

# Central<sup>TM</sup> Semiconductor Corp.

145 Adams Ave., Hauppauge, NY 11788 USA  
Phone (631) 435-1110 FAX (631) 435-1824  
Manufacturer of World Class Discrete Semiconductors  
www.centrasemi.com

**C106B THRU C106M**

**4.0A SENSITIVE GATE  
SILICON CONTROLLED RECTIFIER  
(200V to 600V)**

**JEDEC TO-126 CASE**

## DESCRIPTION

The Central Semiconductor C106B Series 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, remote warning and triggering applications.

## MAXIMUM RATINGS (T<sub>C</sub>=25°C unless otherwise noted)

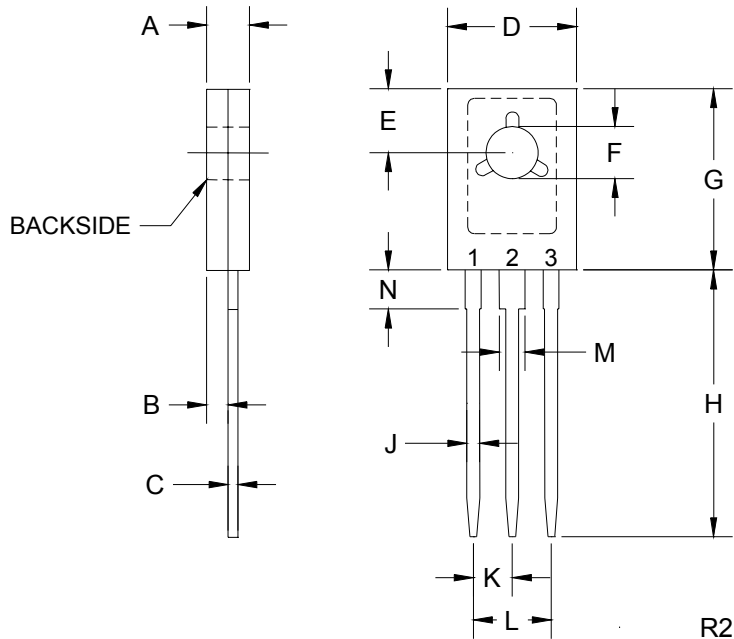
	SYMBOL	C106B	C106D	C106M	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub> , V <sub>RRM</sub>	200	400	600	V
RMS On-State Current (T <sub>C</sub> =80°C)	I <sub>T(RMS)</sub>		4.0		A
Peak Non-Repetitive Surge Current (T <sub>J</sub> =110°C)	I <sub>TSM</sub>		20		A
I <sup>2</sup> t Value for Fusing (t=8.3ms)	I <sup>2</sup> t		1.65		A <sup>2</sup> s
Peak Gate Power (T <sub>C</sub> =80°C)	P <sub>GM</sub>		0.5		W
Average Gate Power (T <sub>C</sub> =80°C)	P <sub>G(AV)</sub>		0.1		W
Peak Forward Gate Current (T <sub>C</sub> =80°C)	I <sub>GFM</sub>		0.2		A
Storage Temperature	T <sub>stg</sub>		-40 to +150		°C
Junction Temperature	T <sub>J</sub>		-40 to +110		°C
Thermal Resistance	θ <sub>JC</sub>		3.0		°C/W
Thermal Resistance	θ <sub>JA</sub>		75		°C/W

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub> , I <sub>R</sub> RM	Rated V <sub>DRM</sub> , V <sub>RRM</sub> , R <sub>GK</sub> =1KΩ			10	μA
I <sub>DRM</sub> , I <sub>R</sub> RM	Rated V <sub>DRM</sub> , V <sub>RRM</sub> , R <sub>GK</sub> =1KΩ, T <sub>J</sub> =110°C			100	μA
V <sub>TM</sub>	I <sub>FM</sub> =4.0A			2.2	V
I <sub>GT</sub>	V <sub>AK</sub> =6.0V, R <sub>L</sub> =100Ω			200	μA
I <sub>GT</sub>	V <sub>AK</sub> =6.0V, R <sub>L</sub> =100Ω, T <sub>J</sub> = -40°C			500	μA
V <sub>GT</sub>	V <sub>AK</sub> =6.0V, R <sub>L</sub> =100Ω	0.4		0.8	V
V <sub>GT</sub>	V <sub>AK</sub> =6.0V, R <sub>L</sub> =100Ω, T <sub>J</sub> = -40°C	0.5		1.0	V
I <sub>H</sub>	V <sub>D</sub> =12V			3.0	mA
I <sub>H</sub>	V <sub>D</sub> =12V, T <sub>J</sub> = -40°C			6.0	mA
I <sub>H</sub>	V <sub>D</sub> =12V, T <sub>J</sub> =110°C			2.0	mA
I <sub>L</sub>	V <sub>D</sub> =12V			5.0	mA
I <sub>L</sub>	V <sub>D</sub> =12V, T <sub>J</sub> = -40°C			7.0	mA
dv/dt	V <sub>D</sub> =Rated V <sub>DRM</sub> , R <sub>GK</sub> =1KΩ, T <sub>J</sub> =110°C		8.0		V/μs

(SEE REVERSE SIDE)

TO-126 PACKAGE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.094	0.106	2.40	2.70
B	0.050		1.27	
C	0.015	0.030	0.38	0.75
D	0.291	0.307	7.40	7.80
E	0.148		3.75	
F	0.118	0.126	3.00	3.20
G	0.413	0.435	10.50	11.05
H	0.618		15.70	
J	0.025	0.035	0.64	0.90
K	0.089		2.25	
L	0.177		4.50	
M	0.045	0.055	1.14	1.39
N	0.083		2.10	

TO-126 (REV:R2)

Lead Code:

- 1) Cathode
- 2) Anode
- 3) Gate

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