

CUDD8-02  
CUDD8-04  
CUDD8-08

**SURFACE MOUNT SILICON  
ULTRA FAST  
RECOVERY RECTIFIERS  
8.0 AMP, 200 THRU 800 VOLT**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CUDD8-02, CUDD8-04, and CUDD8-06 are silicon Ultra-Fast Recovery Rectifiers designed for surface mount ultra fast switching applications requiring a low forward voltage drop.

**D<sup>2</sup>PAK!**  
SUPER POWER



**D<sup>2</sup>PAK CASE**

**MARKING CODE: FULL PART NUMBER**

**FEATURES:**

- High Reliability
- Low Forward Voltage
- High Current Capability
- High Surge Capacity
- UL Flammability Classification 94V-O
- Superior Lot To Lot Consistency
- Ultra Fast Recovery Time
- High Voltage

**MAXIMUM RATINGS:** (T<sub>C</sub>=25°C unless otherwise noted)

	SYMBOL	CUDD8-02	CUDD8-04	CUDD8-08	UNITS
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	200	400	800	V
DC Blocking Voltage	V <sub>R</sub>	200	400	800	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	140	280	560	V
Average Forward Current (T <sub>C</sub> =100°C)	I <sub>O</sub>		8.0		A
Peak Forward Surge Current, tp=8.3ms	I <sub>FSM</sub>		125		A
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>		-65 to +150		°C
Typical Thermal Resistance	θ <sub>JC</sub>		5.0		°C/W
Typical Thermal Resistance	θ <sub>JA</sub>		50		°C/W

**ELECTRICAL CHARACTERISTICS:** (T<sub>C</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	CUDD8-02		CUDD8-04		CUDD8-08		UNITS
		TYP	MAX	TYP	MAX	TYP	MAX	
I <sub>R</sub>	V <sub>R</sub> =Rated V <sub>RRM</sub>	-	5.0	-	10	-	10	μA
I <sub>R</sub>	V <sub>R</sub> =Rated V <sub>RRM</sub> , T <sub>C</sub> = 150°C	-	250	-	500	-	500	μA
V <sub>F</sub>	I <sub>F</sub> =8.0A	-	0.975	-	1.3	-	1.5	V
V <sub>F</sub>	I <sub>F</sub> =8.0A, T <sub>C</sub> = 150°C	-	0.895	-	1.1	-	1.2	V
t <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	-	25	-	25	-	50	ns
C <sub>J</sub>	V <sub>R</sub> =10V, f=1.0MHz	60	-	60	-	60	-	pF

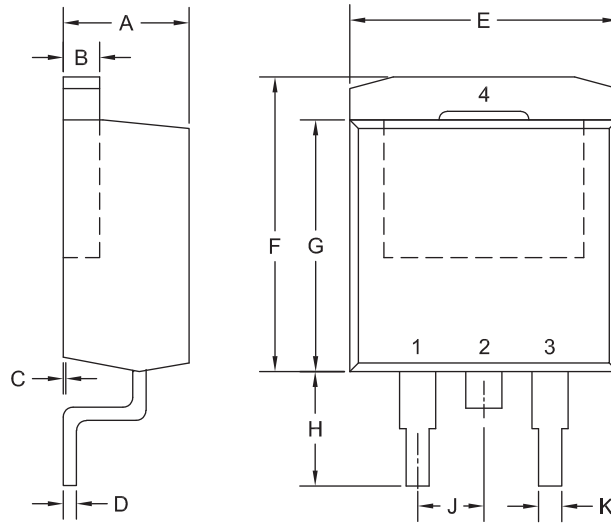
R6 (20-July 2021)

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**D<sup>2</sup>PAK CASE - MECHANICAL OUTLINE**



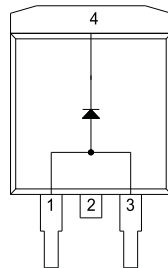
R3

**LEAD CODE:**

- 1) Anode
  - 2) Cathode
  - 3) Anode
  - 4) Cathode
- Pin 2 is common to the tab (4).

