

## Product / Process Change Notice

**Revision 1 June 4, 2021:** Issued to update the Effective Date of Change and add Inventory Availability.

**Parts Affected:**

Chip process CP216, N-Channel field effect transistors, wafers and bare die.

**Extent of Change:**

The CP216 wafer process has been discontinued and is being replaced with the CP226V wafer process. See Figures 1 and 2 for details.

**Reason for Change:**

The CP216 wafer process has been replaced in order to enhance manufacturing process controls and device performance. This change will help ensure an undisrupted supply of product.

**Effect of Change:**

The CP226V wafer process meets all electrical specifications of the individual devices listed on the following page.

**Qualification:**

Test	Condition	Failure rate
High Temperature Storage Life/ bake test.	150°C (-0/+10)°C, 1000 hours. <b>JESD22-A103</b>	0/77
Temperature Cycling	T= -65°C to +150°C 1000 cycles. Dwell time = 15 min. <b>JESD22-A104 &amp; MIL-STD-750 TM1051</b>	0/77
High Temperature Gate Bias (HTGB)	T=125°C, t=1000 hours, Bias at V <sub>GS</sub> from gate to source with source and drain shorted <b>JESD22-A108</b>	0/77
Highly Accelerated Temperature and Humidity Stress Test (HAST)	T = 110°C, RH = 85%, and t = 264 hours. Bias conditions per device specification sheet. <b>JESD22-A110</b>	0/77
Intermittent Operational Life (IOL)	Ta=25°C, ΔTj>=100°C Bias conditions per device datasheet Number of Cycles: for ΔTj>=100°C: 60000/(x+y) for ΔTj>=125°C: 30000/(x+y) x = time on ; y = time off (x , y >= 2 minutes) <b>MIL-STD-750 TM1037 &amp; JESD22-A105</b>	0/77

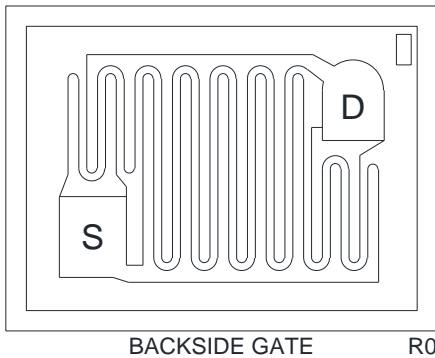
**Earliest Effective Date of Change:**

April 28, 2021

**Inventory Availability**

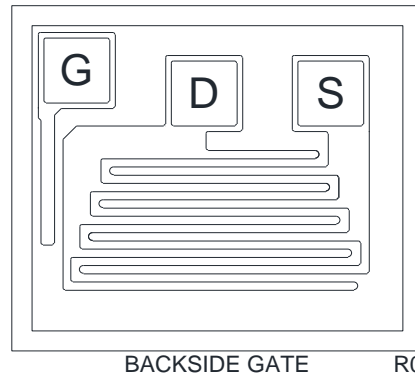
Existing inventory will be shipped until depleted.

**Figure 1: CP216 Chip Geometry (Discontinued)**



Wafer Diameter: 4 inch  
Die Size: 21 x 16 mils  
Die Thickness: 7.9 mils  
Bond Pad Size (Drain): 3.3 x 4.5 mils  
Bond Pad Size (Source): 3.3 x 4.5 mils  
Topside Metal: Al (10,000Å)  
Backside Metal: Au (3,250Å)

**Figure 2: CP226V Chip Geometry**



Wafer Diameter: 5 inch  
Die Size: 20 x 17 mils  
Die Thickness: 7.1 mils  
Bond Pad Size (Drain): 3.2 x 3.2 mils  
Bond Pad Size (Source): 3.2 x 3.2 mils  
Bond Pad Size (Gate): 3.2 x 3.2 mils  
Topside Metal: Al (30,000Å)  
Backside Metal: Au (9,000Å)

**Part Numbers Affected:**

CEN1280	2N3972	2N4858	CP216-2N4392-CM
CMPF4391	2N4091	2N4858A	CP216-2N4392-CT
CMPF4392	2N4092	2N4859	CP216-2N4392-WN
CMPF4393	2N4093	2N4859A	CP216-2N4393-CM
PN4091	2N4391	2N4860	CP216-2N4393-CT
PN4092	2N4392	2N4860A	CP216-2N4393-WN
PN4093	2N4393	2N4861	CP216-2N4856-CM
PN4391	2N4856	2N4861A	CP216-2N4856-CT
PN4392	2N4856A		CP216-2N4856-WN
PN4393	2N4857		
2N3971	2N4857A		



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**PCN # 202\_Rev 1**  
**Revision 1 Notification Date: June 4, 2021**  
**Original Notification Date: January 28, 2021**

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:	