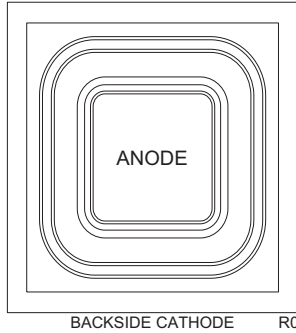


# CPD80V-1N3070

## Switching Diode Die

### 0.2 Amp, 175 Volt

The CPD80V-1N3070 is a 0.2 Amp, 175 Volt silicon switching diode ideal for all types of commercial, industrial, entertainment, and computer applications.



#### MECHANICAL SPECIFICATIONS:

|                        |                  |
|------------------------|------------------|
| Die Size               | 16.1 x 16.1 MILS |
| Die Thickness          | 7.1 MILS         |
| Anode Bonding Pad Size | 8.3 x 8.3 MILS   |
| Top Side Metalization  | Al – 30,000Å     |
| Back Side Metalization | Au-As – 9,000Å   |
| Scribe Alley Width     | 1.97 MILS        |
| Wafer Diameter         | 5 INCHES         |
| Gross Die Per Wafer    | 65,400           |

#### MAXIMUM RATINGS: (T<sub>A</sub>=25°C)

|                                            |
|--------------------------------------------|
| Peak Repetitives Reverse Voltage           |
| Peak Working Reverse Voltage               |
| Average Forward Current                    |
| Continuous Forward Current                 |
| Peak Repetitive Forward Current            |
| Peak Forward Surge Current, tp=1.0µs       |
| Peak Forward Surge Current, tp=1.0s        |
| Operating and Storage Junction Temperature |

#### SYMBOL

|                                   |
|-----------------------------------|
| V <sub>RRM</sub>                  |
| V <sub>RWM</sub>                  |
| I <sub>O</sub>                    |
| I <sub>F</sub>                    |
| I <sub>FRM</sub>                  |
| I <sub>FSM</sub>                  |
| I <sub>FSM</sub>                  |
| T <sub>J</sub> , T <sub>stg</sub> |

|             |
|-------------|
| 175         |
| 175         |
| 200         |
| 500         |
| 600         |
| 4.0         |
| 1.0         |
| -65 to +150 |

#### UNITS

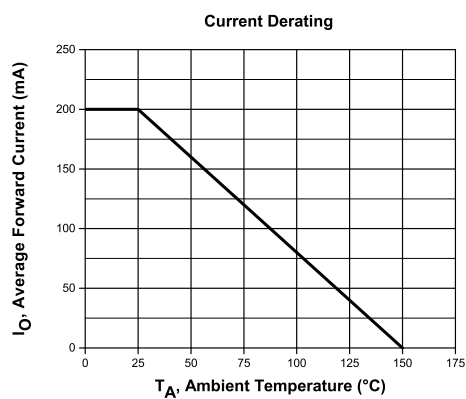
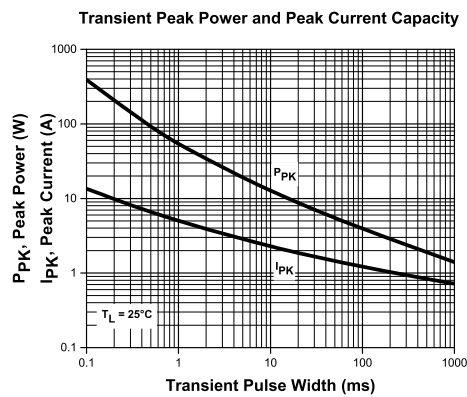
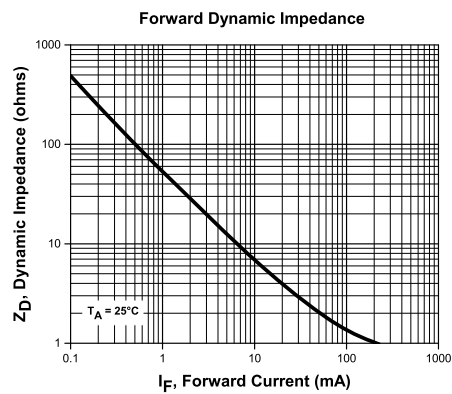
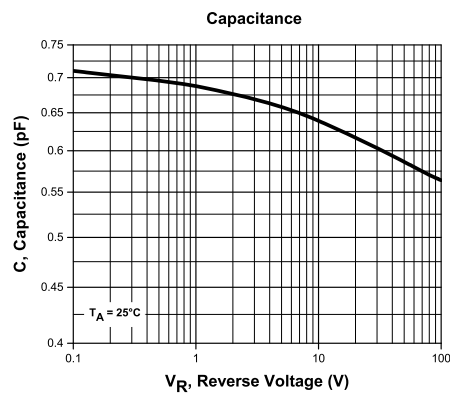
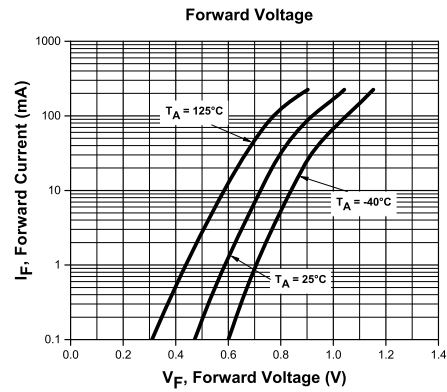
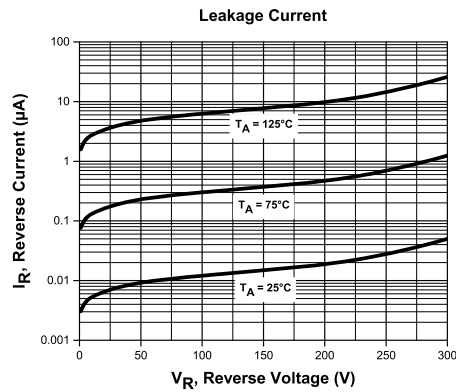
|    |
|----|
| V  |
| V  |
| mA |
| mA |
| mA |
| A  |
| A  |
| °C |

#### ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C unless otherwise noted)

| SYMBOL          | TEST CONDITIONS                                                                    | MIN | MAX | UNITS |
|-----------------|------------------------------------------------------------------------------------|-----|-----|-------|
| I <sub>R</sub>  | V <sub>R</sub> =175V                                                               |     | 100 | nA    |
| BV <sub>R</sub> | I <sub>R</sub> =100µA                                                              | 200 |     | V     |
| V <sub>F</sub>  | I <sub>F</sub> =100mA                                                              |     | 1.0 | V     |
| C <sub>J</sub>  | V <sub>R</sub> =0, f=1.0MHz                                                        |     | 5.0 | pF    |
| t <sub>rr</sub> | I <sub>R</sub> =I <sub>F</sub> =30mA, I <sub>rr</sub> =1.0mA, R <sub>L</sub> =100Ω |     | 50  | ns    |

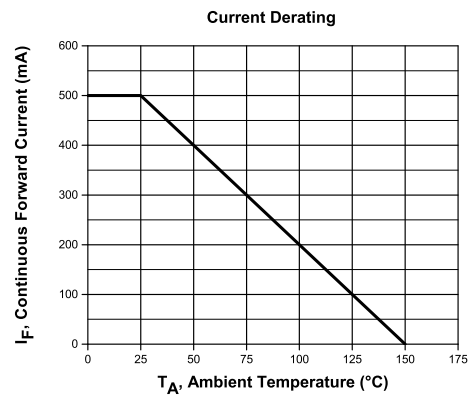
# CPD80V-1N3070

## Typical Electrical Characteristics



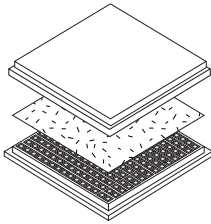
# CPD80V-1N3070

## Typical Electrical Characteristics



## BARE DIE PACKING OPTIONS

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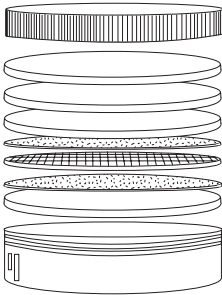


### BARE DIE IN TRAY (WAFFLE) PACK

**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)

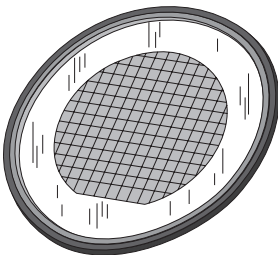
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### UNSAWN WAFER

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

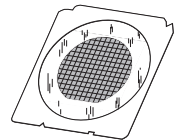
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### SAWN WAFER ON PLASTIC RING

**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



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### 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

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### 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

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### 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).

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### 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)

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