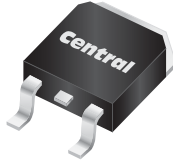


CQDD-8M  
CQDD-8N

SURFACE MOUNT  
8.0 AMP SILICON TRIACS  
600 THRU 800 VOLT



D<sup>2</sup>PAK CASE



www.centrasemi.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 <sub>C</sub> =25°C unless otherwise noted)	SYMBOL	CQDD-8M	CQDD-8N	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub>	600	800	V
RMS On-State Current (T <sub>C</sub> =90°C)	I <sub>T(RMS)</sub>		8.0	A
Peak One Cycle Surge, t=8.3ms	I <sub>TSM</sub>		50	A
I <sup>2</sup> t Value for Fusing, t=8.3m	I <sup>2</sup> t		10	A <sup>2</sup> s
Peak Gate Power, tp=10µs	P <sub>GM</sub>		40	W
Average Gate Power Dissipation	P <sub>G(AV)</sub>		1.0	W
Peak Gate Current, tp=10µs	I <sub>GM</sub>		4.0	A
Peak Gate Voltage, tp=10µs	V <sub>GM</sub>		16	V
Critical Rate of Rise of On-State Current Repetitive, f=60Hz	di/dt		10	A/µs
Operating Junction Temperature	T <sub>J</sub>	-40 to +125		°C
Storage Temperature	T <sub>stg</sub>	-40 to +150		°C
Thermal Resistance	θ <sub>JA</sub>		60	°C/W
Thermal Resistance	θ <sub>JC</sub>		3.2	°C/W

**ELECTRICAL CHARACTERISTICS: (T<sub>C</sub>=25°C unless otherwise noted)**

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub>	Rated V <sub>DRM</sub>			10	µA
I <sub>DRM</sub>	Rated V <sub>DRM</sub> , T <sub>C</sub> =125°C			500	µA
I <sub>GT</sub>	V <sub>D</sub> =12V, R <sub>L</sub> =10Ω, QUAD I, II, III		4.5	20	mA
I <sub>GT</sub>	V <sub>D</sub> =12V, R <sub>L</sub> =10Ω, QUAD IV		17	50	mA
I <sub>H</sub>	I <sub>T</sub> =100mA		4.7	25	mA
V <sub>GT</sub>	V <sub>D</sub> =12V, R <sub>L</sub> =10Ω, QUAD I, II, III		0.95	1.50	V
V <sub>GT</sub>	V <sub>D</sub> =12V, R <sub>L</sub> =10Ω, QUAD IV		1.35	2.50	V
V <sub>TM</sub>	I <sub>TM</sub> =11A, tp=380µs		1.30	1.75	V
dv/dt	V <sub>D</sub> = <sup>2</sup> / <sub>3</sub> V <sub>DRM</sub> , R <sub>GK</sub> =∞, T <sub>C</sub> =125°C	5.0			V/µs

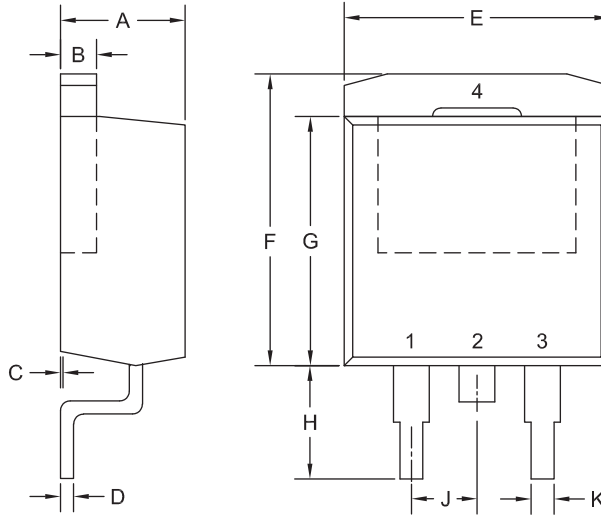
R3 (11-January 2018)

CQDD-8M  
CQDD-8N

SURFACE MOUNT  
8.0 AMP SILICON TRIACS  
600 THRU 800 VOLT



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



R3

**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	0.415	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



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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