

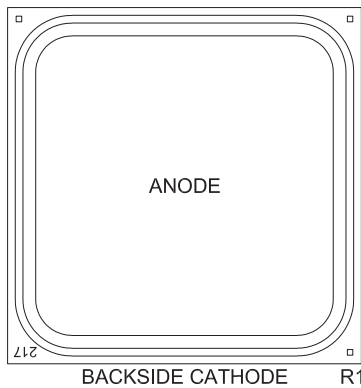
The CPD31X Schottky die is optimized for alternative energy applications. The 6 mil thick die provides an ultra low profile that is readily attached via standard die attach methods. Parametrically, the device is extremely energy efficient as a result of low forward and reverse conduction losses.

FEATURES:

- Low forward voltage at 10 Amps forward current
- Low reverse leakage current
- Low profile geometry
- Metalization suitable for standard die attach technologies
- Top metalization optimized for solder process

APPLICATIONS:

The CPD31X is optimized for use as a by-pass rectifier in low profile solar (PV) panels.



MECHANICAL SPECIFICATIONS:

Die Size	85 x 85 MILS
Die Thickness	5.9 MILS ± 0.8 MILS
Die Passivation	SiN
Anode Bonding Pad Area	78 x 78 MILS
Top Side Metalization	Al/Ni/Au – 30,000Å/4,000Å/1,500Å
Back Side Metalization	Ti/Ni/Au – 1,500Å/5,500Å/1,500Å
Scribe Alley Width	3.15 MILS

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

	SYMBOL		UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	60	V
DC Blocking Voltage	V_R	60	V
Average Forward Current	I_O	10	A
Peak Forward Surge Current (tp=8.3ms)	I_{FSM}	250	A
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$

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

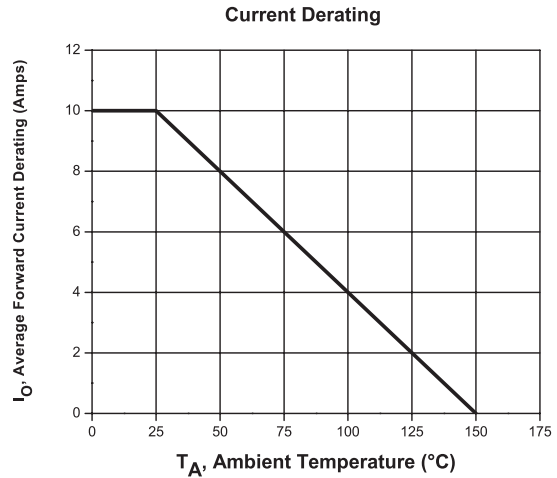
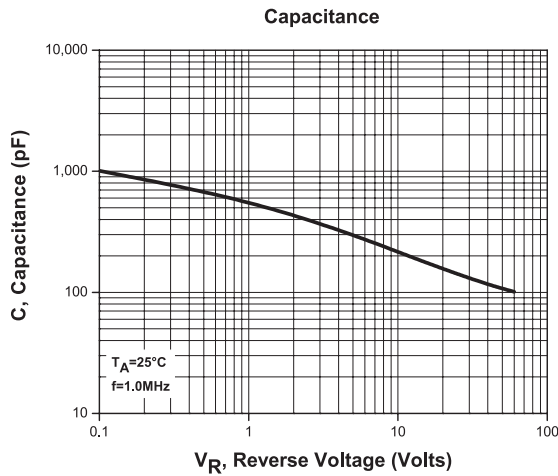
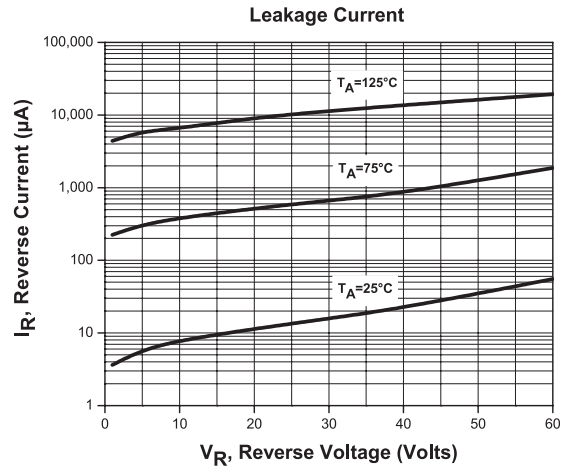
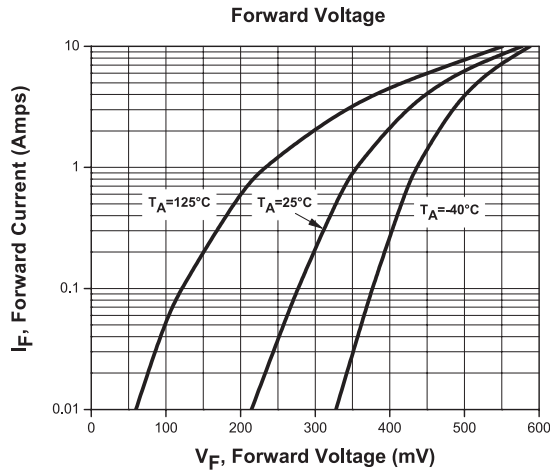
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_R	$V_R=60\text{V}$		75	500	μA
I_R	$V_R=60\text{V}, T_A=100^{\circ}\text{C}$			50	mA
BV_R	$I_R=0.4\text{mA}$	60			V
V_F	$I_F=5.0\text{A}$		0.49		V
V_F	$I_F=10\text{A}$		0.59	0.67	V

PACKING OPTIONS:

- CPD31X-WN: Full Wafer
- CPD31X-WR: Sawn Wafer on Plastic Ring

CPD31X

Typical Electrical Characteristics



Rethink the Possibilities™
Discretes do Matter™

Bare Die and Wafer Part Numbering & Packing Guide

Central™
Semiconductor Corp.

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

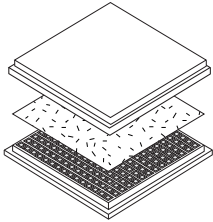
***WS is by special order only.**
 Please contact Central sales representative at 631-435-1110.

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

www.centrasemi.com/bare-die



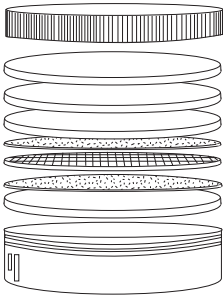
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

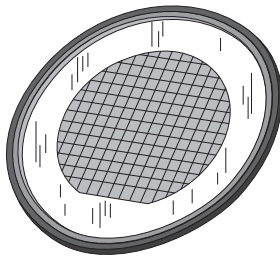
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

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

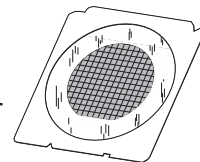
WN: Full wafer, unsawn, 100% tested with reject die inked.
(example: CP211-PART NUMBER-WN)



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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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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