

CUD10-02  
 CUD10-04  
 CUD10-06  
 SURFACE MOUNT SILICON  
 ULTRA FAST  
 RECOVERY RECTIFIERS  
 10 AMP, 200 THRU 600 VOLT

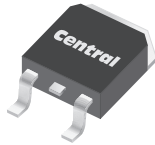


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**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CUD10-02, CUD10-04 and CUD10-06 are silicon Ultra Fast Recovery rectifiers designed for ultra fast switching applications requiring a low forward voltage drop.

**MARKING: FULL PART NUMBER**



DPAK CASE

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

	SYMBOL	CUD10-02	CUD10-04	CUD10-06	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$	200	400	600	V
DC Blocking Voltage	$V_R$	200	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	420	V
Average Forward Current ( $T_C=100^\circ\text{C}$ )	$I_O$		10		A
Peak Forward Surge Current, $t_p=8.3\text{ms}$	$I_{FSM}$		100		A
Operating and Storage Junction Temperature	$T_J, T_{stg}$		-65 to +150		$^\circ\text{C}$
Typical Thermal Resistance	$\theta_{JC}$		3.0		$^\circ\text{C/W}$

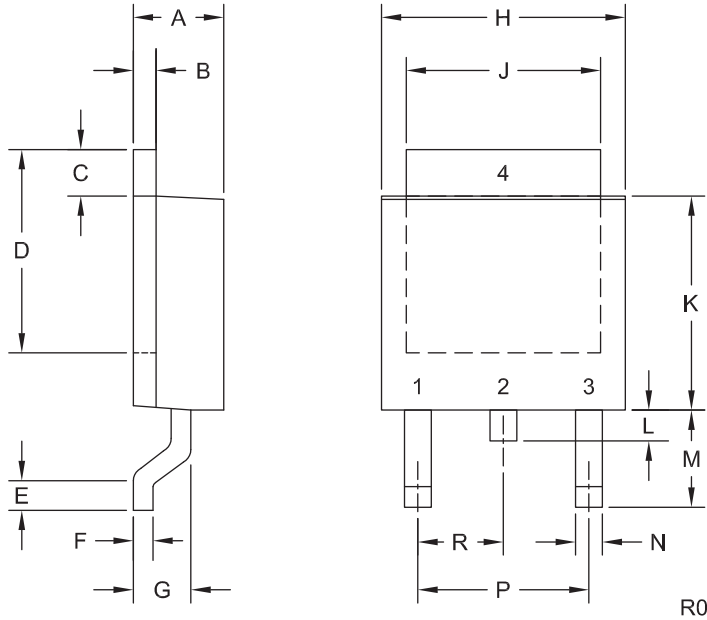
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	CUD10-02		CUD10-04		CUD10-06		UNITS
		TYP	MAX	TYP	MAX	TYP	MAX	
$I_R$	$V_R=\text{Rated } V_{RRM}$	-	10	-	10	-	10	$\mu\text{A}$
$I_R$	$V_R=\text{Rated } V_{RRM}, T_A=125^\circ\text{C}$	-	500	-	500	-	500	$\mu\text{A}$
$V_F$	$I_F=10\text{A}$	-	0.95	-	1.30	-	1.70	V
$t_{rr}$	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	-	35	-	35	-	35	ns
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz}$	62	-	62	-	62	-	pF

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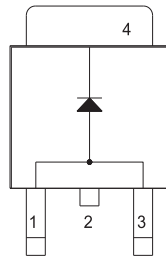
DPAK CASE - MECHANICAL OUTLINE



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	0.083	0.108	2.10	2.75
B	0.016	0.032	0.40	0.81
C	0.035	0.063	0.89	1.60
D	0.203	0.228	5.15	5.79
E	0.020	-	0.51	-
F	0.018	0.024	0.45	0.60
G	0.051	0.071	1.30	1.80
H	0.248	0.268	6.30	6.81
J	0.197	0.217	5.00	5.50
K	0.209	0.245	5.30	6.22
L	0.025	0.040	0.64	1.02
M	0.090	0.115	2.30	2.91
N	0.012	0.045	0.30	1.14
P	0.180		4.60	
R	0.090		2.30	

DPAK (REV: R0)

R3 (21-January 2013)

## 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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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)



<http://www.centrasemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01123
<b>Notification Date:</b>	4/15/19
<b>Last Buy Date:</b>	10/15/19
<b>Last Shipment Date</b>	4/15/20

Summary: Central's 10 amp ultra fast recovery rectifiers in the DPAK package are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
CUD10-02 BK	N/A, Stock Only
CUD10-02 TR13	N/A, Stock Only
CUD10-04 BK	N/A, Stock Only
CUD10-04 TR13	N/A, Stock Only
CUD10-06 BK	N/A, Stock Only
CUD10-06 TR13	N/A, Stock Only

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

**DISCLAIMER:** This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.