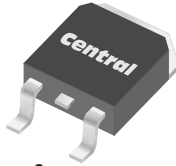


CSDD-16M  
CSDD-16N

**SURFACE MOUNT  
SILICON CONTROLLED RECTIFIER  
16 AMP, 600 THRU 800 VOLTS**



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



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CSDD-16M series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

**MARKING: FULL PART NUMBER**

<b>MAXIMUM RATINGS:</b> ( $T_C=25^\circ\text{C}$ unless otherwise noted)	<b>SYMBOL</b>	<b>CSDD-16M</b>	<b>CSDD-16N</b>	<b>UNITS</b>
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	600	800	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_T(\text{RMS})$		16	A
Peak One Cycle Surge, $t=10\text{ms}$	$I_{TSM}$		160	A
$I^2t$ Value for Fusing, $t=10\text{ms}$	$I^2t$		128	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/ $\mu\text{s}$
Operating Junction Temperature	$T_J$	-40 to +125		$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to +150		$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	60		$^\circ\text{C}/\text{W}$
Thermal Resistance	$\theta_{JC}$	2.0		$^\circ\text{C}/\text{W}$

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

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}$			10	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}$			2.0	mA
$I_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		3.4	15	mA
$I_H$	$I_T=100\text{mA}$		8.8	20	mA
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		0.64	1.50	V
$V_{TM}$	$I_{TM}=32\text{A}, t_p=380\mu\text{s}$		1.40	1.60	V
$dv/dt$	$V_D=2/3 V_{DRM}, T_C=125^\circ\text{C}$	500			V/ $\mu\text{s}$

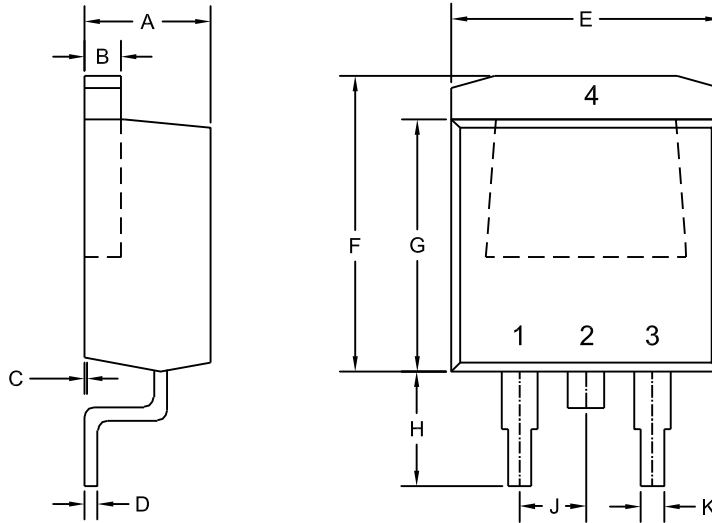
R1 (17-February 2010)

CSDD-16M  
CSDD-16N

SURFACE MOUNT  
SILICON CONTROLLED RECTIFIER  
16 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:**

**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	0.409	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 (17-February 2010)