**MARKING:**

**FULL PART NUMBER**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.163	0.189	4.14	4.80
B	0.045	0.055	1.14	1.40
C	0.000	0.010	0.00	0.25
D	0.012	0.028	0.30	0.70
E	0.386	0.415	9.80	10.55
F	0.378	0.417	9.60	10.60
G	0.335	0.358	8.50	9.10
H	0.188	0.236	4.78	6.00
J	0.093	0.108	2.35	2.75
K	0.030	0.035	0.75	0.90

D2PAK (REV: R3)

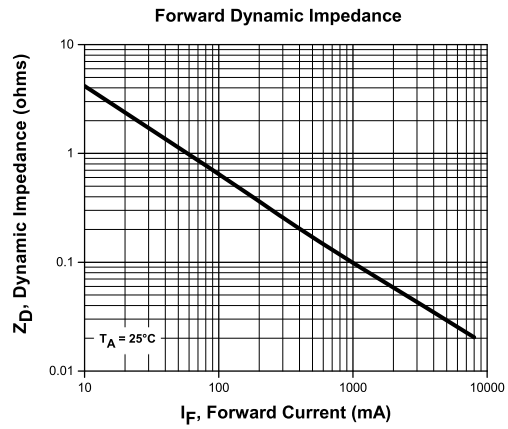
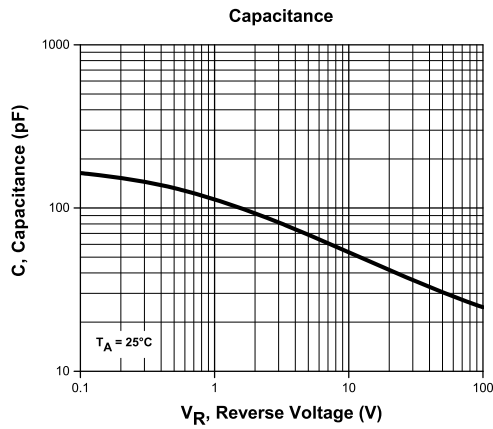
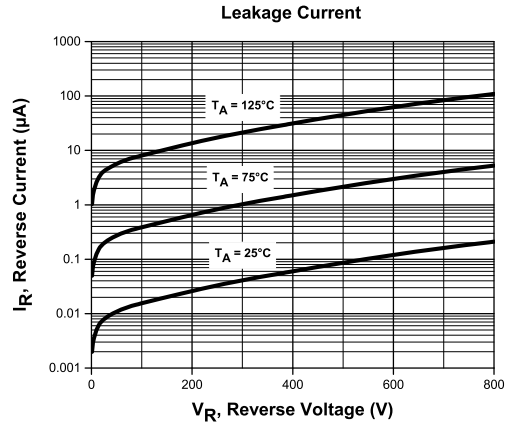
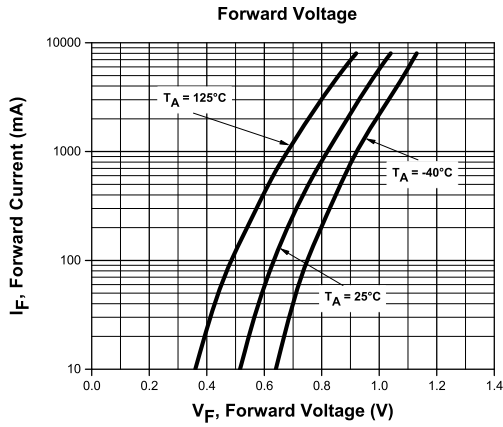
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TYPICAL ELECTRICAL CHARACTERISTICS



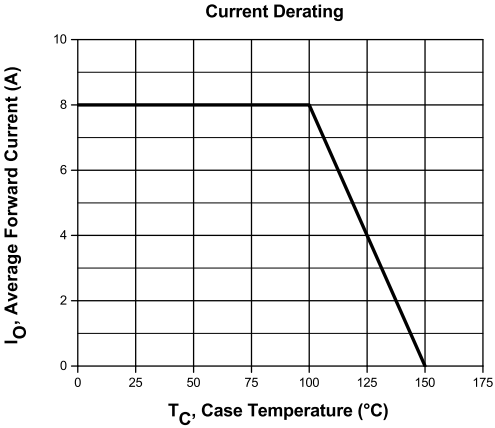
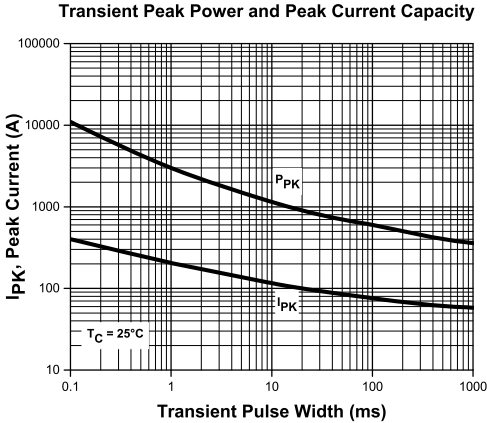
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**TYPICAL ELECTRICAL CHARACTERISTICS**



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## 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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