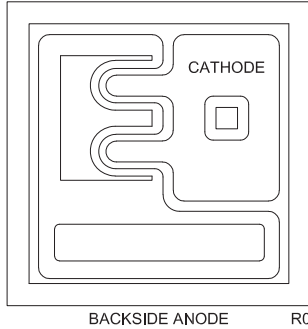


# CPZ40X-CMO5V0LC

## Low Capacitance Uni-Directional TVS Die

### 5.0 Volt

The CPZ40X-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	5.5 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: ( $T_A=25^\circ\text{C}$ )

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

$P_{PK}$

EFT

$V_{ESD}$

$V_{ESD}$

$T_J$

$T_{stg}$

#### UNITS

W

A

kV

kV

$^\circ\text{C}$

$^\circ\text{C}$

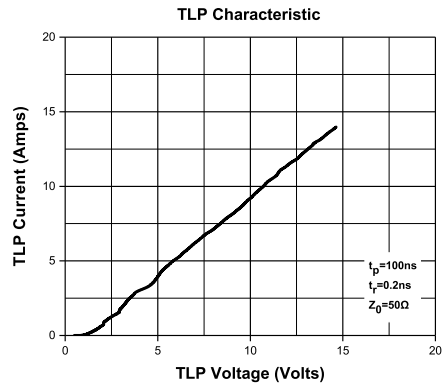
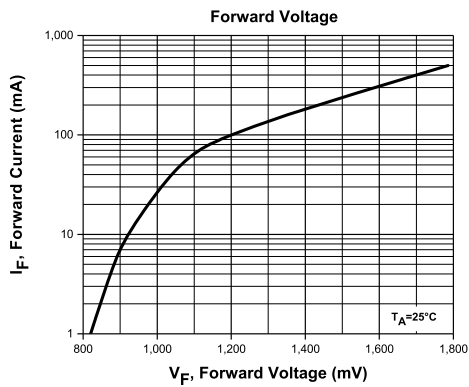
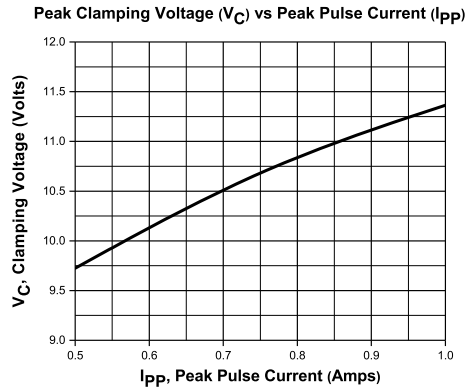
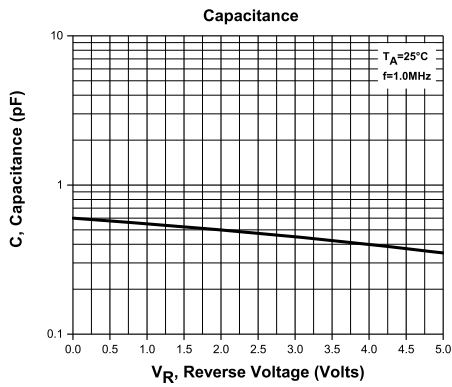
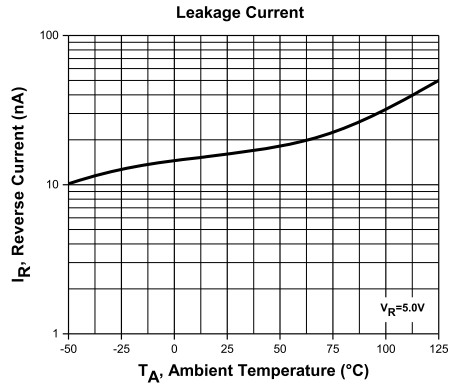
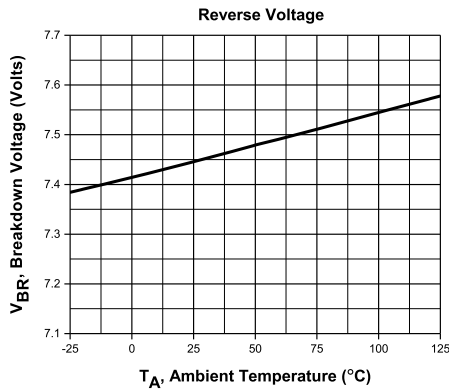
#### ELECTRICAL CHARACTERISTICS: ( $T_A=25^\circ\text{C}$ ) $V_F=1.0\text{V MAX @ 10mA}$

Maximum Reverse Stand-off Voltage $V_{RWM}$	Minimum Breakdown Voltage $V_{BR @ I_T}$	Test Current $I_T$	Maximum Reverse Leakage Current $I_R @ V_{RWM}$	Maximum Clamping Voltage (8x20µs) $V_C @ I_{PP}$		Typical TLP Clamping Voltage (Note 1) $V_{CL @ I_{PP}}$		Typical Dynamic Resistance (Note 1) $R_{DYN}$	Maximum Junction Capacitance @ 0V Bias $C_J$
				V	A	V	A		
V	V	mA	µA	V	A	V	A	Ω	pF
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:  $Z_0=50\Omega$ ,  $t_p=100\text{ns}$

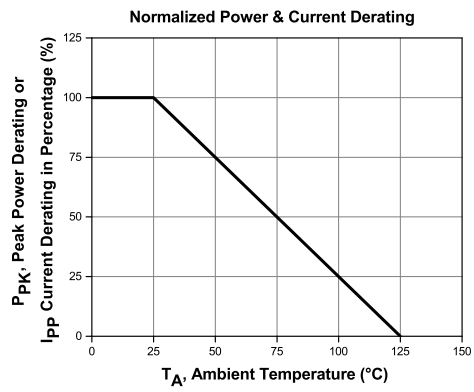
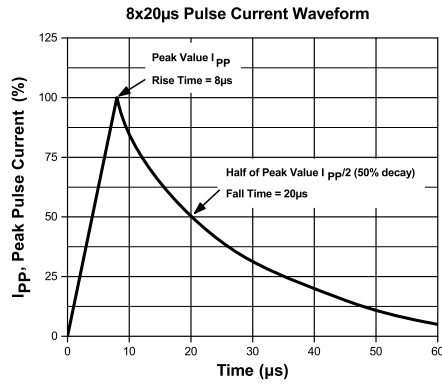
# CPZ40X-CMO5V0LC

## Typical Electrical Characteristics



# CPZ40X-CMO5V0LC

## 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)

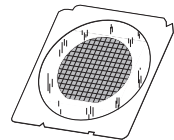
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### SAWN WAFER ON PLASTIC RING

**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

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

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