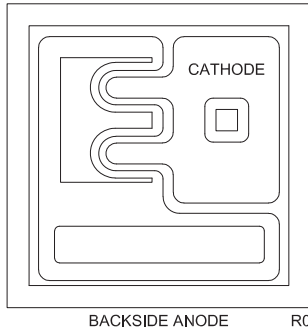


# CPZ40R-CMO5V0LC

## Low Capacitance Uni-Directional TVS Die

### 5.0 Volt

The CPZ40R-CMO5V0LC is a silicon, low capacitance uni-directional transient voltage suppressor designed to protect sensitive equipment against ESD damage.



#### MECHANICAL SPECIFICATIONS:

Die Size	13.4 x 13.4 MILS
Die Thickness	3.9 MILS
Cathode Bonding Pad Size	3.9 x 6.7 MILS
Top Side Metalization	Al – 30,000Å
Back Side Metalization	Au – 9,000Å
Scribe Alley Width	1.97 MILS
Wafer Diameter	6 INCHES
Gross Die Per Wafer	122,493

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

Peak Power Dissipation (8x20µs)  
 Electrical Fast Transient (IEC 61000-4-4) (5x50ns)  
 ESD Voltage (IEC 61000-4-2, Air)  
 ESD Voltage (IEC 61000-4-2, Contact)  
 Operating Junction Temperature  
 Storage Temperature

#### SYMBOL

P<sub>PK</sub>  
 EFT  
 V<sub>ESD</sub>  
 V<sub>ESD</sub>  
 T<sub>J</sub>  
 T<sub>stg</sub>

#### UNITS

W  
 A  
 kV  
 kV  
 °C  
 °C

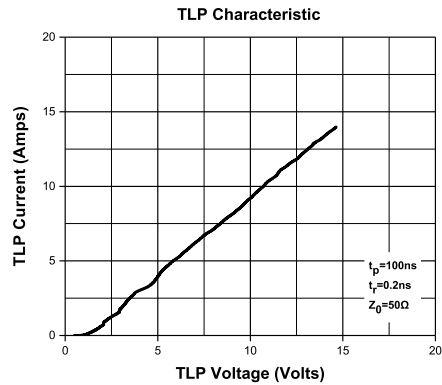
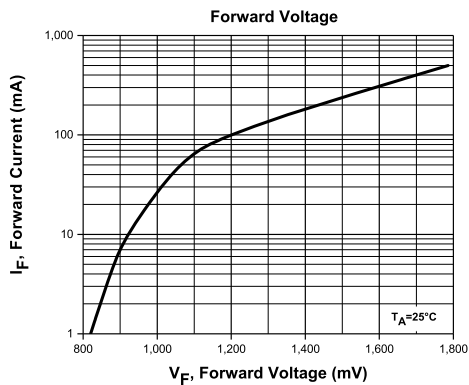
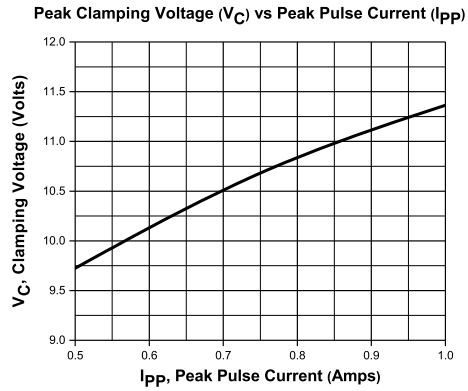
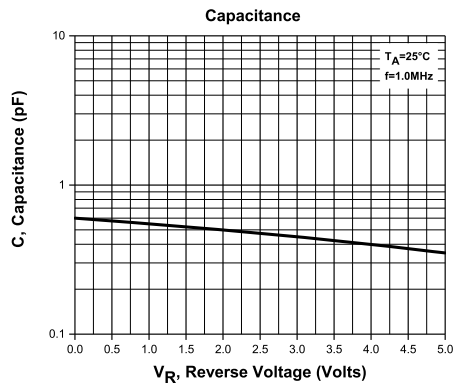
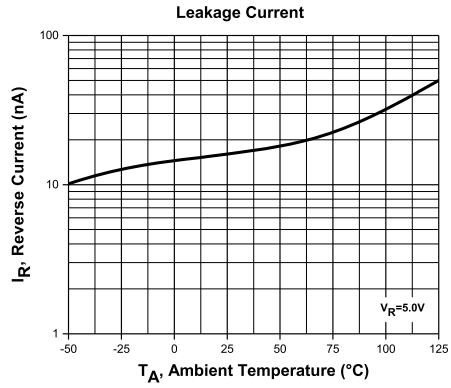
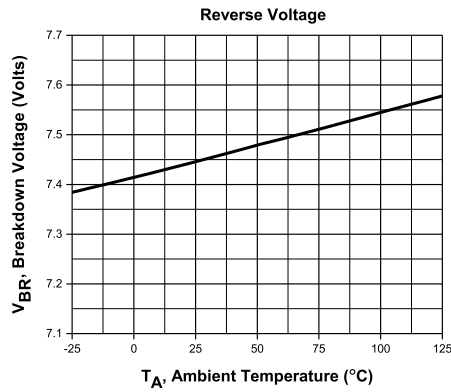
#### ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C) V<sub>F</sub>=1.0V MAX @ 10mA

Maximum Reverse Stand-off Voltage V <sub>RWM</sub>	Minimum Breakdown Voltage V <sub>BR</sub> @ I <sub>T</sub>	Test Current I <sub>T</sub>	Maximum Reverse Leakage Current I <sub>R</sub> @ V <sub>RWM</sub>	Maximum Clamping Voltage (8x20µs) V <sub>C</sub> @ I <sub>PP</sub>		Typical TLP Clamping Voltage (Note 1) V <sub>CL</sub> @ I <sub>PP</sub>		Typical Dynamic Resistance (Note 1) R <sub>DYN</sub>	Maximum Junction Capacitance @ 0V Bias C <sub>J</sub>
				V	A	V	A		
5.0	6.0	1.0	1.0	12	1.0	5.0	4.0	0.96	0.9
						10	9.2		

Note 1: Transmission Line Pulse (TLP) conditions: Z<sub>0</sub>=50Ω, t<sub>p</sub>=100ns

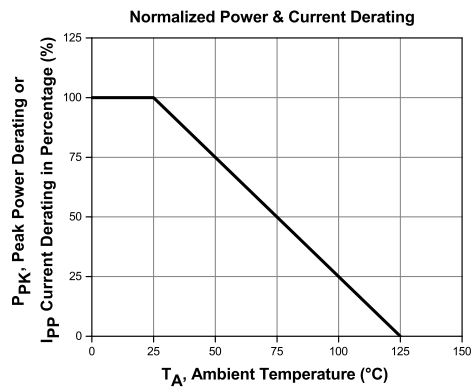
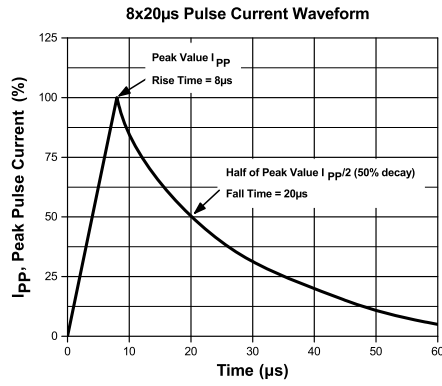
# CPZ40R-CMO5V0LC

## Typical Electrical Characteristics



# CPZ40R-CMO5V0LC

## 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)