

2N3669  
2N3670

**SILICON CONTROLLED RECTIFIERS  
16 AMP, 400 THRU 600 VOLT**



**TO-3 50 MIL CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N3669 and 2N3670 are hermetically sealed SCRs designed for sensing circuit applications and control systems. Higher voltage devices and electrical selections are available on special order.

**MARKING: FULL PART NUMBER**

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

	SYMBOL	2N3669	2N3670	UNITS
Peak Repetitive Off-State Voltage	$V_{RRM}$	200	400	V
Peak Repetitive Off-State Voltage	$V_{DRM}$	400	600	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_T(\text{RMS})$	16		A
Peak One Cycle Surge Current (60Hz, $T_C=80^\circ\text{C}$ )	$I_{TSM}$	200		A
Peak Gate Current	$I_{GM}$	4.0		A
Average Gate Power Dissipation	$P_{G(AV)}$	0.5		W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-40 to +125		$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	1.7		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{RRM}$	$V_R=\text{Rated } V_{RRM}, T_C=100^\circ\text{C}$			1.0	mA
$I_{DRM}$	$V_D=\text{Rated } V_{DRM}, T_C=100^\circ\text{C}$			2.0	mA
$I_{GT}$	$V_D=7.0\text{V}$	1.0		40	mA
$I_H$	$R_G=1.0\text{K}\Omega$	0.5		50	mA
$V_{TM}$	$I_T=25\text{A}$			1.8	V
$V_{GT}$	$V_D=7.0\text{V}$			2.0	V
$dv/dt$	$V_D=\frac{2}{3}V_{DRM}, R_G=1.0\text{k}\Omega, T_C=100^\circ\text{C}$	10	400		V/ $\mu\text{s}$
$t_{gd}$	$I_G=125\text{mA}, di_G/dt=1.25\text{A}/\mu\text{s}$			500	ns
$t_q$	$V_D=\frac{2}{3}V_{DRM}, V_R=35\text{V}, I_T=10\text{A}, T_C=90^\circ\text{C}$			50	$\mu\text{s}$

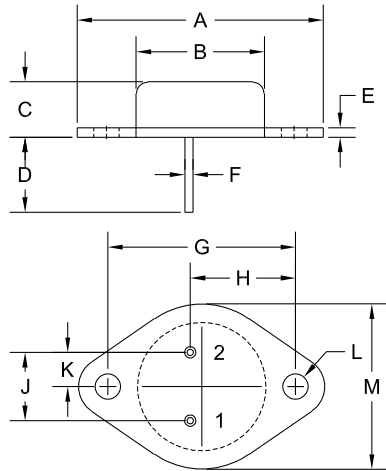
R1 (3-October 2017)

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SILICON CONTROLLED RECTIFIERS  
16 AMP, 400 THRU 600 VOLT



TO-3 50 MIL CASE - MECHANICAL OUTLINE



R0

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.516	1.573	38.50	39.96
B (DIA)	0.748	0.875	19.00	22.23
C	0.250	0.450	6.35	11.43
D	0.433	0.516	11.00	13.10
E	0.054	0.065	1.38	1.65
F	0.048	0.051	1.22	1.30
G	1.177	1.197	29.90	30.40
H	0.650	0.681	16.50	17.30
J	0.420	0.440	10.67	11.18
K	0.205	0.225	5.21	5.72
L (DIA)	0.151	0.172	3.84	4.36
M	0.984	1.050	25.00	26.67

TO-3 50 MIL (REV: R0)

LEAD CODE:

- 1) Gate
- 2) Cathode
- Case) Anode

MARKING:

FULL PART NUMBER

R1 (3-October 2017)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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