

C106A1 C106D1  
 C106B1 C106E1  
 C106C1 C106M1

**SILICON CONTROLLED RECTIFIER  
 4 AMP, 100 THRU 600 VOLTS**



**TO-202 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR C106A1 series are PNP silicon controlled rectifiers designed for applications such as temperature, light, speed control, process and remote control, and warning systems where reliability of operation is important.

**MARKING: FULL PART NUMBER**

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

	SYMBOL	C106	C106	C106	C106	C106	C106	UNITS
		A1	B1	C1	D1	E1	M1	
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	100	200	300	400	500	600	V
RMS On-State Current	$I_{T(RMS)}$				4.0			A
Peak One Cycle Surge (60Hz)	$I_{TSM}$				20			A
$I^2t$ Value for Fusing ( $t>1.5\text{ms}$ )	$I^2t$				0.5			A <sup>2</sup> s
Peak Gate Power	$P_{GM}$				0.5			W
Average Gate Power	$P_{G(AV)}$				0.1			W
Peak Forward Gate Current	$I_{GFM}$				0.2			A
Peak Reverse Gate Voltage	$V_{GRM}$				6.0			V
Storage Temperature	$T_{stg}$				-40 to +150			$^\circ\text{C}$
Junction Temperature	$T_J$				-40 to +110			$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$				3.0			$^\circ\text{C}/\text{W}$
Thermal Resistance	$\theta_{JA}$				75			$^\circ\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega$			10	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega, T_C=110^\circ\text{C}$			100	$\mu\text{A}$
$V_{TM}$	$I_{FM}=4.0\text{A}$			2.2	V
$I_{GT}$	$V_{AK}=6.0\text{V}, R_L=100\Omega, R_{GK}=1.0\text{K}\Omega$			200	$\mu\text{A}$
$I_{GT}$	$V_{AK}=6.0\text{V}, R_L=100\Omega, R_{GK}=1.0\text{K}\Omega, T_C=-40^\circ\text{C}$			500	$\mu\text{A}$
$V_{GT}$	$V_{AK}=6.0\text{V}, R_L=100\Omega, R_{GK}=1.0\text{K}\Omega$	0.4		0.8	V
$V_{GT}$	$V_{AK}=6.0\text{V}, R_L=100\Omega, R_{GK}=1.0\text{K}\Omega, T_C=-40^\circ\text{C}$	0.5		1.0	V
$V_{GT}$	$V_{AK}=\text{Rated } V_{DRM}, R_L=3.0\text{K}\Omega, R_{GK}=1.0\text{K}\Omega, T_C=110^\circ\text{C}$	0.2			V
$I_{HX}$	$V_D=12\text{V}, R_{GK}=1.0\text{K}\Omega$	0.3		3.0	mA
$I_{HX}$	$V_D=12\text{V}, R_{GK}=1.0\text{K}\Omega, T_C=-40^\circ\text{C}$	0.4		6.0	mA
$I_{HX}$	$V_D=12\text{V}, R_{GK}=1.0\text{K}\Omega, T_C=110^\circ\text{C}$	0.14		2.0	mA
$I_{LX}$	$V_D=12\text{V}, R_{GK}=1.0\text{K}\Omega$	0.3		4.0	mA
$I_{LX}$	$V_D=12\text{V}, R_{GK}=1.0\text{K}\Omega, T_C=-40^\circ\text{C}$	0.4		8.0	mA
dv/dt	$V_D=\text{Rated } V_{DRM}, R_{GK}=1.0\text{K}\Omega, T_C=110^\circ\text{C}$		8.0		V/ $\mu\text{s}$
$t_{gt}$ (turn-on time)			1.2		$\mu\text{s}$
$t_q$ (turn-off time)			40		$\mu\text{s}$

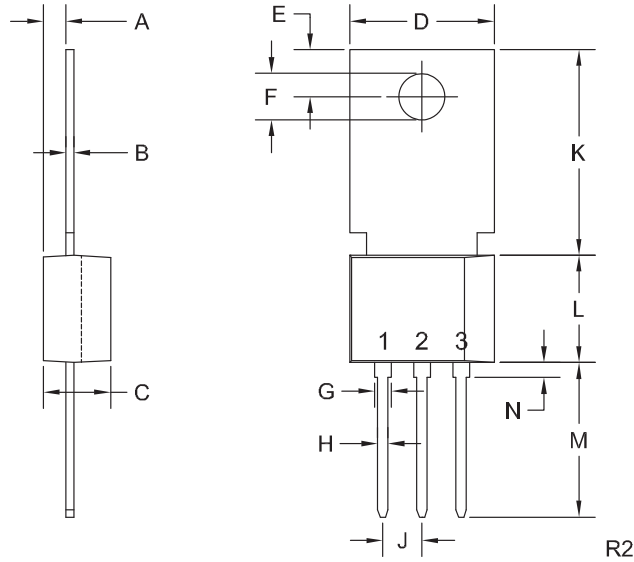
R1 (23-January 2012)

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**TO-202 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**  
 1) Cathode  
 2) Anode  
 3) Gate  
 Tab is common to pin 2

**MARKING:**  
**FULL PART NUMBER**

SYMBOL	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	0.118	0.154	3.00	3.90
F (DIA)	0.124	0.150	3.15	3.80
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	0.459	0.559	11.66	14.21
L	0.280	0.346	7.12	8.80
M	0.406	0.531	10.3	13.5
N	0.024	0.059	0.60	1.50

TO-202 (REV: R2)

R1 (23-January 2012)