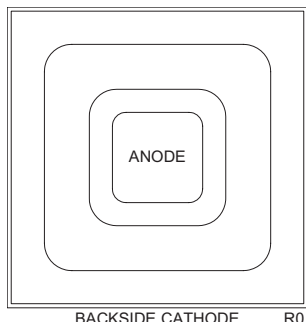


CPD83V-CMPD7000

High Speed Switching Diode Die

0.2 Amp, 100 Volt

The CPD83V-CMPD7000 is a silicon high speed switching diode ideal for all types of commercial, industrial, entertainment, and computer applications.



MECHANICAL SPECIFICATIONS:

Die Size	11 x 11 MILS
Die Thickness	7.1 MILS
Anode Bonding Pad Size	3.35 x 3.35 MILS
Top Side Metalization	Al – 30,000Å
Back Side Metalization	Au-As – 9,000Å
Scribe Alley Width	2.3 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	137,880

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

	SYMBOL		UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Average Forward Current	I_O	200	mA
Peak Forward Surge Current, $t_p=1.0\mu\text{s}$	I_{FSM}	500	mA
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$

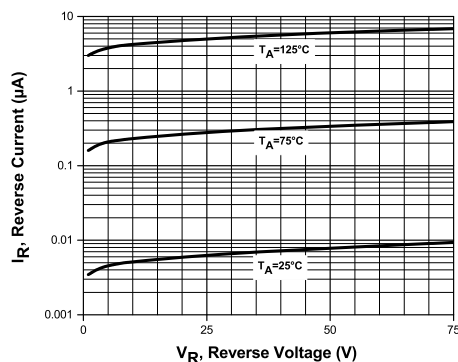
ELECTRICAL CHARACTERISTICS: ($T_A=25^{\circ}\text{C}$)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_R	$V_R=50\text{V}$		300	nA
I_R	$V_R=100\text{V}$		500	nA
BV_R	$I_R=100\mu\text{A}$	100		V
V_F	$I_F=1.0\text{mA}$	0.55	0.70	V
V_F	$I_F=10\text{mA}$	0.67	0.82	V
V_F	$I_F=100\text{mA}$	0.75	1.10	V
C_J	$V_R=0, f=1.0\text{MHz}$		2.6	pF
t_{rr}	$I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$		4.0	ns

