

CUDD16-02C  
CUDD16-04C  
CUDD16-08C

**SURFACE MOUNT, DUAL  
COMMON CATHODE, ULTRA FAST  
RECOVERY SILICON RECTIFIERS  
16 AMP, 200 THRU 800 VOLT**



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

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



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CUDD16-02C Series types are Silicon Ultra-Fast Recovery Rectifiers designed for surface mount ultra fast switching applications requiring a low forward voltage drop.

**MARKING: 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:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

	SYMBOL	CUDD16-02C	CUDD16-04C	CUDD16-08C	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$	200	400	800	V
DC Blocking Voltage	$V_R$	200	400	800	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	560	V
Average Forward Current ( $T_C=100^\circ\text{C}$ )	$I_O$		16		A
Peak Forward Surge Current, $t_p=8.3\text{ms}$	$I_{FSM}$		125		A
Operating and Storage					
Junction Temperature	$T_J, T_{stg}$		-65 to +150		$^\circ\text{C}$
Typical Thermal Resistance	$\theta_{JC}$		3.0		$^\circ\text{C/W}$
Typical Thermal Resistance	$\theta_{JA}$		50		$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	CUDD16-02C		CUDD16-04C		CUDD16-08C		UNITS
		TYP	MAX	TYP	MAX	TYP	MAX	
$I_R$	$V_R=\text{Rated } V_{RRM}$	-	5.0	-	10	-	10	$\mu\text{A}$
$I_R$	$V_R=\text{Rated } V_{RRM}, T_C=150^\circ\text{C}$	-	250	-	500	-	500	$\mu\text{A}$
$V_F$	$I_F=8.0\text{A}$	-	0.975	-	1.3	-	1.5	V
$V_F$	$I_F=8.0\text{A}, T_C=150^\circ\text{C}$	-	0.895	-	1.1	-	1.2	V
$t_{rr}$	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	-	25	-	25	-	50	ns
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz}$	80	-	80	-	50	-	pF

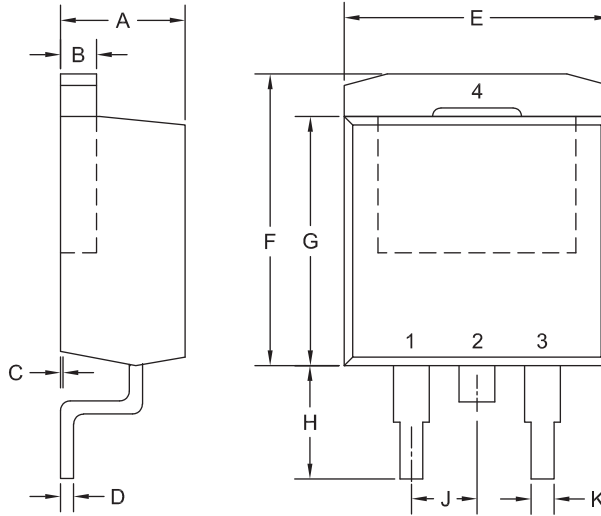
R5 (11-January 2018)

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



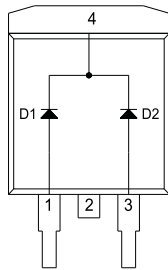
R3

**LEAD CODE:**

- 1) Anode D1
  - 2) Cathode D1, D2
  - 3) Anode D2
  - 4) Cathode D1, D2
- 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)

R5 (11-January 2018)

## 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

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