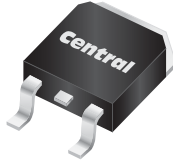


CQDD-12M
CQDD-12N

SURFACE MOUNT
12 AMP SILICON TRIACS
600 THRU 800 VOLT



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

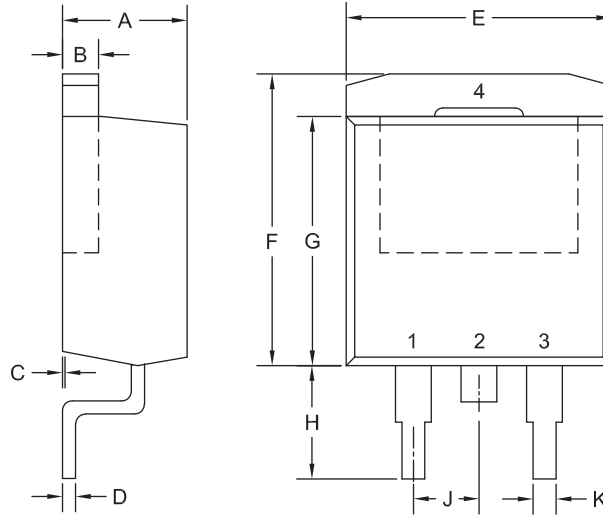
ELECTRICAL CHARACTERISTICS: (T _C =25°C unless otherwise noted)		MIN	TYP	MAX	UNITS
SYMBOL	TEST CONDITIONS				
I _{DRM}	Rated V _{DRM}			10	µA
I _{DRM}	Rated V _{DRM} , T _C =125°C			500	µA
I _{GT}	V _D =12V, R _L =10Ω, QUAD I, II, III		9.9	20	mA
I _{GT}	V _D =12V, R _L =10Ω, QUAD IV		24.3	50	mA
I _H	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

CQDD-12M
CQDD-12N

SURFACE MOUNT
12 AMP SILICON TRIACS
600 THRU 800 VOLT



D²PAK CASE - MECHANICAL OUTLINE



R3

LEAD CODE:

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

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	0.415	9.80	10.55
F	0.378	0.417	9.60	10.60
G	0.335	0.358	8.50	9.10
H	0.188	0.236	4.78	6.00
J	0.093	0.108	2.35	2.75
K	0.030	0.035	0.75	0.90

D2PAK (REV: R3)

R3 (11-January 2018)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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