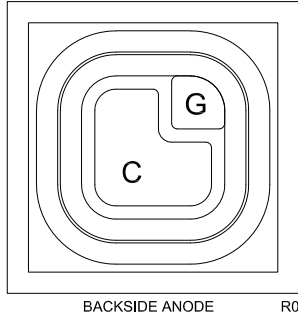


# CPS053-CS92D

## Silicon Controlled Rectifier Die

### 0.8 Amp, 400 Volt

The CPS053-CS92D is a Silicon Controlled Rectifier designed for sensing circuit and control system applications.



#### MECHANICAL SPECIFICATIONS:

Die Size	53.2 x 53.2 MILS
Die Thickness	8.7 MILS
Gate Bonding Pad Size	7.9 x 7.9 MILS
Source Bonding Pad Size	20.1 x 10.2 MILS
Top Side Metalization	Al – 45,000Å
Back Side Metalization	Al/Mo/Ni/Ag – 32,000Å
Scribe Alley Width	1.96 MILS
Wafer Diameter	4 INCHES
Gross Die Per Wafer	3,884

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

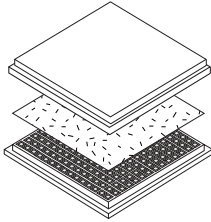
	SYMBOL		UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	400	V
RMS On-State Current	$I_T(\text{RMS})$	0.8	A
Peak One Cycle Surge Current ( $t=10\text{ms}$ )	$I_{TSM}$	10	A
$I^2t$ Value for Fusing ( $t=10\text{ms}$ )	$I^2t$	0.24	$\text{A}^2\text{s}$
Peak Gate Power Dissipation ( $t_p=10\mu\text{s}$ )	$P_{GM}$	2.0	W
Average Gate Power Dissipation	$P_{G(AV)}$	0.1	W
Peak Gate Current ( $t_p=10\mu\text{s}$ )	$I_{GM}$	1.0	A
Peak Gate Voltage ( $t_p=10\mu\text{s}$ )	$V_{GM}$	8.0	V
Operating Junction Temperature	$T_J$	-65 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$

#### ELECTRICAL CHARACTERISTICS: ( $T_A=25^\circ\text{C}$ )

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{DRM}, I_{RRM}$	$V_{DRM}, V_{RRM}=400\text{V}, R_{GK}=1.0\text{k}\Omega$		1.0	$\mu\text{A}$
$I_{GT}$	$V_D=12\text{V}$		200	$\mu\text{A}$
$I_H$	$I_T=100\text{mA}, R_{GK}=1.0\text{k}\Omega$		5.0	$\text{mA}$
$V_{GT}$	$V_D=12\text{V}$		0.8	V
$V_{TM}$	$I_{TM}=1.0\text{A}, t_p=380\mu\text{s}$		1.7	V

## BARE DIE PACKING OPTIONS

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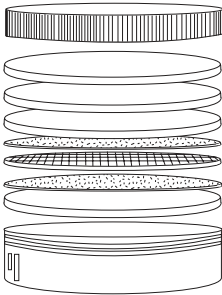


### BARE DIE IN TRAY (WAFFLE) PACK

**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)

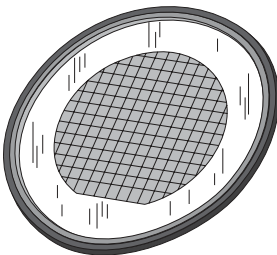
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### UNSAWN WAFER

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

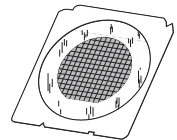
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### SAWN WAFER ON PLASTIC RING

**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:**  
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