C106A1 C106D1
C106B1 C106E1
C106C1 C106M1

SILICON CONTROLLED RECTIFIER
4 AMP, 100 THRU 600 VOLTS

TO-202 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR C106A1 series are PNPN 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°C unless otherwise noted)

	SYMBOL	C106 A1	C106 B1	C106 C1	C106 D1	C106 E1	C106 M1	UNITS
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>1.5ms)	I^2t			0.5				A^2s
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				°C
Junction Temperature	T_J			-40 to +110				°C
Thermal Resistance	Θ_{JC}			3.0				°C/W
Thermal Resistance	Θ_{JA}			75				°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}, R_{GK}=1.0KΩ			10	μA
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}, R_{GK}=1.0KΩ, T_C=110°C			100	μA
V_{TM}	I_{FM}=4.0A			2.2	V
I_{GT}	V_{AK}=6.0V, R_L=100Ω, R_{GK}=1.0KΩ			200	μA
I_{GT}	V_{AK}=6.0V, R_L=100Ω, R_{GK}=1.0KΩ, T_C=-40°C			500	μA
V_{GT}	V_{AK}=6.0V, R_L=100Ω, R_{GK}=1.0KΩ	0.4		0.8	V
V_{GT}	V_{AK}=6.0V, R_L=100Ω, R_{GK}=1.0KΩ, T_C=-40°C	0.5		1.0	V
V_{GT}	V_{AK}=Rated V_{DRM}, R_L=3.0KΩ, R_{GK}=1.0KΩ, T_C=110°C	0.2			V
I_{HX}	V_D=12V, R_{GK}=1.0KΩ	0.3		3.0	mA
I_{HX}	V_D=12V, R_{GK}=1.0KΩ, T_C=-40°C	0.4		6.0	mA
I_{HX}	V_D=12V, R_{GK}=1.0KΩ, T_C=110°C	0.14		2.0	mA
I_{LX}	V_D=12V, R_{GK}=1.0KΩ	0.3		4.0	mA
I_{LX}	V_D=12V, R_{GK}=1.0KΩ, T_C=-40°C	0.4		8.0	mA
dv/dt	V_D=Rated V_{DRM}, R_{GK}=1.0KΩ, T_C=110°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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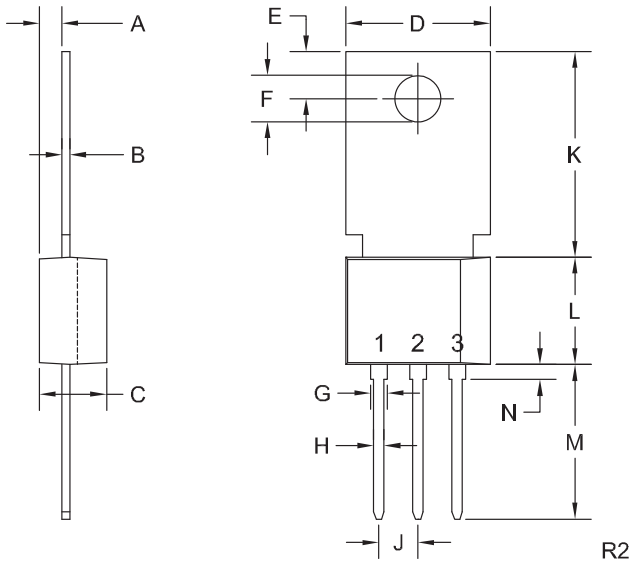
TO-202 CASE - MECHANICAL OUTLINE



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

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

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.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

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