

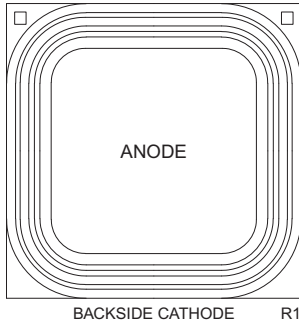
The CPD19-CHD8-06 is a silicon HyperFast rectifier designed for motor control and power factor correction applications where fast switching is required.

**FEATURES:**

- HyperFast recovery time
- High current
- High voltage

**APPLICATIONS:**

- Power factor correction
- Motor control



**MECHANICAL SPECIFICATIONS:**

|                        |                       |
|------------------------|-----------------------|
| Die Size               | 87 x 87 MILS          |
| Die Thickness          | 10.2 MILS             |
| Anode Bonding Pad Size | 60 x 60 MILS          |
| Top Side Metalization  | Al/Ti/Ni/Au – 13,500Å |
| Back Side Metalization | Al/Ti/Ni/Au – 13,500Å |
| Scribe Alley Width     | 3.7 MILS              |
| Wafer Diameter         | 4 INCHES              |
| Gross Die Per Wafer    | 1,335                 |

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

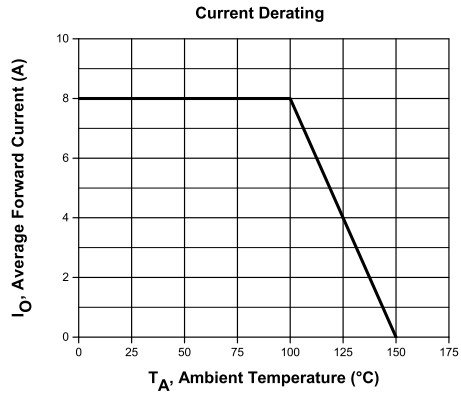
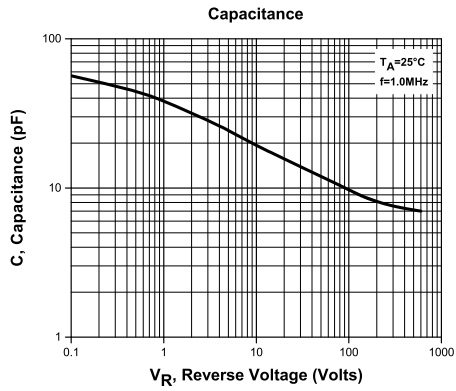
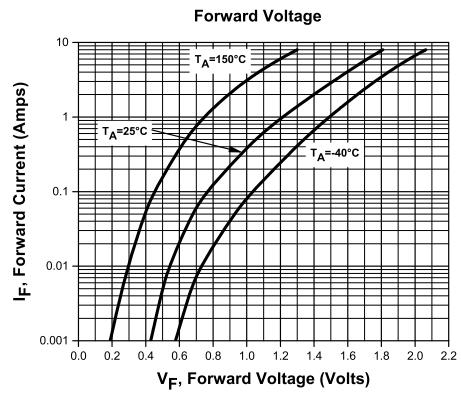
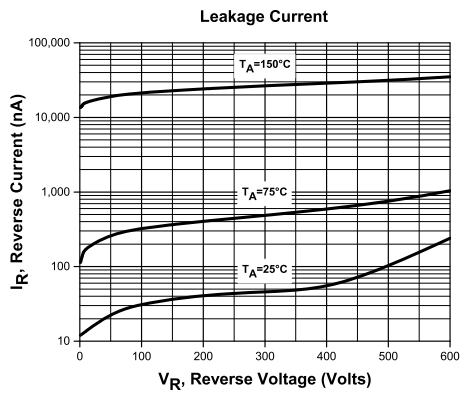
|   | SYMBOL         |             | UNITS            |
|---|----------------|-------------|------------------|
| Peak Repetitive Reverse Voltage                     | $V_{RRM}$      | 600         | V                |
| DC Blocking Voltage                                 | $V_R$          | 600         | V                |
| RMS Reverse Voltage                                 | $V_{R(RMS)}$   | 420         | V                |
| Average Forward Current ( $T_A=100^\circ\text{C}$ ) | $I_O$          | 8.0         | A                |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$      | $I_{FSM}$      | 70          | A                |
| Operating and Storage Junction Temperature          | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$ |

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL   | TEST CONDITIONS   | TYP | MAX | UNITS         |
|----------|---|-----|-----|---------------|
| $I_R$    | $V_R=600\text{V}$   |     | 10  | $\mu\text{A}$ |
| $V_F$    | $I_F=8.0\text{A}$   |     | 2.2 | V             |
| $C_J$    | $V_R=4.0\text{V}, f=1.0\text{MHz}$                                |     | 35  | pF            |
| $t_{rr}$ | $I_F=8.0\text{A}, V_R=400\text{V}, di/dt=200\text{A}/\mu\text{s}$ |     | 25  | ns            |

# CPD19-CHD8-06

## Typical Electrical Characteristics



## 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)

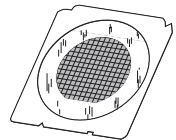
---



### 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.centrasemi.com/bdspecs](http://www.centrasemi.com/bdspecs)

## 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 (2<sup>nd</sup> 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  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)