# CP212-CZTA44HC
## NPN - High Voltage Transistor Die

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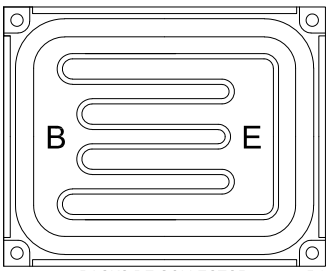
The CP212-CZTA44HC die is a silicon NPN transistor designed for high voltage and high current applications.




**MECHANICAL SPECIFICATIONS:**

| | |
|---|---|
| Die Size | 80 x 99 MILS |
| Die Thickness | 12.5 MILS |
| Base Bonding Pad Size | 32 x 12 MILS |
| Emitter Bonding Pad Size | 48 x 13 MILS |
| Top Side Metalization | Al – 30,000Å |
| Back Side Metalization | Cr/Ni/Ag – 1,000Å/5,000Å/10,000Å |
| Scribe Alley Width | 3.5 mils |
| Wafer Diameter | 4 INCHES |
| Gross Die Per Wafer | 1,380 |

| **MAXIMUM RATINGS:** ($T_A$=25°C) | **SYMBOL** | | **UNITS** |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 450 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 400 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 7.0 | V |
| Continuous Collector Current | $I_C$ | 2.0 | A |
| Peak Collector Current | $I_{CM}$ | 3.0 | A |
| Operating and Storage Junction Temperature | $T_J$, $T_{stg}$ | -65 to +150 | °C |

**ELECTRICAL CHARACTERISTICS:** ($T_A$=25°C unless otherwise noted)

| **SYMBOL** | **TEST CONDITIONS** | **MIN** | **MAX** | **UNITS** |
|---|---|---|---|---|
| $I_{CBO}$ | $V_{CB}$=400V | | 500 | nA |
| $I_{EBO}$ | $V_{EB}$=5.0V | | 500 | nA |
| $BV_{CBO}$ | $I_C$=50μA | 450 | | V |
| $BV_{CEO}$ | $I_C$=1.0mA | 400 | | V |
| $BV_{EBO}$ | $I_E$=50μA | 7.0 | | V |
| $V_{CE(SAT)}$ | $I_C$=500mA, $I_B$=50mA | | 0.25 | V |
| $V_{CE(SAT)}$ | $I_C$=1.0A, $I_B$=100mA | | 0.50 | V |
| $V_{CE(SAT)}$ | $I_C$=2.0A, $I_B$=200mA | | 1.5 | V |
| $V_{BE(SAT)}$ | $I_C$=1.0A, $I_B$=1.0mA | | 1.5 | V |
| $h_{FE}$ | $V_{CE}$=10V, $I_C$=10mA | 35 | | |
| $h_{FE}$ | $V_{CE}$=10V, $I_C$=500mA | 35 | | |
| $h_{FE}$ | $V_{CE}$=10V, $I_C$=1.0A | 30 | | |
| $h_{FE}$ | $V_{CE}$=10V, $I_C$=2.0A | 15 | | |
| $f_T$ | $V_{CE}$=10V, $I_C$=10mA, f=10MHz | 10 | | MHz |
| $C_{ob}$ | $V_{CB}$=20V, $I_E$=0, f=1.0MHz | | 30 | pF |
| $C_{ib}$ | $V_{EB}$=0.5V, $I_C$=0, f=1.0MHz | | 1000 | pF |

R0 (8-April 2016)

# CP212-CZTA44HC
## Typical Electrical Characteristics

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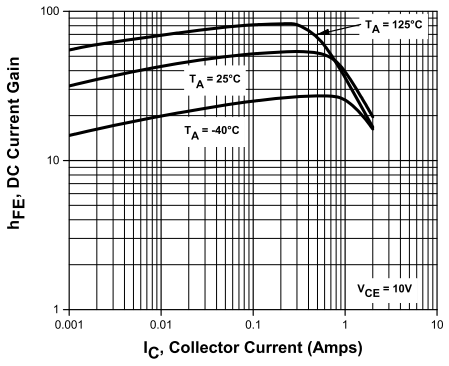
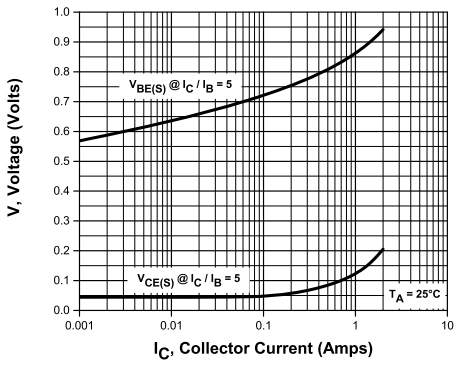
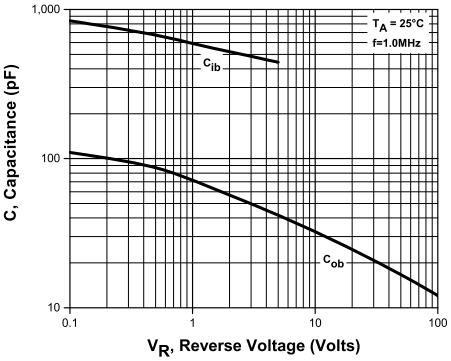
DC Current Gain