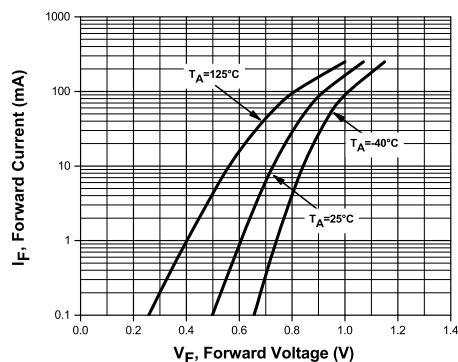
CPD83V-CMPD7000

Typical Electrical Characteristics

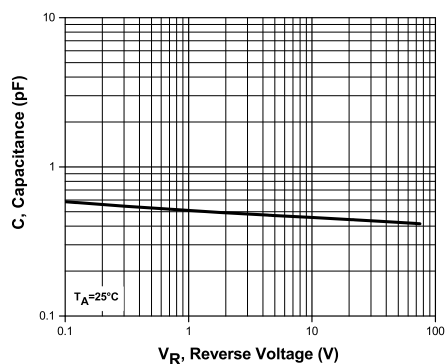
Leakage Current



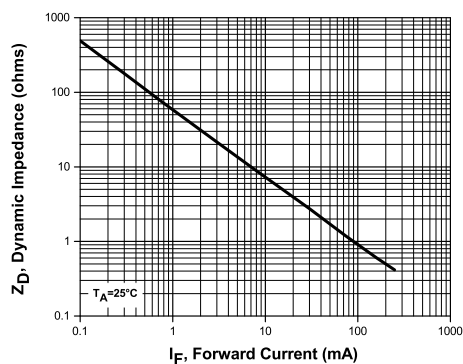
Forward Voltage



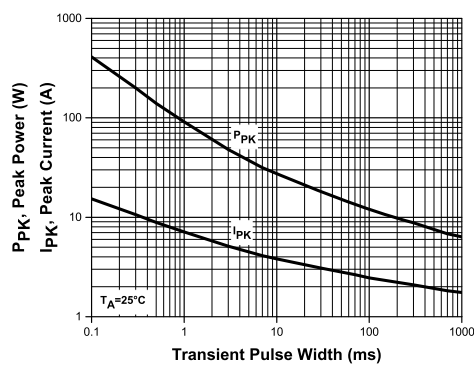
Capacitance



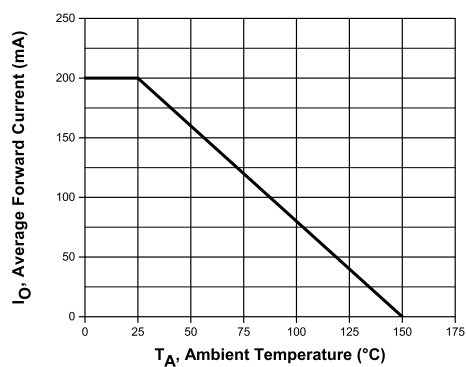
Forward Dynamic Impedance



Transient Peak Power and Peak Current Capacity



Current Derating



Rethink the Possibilities™
Discretes do Matter™

Bare Die and Wafer Part Numbering & Packing Guide



www.centrasemi.com

Bare Die Part Numbering System

- This specification defines the method for bare die packing and part number identification.
Example: Bipolar Power NPN Darlington Transistor Die, 2N6300, with optional up-screening to MIL-PRF-38534 Class H equivalent, Tray (Waffle) Package.

CP127 - H2N6300 - CM

DEVICE TYPE NUMBER
(10 ALPHA/NUMERIC MAX)

PREFIX FOR OPTIONAL UP-SCREENING*

H = MIL-PRF-38534 Class H equivalent
K = MIL-PRF-38534 Class K equivalent
HC = MIL-PRF-19500 JANHC equivalent
KC = MIL-PRF-19500 JANKC equivalent
CEN = Customer-specific up-screening

*Non up-screened devices will not include this prefix.

CENTRAL PROCESS NUMBER
(5 - 7 ALPHA/NUMERIC)

CPxxx = Transistor
CPZxx = Zener Diode
CPDxx = Diode
CPQxx = TRIAC
CPSxx = SCR
CPCxx = Silicon Carbide

PACKING METHOD

CM = Singulated bare die,
100% electrically tested,
100% visually inspected,
reject die removed,
tray (waffle) package

CT = Singulated bare die,
100% electrically tested,
reject die removed,
tray (waffle) package

WN = Wafer form,
100% electrically tested,
reject die inked

WR = Wafer form,
100% electrically tested,
sawn and mounted on adhesive
membrane and plastic ring,
reject die inked

WS* = Wafer form,
100% electrically tested,
sawn and mounted on adhesive
membrane and metal frame,
reject die inked

***WS is by special order only.**
Please contact Central sales
representative at 631-435-1110.

Visit the Central website for a complete
listing of all available WR and WS
specifications:

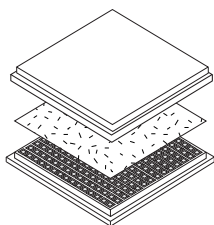
www.centrasemi.com/bare-die



www.centrasemi.com

R2 (3-September 2020)

BARE DIE PACKING OPTIONS

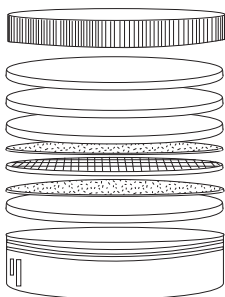


BARE DIE IN TRAY (WAFFLE) PACK

CT: Singulated die in tray (waffle) pack.

(example: CP211-PART NUMBER-CT)

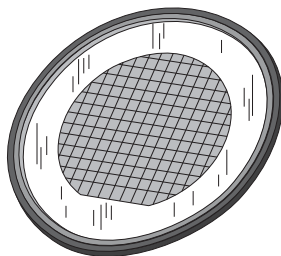
CM: Singulated die in tray (waffle) pack 100% visually inspected as per MIL-STD-750, (method 2072 transistors, method 2073 diodes).
(example: CP211-PART NUMBER-CM)



UNSAWN WAFER

WN: Full wafer, unsawn, 100% tested with reject die inked.

(example: CP211-PART NUMBER-WN)

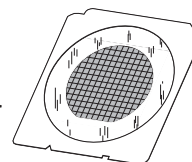


SAWN WAFER ON PLASTIC RING

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.centalsemi.com/bdspecs

R2 (3-April 2017)

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 (2nd 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

CONTACT US

Corporate Headquarters & Customer Support Team

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Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

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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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