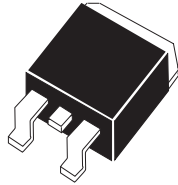


**CQDD-16M  
CQDD-16N**

**16 AMP TRIAC  
600 THRU 800 VOLTS**



**D²PAK CASE**

# Central™

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CQDD-16M series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

**MARKING CODE: FULL PART NUMBER**

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

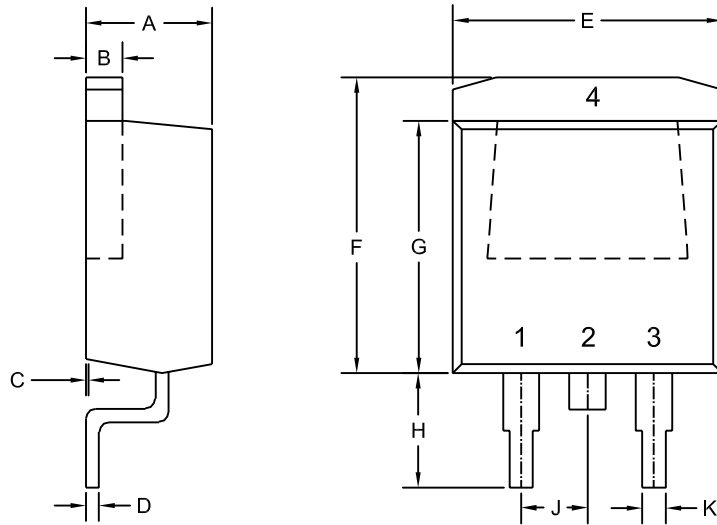
	SYMBOL	CQDD -16M	CQDD -16N	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}$	600	800	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_T(\text{RMS})$		16	A
Peak One Cycle Surge ( $t=8.3\text{ms}$ )	$I_{TSM}$		110	A
$I^2t$ Value for Fusing ( $t=8.3\text{ms}$ )	$I^2t$		50	$\text{A}^2\text{s}$
Peak Gate Power ( $t_p=10\mu\text{s}$ )	$P_{GM}$		40	W
Average Gate Power Dissipation	$P_G (AV)$		1.0	W
Peak Gate Current ( $t_p=10\mu\text{s}$ )	$I_{GM}$		6.0	A
Peak Gate Voltage ( $t_p=10\mu\text{s}$ )	$V_{GM}$		16	V
Critical Rate of Rise of On-State Current				
Repetitive ( $f=60\text{Hz}$ )	$di/dt$		10	$\text{A}/\mu\text{s}$
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	$^\circ\text{C}/\text{W}$
Thermal Resistance	$\theta_{JC}$		2.3	$^\circ\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}$	Rated $V_{DRM}$			10	$\mu\text{A}$
$I_{DRM}$	Rated $V_{DRM}$ , $T_C=125^\circ\text{C}$			2.0	$\text{mA}$
$I_{GT}$	$V_D=12\text{V}$ , $R_L=10\Omega$ , QUAD I, II, III		10.9	25	$\text{mA}$
$I_{GT}$	$V_D=12\text{V}$ , $R_L=10\Omega$ , QUAD IV		55.2	75	$\text{mA}$
$I_H$	$I_T=100\text{mA}$		9.8	25	$\text{mA}$
$V_{GT}$	$V_D=12\text{V}$ , $R_L=10\Omega$ , QUAD I, II, III		0.97	1.50	V
$V_{GT}$	$V_D=12\text{V}$ , $R_L=10\Omega$ , QUAD IV		1.51	2.50	V
$V_{TM}$	$I_{TM}=22.5\text{A}$ , $t_p=380\mu\text{s}$		1.35	1.60	V
$dv/dt$	$V_D=2/3 V_{DRM}$ , $R_{GK}=\infty$ , $T_C=125^\circ\text{C}$	10			$\text{V}/\mu\text{s}$

R1 (24-September 2004)

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



R2

**LEAD CODE:**

- 1) MT1
- 2) MT2
- 3) GATE
- 4) MT2

**MARKING CODE:**

**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)