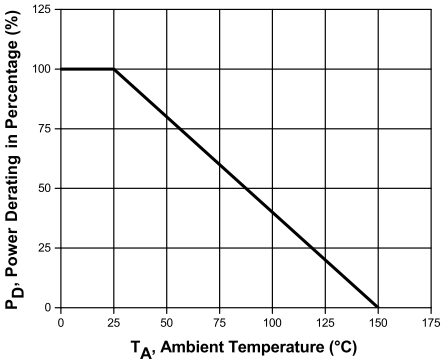

"ON" Voltage



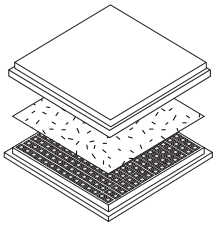

Capacitance




Normalized Power Derating



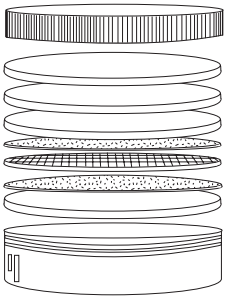
# BARE DIE PACKING OPTIONS



## BARE DIE IN TRAY (WAFFLE) PACK

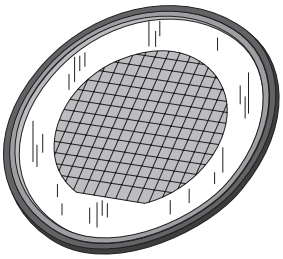
**CT**: Singulated die in tray (waffle) pack.
**(example: CP211-PART NUMBER-CT)**

**CM**: Singulated die in tray (waffle) pack 100% visually inspected as per MIL-STD-750, (method 2072 transistors, method 2073 diodes).
**(example: CP211-PART NUMBER-CM)**



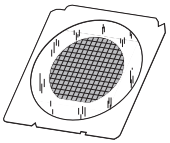
## UNSAWN WAFER

**WN**: Full wafer, unsawn, 100% tested with reject die inked.
**(example: CP211-PART NUMBER-WN)**



## SAWN WAFER ON PLASTIC RING

**WR**: Full wafer, sawn and mounted on plastic ring, 100% tested with reject die inked.
**(example: CP211-PART NUMBER-WR)**



Please note: Sawn Wafer on Metal Frame (WS) is possible as a special order. Please contact your Central Sales Representative at 631-435-1110.

Visit the Central website for a complete listing of specifications:
**www.centralsemi.com/bdspecs**

R2 (3-April 2017)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES

### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

### CONTACT US

**Corporate Headquarters & Customer Support Team**

Central Semiconductor Corp.
145 Adams Avenue
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Main Fax: (631) 435-1824
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www.centralsemi.com

**Worldwide Field Representatives:**
www.centralsemi.com/wwreps

**Worldwide Distributors:**
www.centralsemi.com/wwdistributors

http://www.centralsemi.com

# Product End of Life Notification

| | |
|---|---|
| **PDN ID:** | PDN01242 |
| **Notification Date:** | 8/11/22 |
| **Last Buy Date:** | 2/11/23 |
| **Last Shipment Date** | 8/11/23 |

Summary:The following bare die transistor devices are discontinued and now classified as of End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

*** All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

| Central Part Number | Suggested Replacement |
|---|---|
| CPP55-BC177-CT | N/A |
| CP188-BC546B-CM | CP388X-BC546B-CT |
| CP212-CZTA44HC-CT | N/A |
| CP235-2N3055-CT | N/A |
| CP235-2N3715-CT | N/A |
| CP588-BC556B-CM | CP788X-BC556B-CT |
| CP608-H2N3741-CM | N/A |
| CP608-TIP32C-CM | N/A |
| CP608-TIP32C-CT | N/A |
| CP608-TIP32C-WN | N/A |
| CP608-2N3741-CT | N/A |
| CP608-2N6475-CT | N/A |
| CP611-TIP42-CT | N/A |
| CP611-TIP42C-CT | N/A |
| CP611-TIP42C-WN | N/A |
| CP611-2N5955-CT | N/A |
| CP611-2N6107-CM | N/A |
| CP611-2N6107-CT | N/A |
| CP645-MJE15031-CM | N/A |

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit https://my.centralsemi.com/submit-inquiry?type=ER to submit an online inquiry.