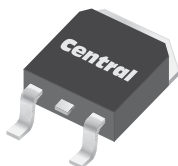


CQDD-12M
CQDD-12N

SURFACE MOUNT
12 AMP SILICON TRIAC
600 THRU 800 VOLTS



D²PAK CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CQDD-12M 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-12M	CQDD-12N	UNITS
Peak Repetitive Off-State Voltage	V _{DRM}	600	800	V
RMS On-State Current (T _C =90°C)	I _{T(RMS)}		12	A
Peak One Cycle Surge, t=8.3ms	I _{TSM}		80	A
I ² t Value for Fusing, t=8.3ms	I ² t		27	A ² s
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}	2.7		°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		9.9	20	mA
I _{GT}	V _D =12V, R _L =10Ω, QUAD IV		24.3	50	mA
I _H	I _T =100mA		14.1	25	mA
V _{GT}	V _D =12V, R _L =10Ω, QUAD I, II, III		1.10	1.50	V
V _{GT}	V _D =12V, R _L =10Ω, QUAD IV		2.10	2.50	V
V _{TM}	I _{TM} =17A, tp=380μs		1.33	1.50	V
dv/dt	V _D =2/3 V _{DRM} , R _{GK} =∞, T _C =125°C	10			V/μs

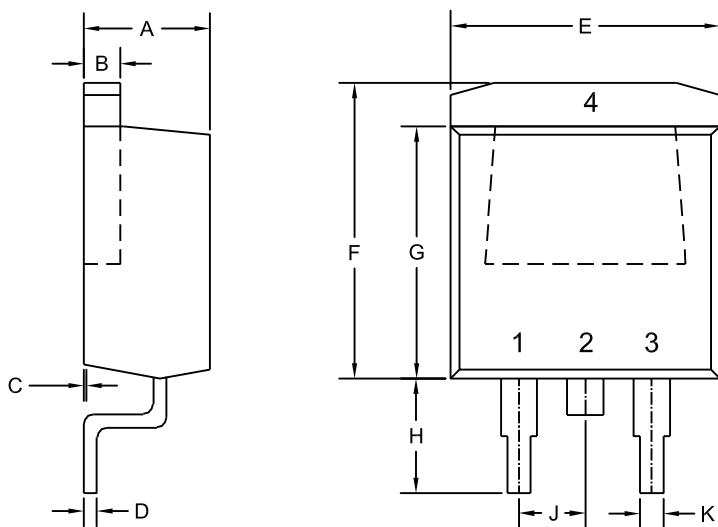
R2 (12-February 2010)

CQDD-12M
CQDD-12N

SURFACE MOUNT
12 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				
SYMBOL	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)

R2 (12-February 2010)