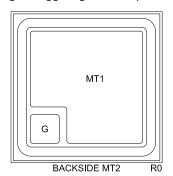


CPQ114-CQD-8M3

Three Quadrant TRIAC Die 8.0 Amp, 600 Volt

The CPQ114-CQD-8M3 is a silicon TRIAC designed for full wave AC control applications featuring gate triggering in three quadrants.



MECHANICAL SPECIFICATIONS:

Die Size	114 x 114 MILS
Die Thickness	8.3 MILS
Gate Bonding Pad Size	21.7 x 21.7 MILS
MT1 Bonding Pad Size	84.6 x 84.6 MILS
Top Side Metalization	AI – 45,000Å
Back Side Metalization	Al/Ti/Ni/Ag – 36,600Å
Scribe Alley Width	3.0 MILS
Wafer Diameter	4 INCHES
Gross Die Per Wafer	787

MAXIMUM RATINGS: (T_J=25°C unless otherwise noted)

	SYMBOL		UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	600	V
RMS On-State Current (T _J =100°C)	I _T (RMS)	8.0	Α
Peak One Cycle Surge Current, 50Hz	ITSM	70	Α
I²t Value for Fusing, t=10ms	l²t	32	A ² s
Peak Gate Current, tp=20µs (T _J =125°C)	I_{GM}	4.0	Α
Critical Rate of Rise of On-State Current			
Repetitive, f=100Hz (T _J =125°C)	di/dt	50	A/µs
Operating Junction Temperature	T_J	-40 to +125	°C
Storage Temperature	T _{sta}	-40 to +150	°C

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

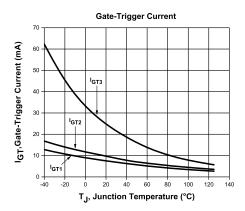
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{DRM} , I _{RRM}	V_{DRM} , V_{RRM} =600 V		5.0	μΑ
I_{GT}	V_D =12V, R_L =30 Ω , QUAD I, II, III		50	mA
lΗ	V _D =12V, I _T =100mA		50	mA
V_{GT}	V_D =12V, R_L =30 Ω , QUAD I, II, III		1.3	V
V_{TM}	I _{TM} =11A, tp=380μs		1.55	V
dv/dt	VD= ² 3VDDM, RCK=∞, TI=125°C		1000	V/us

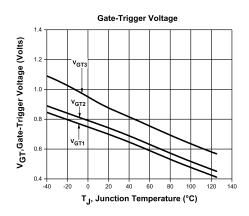
CPQ114-CQD-8M3

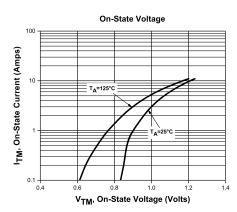
Typical Electrical Characteristics

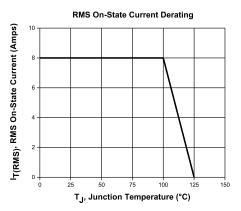


www.centralsemi.com



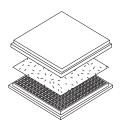






BARE DIE PACKING OPTIONS

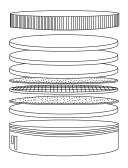




BARE DIE IN TRAY (WAFFLE) PACK

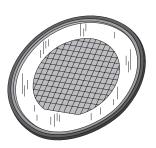
CT: Singulated die in tray (waffle) pack. (example: CP211-PART NUMBER-CT)

CM: Singulated die in tray (waffle) pack 100% visually inspected as per MIL-STD-750, (method 2072 transistors, method 2073 diodes). (example: CP211-PART NUMBER-CM)



UNSAWN WAFER

WN: Full wafer, unsawn, 100% tested with reject die inked. (example: CP211-PART NUMBER-WN)



SAWN WAFER ON PLASTIC RING

WR: Full wafer, sawn and mounted on plastic ring, 100% tested with reject die inked.

(example: CP211-PART NUMBER-WR)

Please note: Sawn Wafer on Metal Frame (WS) is possible as a special order. Please contact your Central Sales Representative at 631-435-1110.



Visit the Central website for a complete listing of specifications: www.centralsemi.com/bdspecs

R2 (3-April 2017)

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 guick 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

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp. 145 Adams Avenue Hauppauge, NY 11788 USA

Main Tel: (631) 435-1110 Main Fax: (631) 435-1824

Support Team Fax: (631) 435-3388

www.centralsemi.com

Worldwide Field Representatives: www.centralsemi.com/wwreps

Worldwide Distributors:

www.centralsemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centralsemi.com/terms

www.centralsemi.com (001)