

C106B2
C106D2
C106M2

**SENSITIVE GATE
SILICON CONTROLLED RECTIFIER
4 AMP, 200 THRU 600 VOLTS**



TO-202-2 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR C106B2 series types are 4.0A, PNP sensitive gate triggering silicon controlled rectifiers with voltages ranging from 200V to 600V. These devices are designed for applications such as temperature, light and speed control, and remote warning and triggering applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL	C106B2	C106D2	C106M2	UNITS
Peak Repetitive Off-State Voltage	$V_{\text{DRM}}, V_{\text{RRM}}$	200	400	600	V
RMS On-State Current ($T_C=85^\circ\text{C}$)	$I_{\text{T(RMS)}}$		4.0		A
Peak One Cycle Surge Current, $t=8.3\text{ms}$	I_{TSM}		20		A
I^2t Value for Fusing	I^2t		1.65		A^2s
Peak Gate Power Dissipation ($T_C=80^\circ\text{C}$)	P_{GM}		0.5		W
Average Gate Power Dissipation ($T_C=80^\circ\text{C}$)	$P_{\text{G(AV)}}$		0.1		W
Peak Forward Gate Current ($T_C=80^\circ\text{C}$)	I_{GFM}		0.2		A
Operating Junction Temperature	T_{J}		-40 to +110		$^\circ\text{C}$
Storage Temperature	T_{stg}		-40 to +150		$^\circ\text{C}$
Thermal Resistance	θ_{JC}		7.5		$^\circ\text{C/W}$
Thermal Resistance	θ_{JA}		80		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1.0\text{K}\Omega$			10	μA
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1.0\text{K}\Omega, T_J=110^\circ\text{C}$			100	μA
V_{TM}	$I_{\text{T}}=4.0\text{A}$			2.2	V
I_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega$			200	μA
I_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega, T_J=-40^\circ\text{C}$			500	μA
V_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega$	0.4		0.8	V
V_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega, T_J=-40^\circ\text{C}$	0.5		1.0	V
I_{H}	$V_{\text{D}}=12\text{V}$			3.0	mA
I_{H}	$V_{\text{D}}=12\text{V}, T_J=-40^\circ\text{C}$			6.0	mA
I_{H}	$V_{\text{D}}=12\text{V}, T_J=110^\circ\text{C}$			2.0	mA
I_{L}	$V_{\text{D}}=12\text{V}$			5.0	mA
I_{L}	$V_{\text{D}}=12\text{V}, T_J=-40^\circ\text{C}$			7.0	mA
dv/dt	$V_{\text{D}}=\text{Rated } V_{\text{DRM}}, R_{\text{GK}}=1.0\text{K}\Omega, T_J=110^\circ\text{C}$		8.0		$\text{V}/\mu\text{s}$

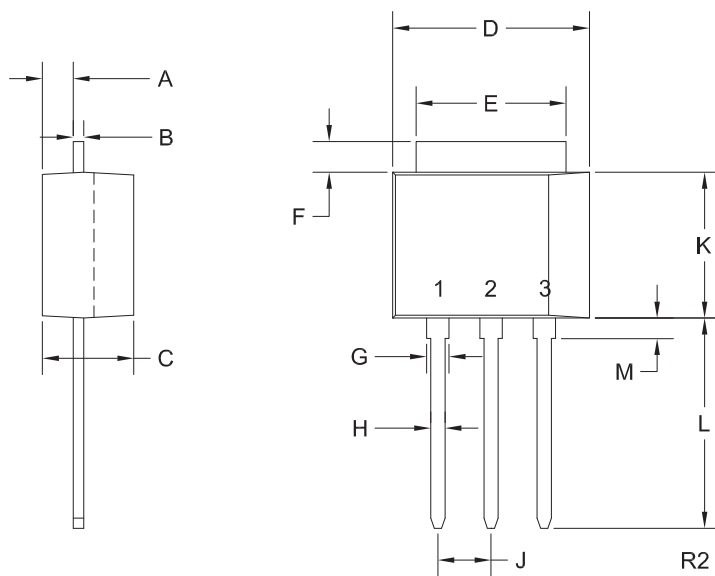
R1 (23-April 2012)

C106B2
C106D2
C106M2

SENSITIVE GATE
SILICON CONTROLLED RECTIFIER
4 AMP, 200 THRU 600 VOLTS



TO-202-2 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
 - 2) Anode
 - 3) Gate
- Tab is common to pin 2

MARKING:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.071	1.40	1.80
B	0.016	0.024	0.40	0.60
C	0.173	0.181	4.40	4.60
D	0.374	0.413	9.50	10.5
E	0.236	0.355	6.00	9.00
F	-	0.071	-	1.80
G	0.035	0.055	0.90	1.40
H	0.023	0.031	0.59	0.80
J	0.094	0.106	2.39	2.69
K	0.280	0.346	7.12	8.80
L	0.406	0.531	10.3	13.5
M	0.024	0.059	0.60	1.50

TO-202-2 (REV: R2)

R1 (23-April 2012)

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

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.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.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.centrasemi.com/terms