

CUD10-02  
 CUD10-04  
 CUD10-06

**SURFACE MOUNT  
 ULTRA FAST RECOVERY  
 SILICON RECTIFIER**

**SINGLE, 10 AMPS, 200 THRU 600 VOLTS**



# Central<sup>TM</sup> Semiconductor Corp.

**FEATURES:**

- HIGH RELIABILITY
- LOW FORWARD VOLTAGE
- HIGH CURRENT CAPABILITY
- HIGH SURGE CAPACITY
- UL FLAMMABILITY CLASSIFICATION 94V-0
- SUPERIOR LOT TO LOT CONSISTENCY
- ULTRA FAST RECOVERY TIME
- HIGH VOLTAGE

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CUD10-02 Series types are a silicon ultra-fast recovery rectifiers designed for surface mount ultra fast switching applications requiring a low forward voltage drop.

**MARKING CODE: FULL PART NUMBER**

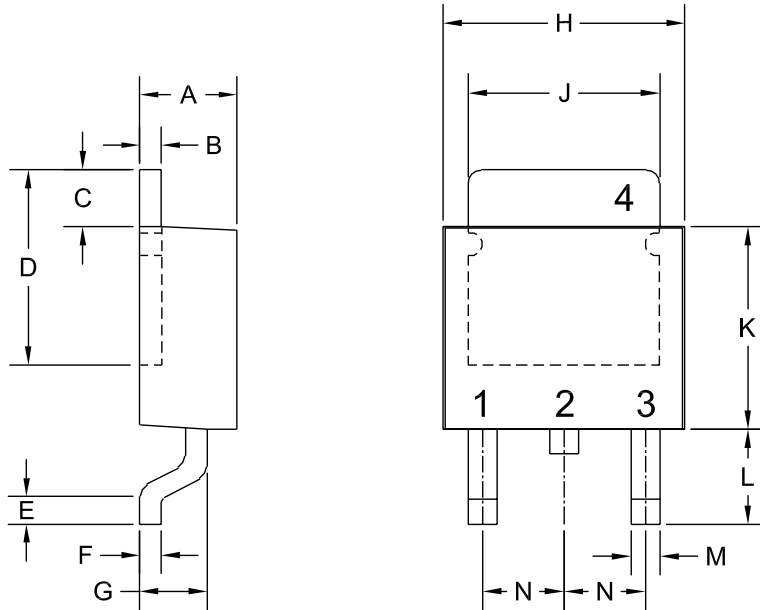
**MAXIMUM RATINGS:** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

	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 ( $T_C=100^{\circ}\text{C}$ )	$I_O$		10.0		A
Peak Forward Surge Current (8.3ms)	$I_{FSM}$		100		A
Operating and Storage					
Junction Temperature	$T_J, T_{stg}$		-65 to +150		$^{\circ}\text{C}$
Typical Thermal Resistance	$\theta_{JC}$		3.0		$^{\circ}\text{C/W}$

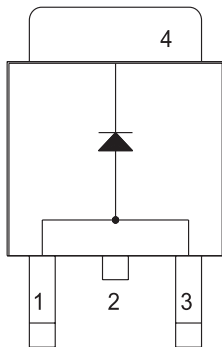
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^{\circ}\text{C}$  unless otherwise noted)

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

**DPAK RECTIFIER CASE - MECHANICAL OUTLINE**



R2



**LEAD CODE:**

- 1) ANODE
- 2) CATHODE
- 3) ANODE
- 4) CATHODE

PIN 2 IS COMMON TO THE TAB (4).

**MARKING CODE: FULL PART NUMBER**

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.083	0.108	2.10	2.75
B	0.016	0.024	0.40	0.60
C	0.063		1.60	
D	0.203	0.219	5.15	5.55
E	0.039		1.00	
F	0.020		0.50	
G	0.051	0.071	1.30	1.80
H	0.248	0.268	6.30	6.80
J	0.197	0.217	5.00	5.50
K	0.209	0.224	5.30	5.70
L	0.090	0.106	2.30	2.70
M	0.012	0.031	0.30	0.80
N	0.091		2.30	