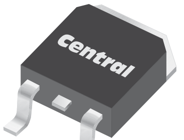
CQDD-8M
CQDD-8N

SURFACE MOUNT
8 AMP SILICON TRIAC
600 THRU 800 VOLTS



D^2PAK CASE

Central™ Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CQDD-8M series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C unless otherwise noted)	**SYMBOL**	**CQDD-8M**	**CQDD-8N**	**UNITS**
Peak Repetitive Off-State Voltage	V_{DRM}	600	800	V
RMS On-State Current (T_C=90°C)	$I_{T(RMS)}$	8.0		A
Peak One Cycle Surge, t=8.3ms	I_{TSM}	50		A
I^2t Value for Fusing, t=8.3m	I^2t	10		A^2s
Peak Gate Power, tp=10µs	P_{GM}	40		W
Average Gate Power Dissipation	$P_{G(AV)}$	1.0		W
Peak Gate Current, tp=10µs	I_{GM}	4.0		A
Peak Gate Voltage, tp=10µs	V_{GM}	16		V
Critical Rate of Rise of On-State Current Repetitive, f=60Hz	di/dt	10		A/µs
Operating Junction Temperature	T_J	-40 to +125		°C
Storage Temperature	T_{stg}	-40 to +150		°C
Thermal Resistance	Θ_{JA}	60		°C/W
Thermal Resistance	Θ_{JC}	3.2		°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

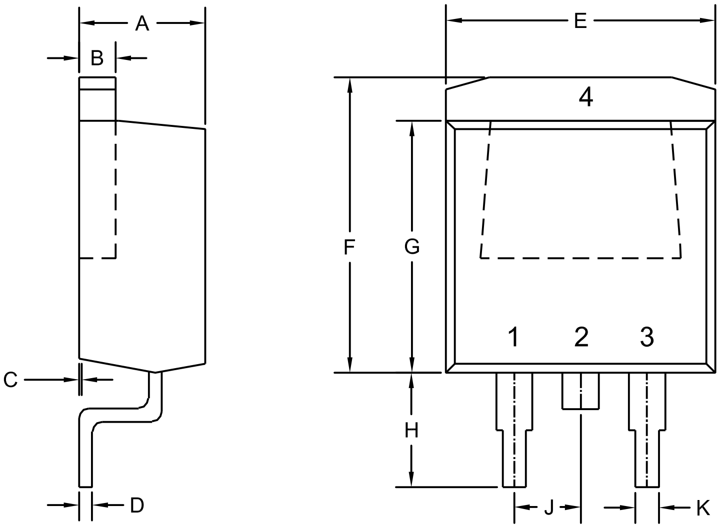
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{DRM}	Rated V_{DRM}			10	µA
I_{DRM}	Rated V_{DRM}, T_C=125°C			500	µA
I_{GT}	V_D=12V, R_L=10Ω, QUAD I, II, III		4.5	20	mA
I_{GT}	V_D=12V, R_L=10Ω, QUAD IV		17	50	mA
I_H	I_T=100mA		4.7	25	mA
V_{GT}	V_D=12V, R_L=10Ω, QUAD I, II, III		0.95	1.50	V
V_{GT}	V_D=12V, R_L=10Ω, QUAD IV		1.35	2.50	V
V_{TM}	I_{TM}=11A, tp=380µs		1.30	1.75	V
dv/dt	$V_D={}^2/_3\,V_{DRM}$, $R_{GK}=\infty$, T_C=125°C	5.0			V/µs

R2 (12-February 2010)

CQDD-8M
CQDD-8N

SURFACE MOUNT
8 AMP SILICON TRIAC
600 THRU 800 VOLTS

D²PAK CASE - MECHANICAL OUTLINE



R2

LEAD CODE:
1) MT1
2) MT2
3) Gate
4) MT2

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

R2 (12-February 2010)