

C106A1 C106D1
 C106B1 C106E1
 C106C1 C106M1

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



TO-202 CASE



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 ² 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	θ_{JC}				3.0			$^\circ\text{C/W}$
Thermal Resistance	θ_{JA}				75			$^\circ\text{C/W}$

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	μA
I_{DRM}, I_{RRM}	Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega, T_C=110^\circ\text{C}$			100	μA
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	μA
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	μA
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/ μs
t_{gt} (turn-on time)			1.2		μs
t_q (turn-off time)			40		μs

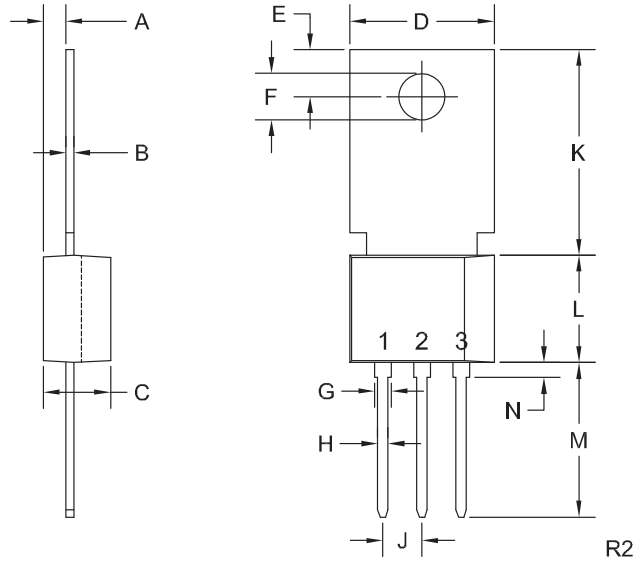
R1 (23-January 2012)

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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)