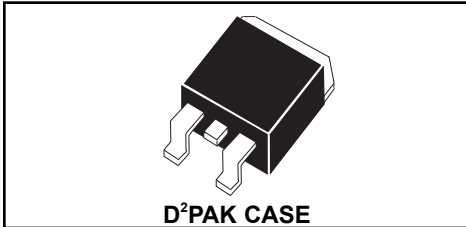


**CSDD-12M  
CSDD-12N**

**SILICON CONTROLLED RECTIFIER  
12 AMP, 600 THRU 800 VOLTS**



# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CSDD-12M series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

**MARKING CODE: FULL PART NUMBER**

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

	SYMBOL	CSDD -12M	CSDD -12N	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	600	800	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_T(\text{RMS})$		12	A
Peak One Cycle Surge ( $t=10\text{ms}$ )	$I_{TSM}$		110	A
$I^2t$ Value for Fusing ( $t=10\text{ms}$ )	$I^2t$		60	A <sup>2</sup> s
Peak Gate Power ( $t_p=10\mu\text{s}$ )	$P_{GM}$		40	W
Average Gate Power Dissipation	$P_G (AV)$		1.0	W
Peak Forward Gate Current ( $t_p=10\mu\text{s}$ )	$I_{FGM}$		4.0	A
Peak Forward Gate Voltage ( $t_p=10\mu\text{s}$ )	$V_{FGM}$		16	V
Peak Reverse Gate Voltage ( $t_p=10\mu\text{s}$ )	$V_{RGM}$		5.0	V
Critical Rate of Rise of On-State Current	$di/dt$		100	A/ $\mu\text{s}$
Storage Temperature	$T_{stg}$	-40 to +150		$^\circ\text{C}$
Junction Temperature	$T_J$	-40 to +125		$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$		60	$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JC}$		2.5	$^\circ\text{C/W}$

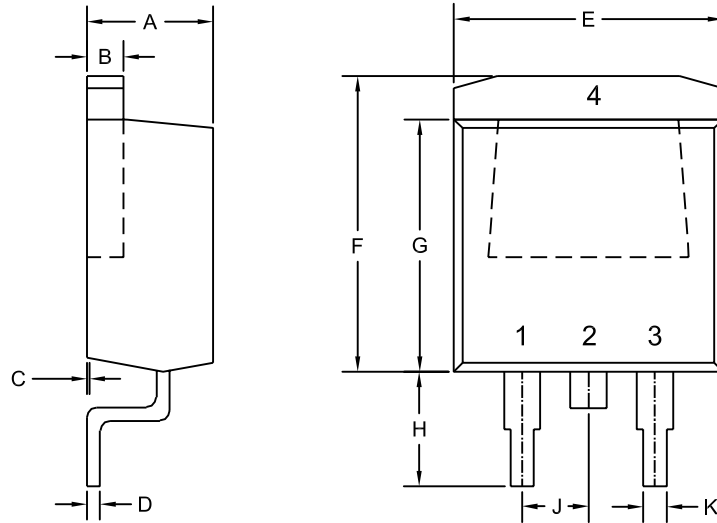
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}$			10	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}$			3.0	mA
$I_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		3.5	15	mA
$I_H$	$I_T=100\text{mA}$		8.7	20	mA
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		0.64	1.50	V
$V_{TM}$	$I_{TM}=24\text{A}, t_p=380\mu\text{s}$		1.21	1.60	V
$dv/dt$	$V_D=2/3 V_{DRM}, T_C=125^\circ\text{C}$	200			V/ $\mu\text{s}$

R1 (24-September 2004)

**SILICON CONTROLLED RECTIFIER  
12 AMP, 600 THRU 800 VOLTS**

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



R2

**LEAD CODE:**

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

**MARKING CODE:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS		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	0.409	9.80	10.40
F	0.378	0.417	9.60	10.60
G	0.335	0.358	8.50	9.10
H	0.197	0.236	5.00	6.00
J	0.093	0.108	2.35	2.75
K	0.030	0.035	0.75	0.90

D2PAK (REV: R2)

R1 (24-September 2004)