on the following page.

**Qualification:**

P/N: 2N5192 Chip Process                      Package: TO-126

No.	Test	Conditions (Reference standards are in bold)	Qty	Pass/Fail	Test Results
<b>1</b>	<b>Device Life Tests</b>				
a	Intermittent Operational Life (IOL)	3360 Cycles <b>JESD22-A108</b>	25	Pass	25/25
b	High Temperature Storage Life (HTSL)	T=150°C, t = 1000 hours <b>JESD22-A103</b>	25	Pass	25/25
C	Thermal Shock	1000 cycles, dwell time = 5 min, 0°C to +100°C, max transfer time = 20 sec. <b>JESD22-A106</b>	25	Pass	25/25
D	Temperature Cycling (TC)	-65°C -+150°C, Tdwell = 15min, 1000 cycles	77	Pass	77/77
E	High Temperature Reverse Bias (HTRB)	T=125°C, Tdwell = 15min, 1000 hours	25	Pass	25/25

**PCN # 173**  
**Notification Date:**  
**11 June 2019**

**Effective Date of Change:**

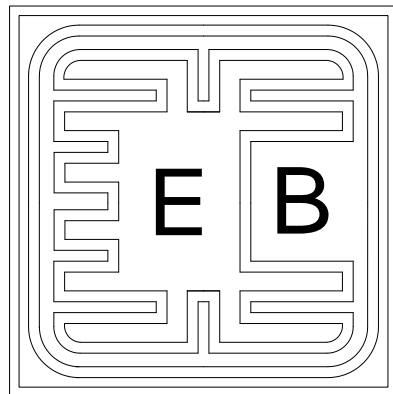
Existing inventory of the old process will be shipped until depleted.

**Sample Availability:**

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

**Figure 1: Old Chip Process**

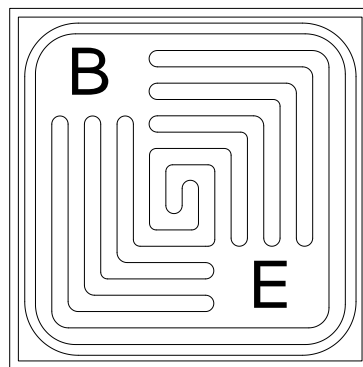
Size: 1.5mm x 1.5mm



BACKSIDE COLLECTOR

**Figure 2: New Chip Process**

Size: 1.37mm x 1.37mm



BACKSIDE COLLECTOR

**Part Numbers Affected:**

BD135	BD233
BD137	BD235
BD137-10	BD237
BD137-16	BD439
BD139	BD441
BD139-10	CEN925
BD139-16	MJE180
BD175	MJE181
BD177	MJE182
BD179	MJE221

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**Part Numbers Affected:**

MJE222	MJE521
MJE223	MJE720
MJE224	MJE721
MJE225	MJE722
MJE240	2N4921
MJE241	2N4922
MJE242	2N4923
MJE243	2N5190
MJE244	2N5191
MJE520	2N5192



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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:	