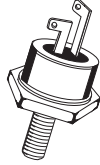


2N1772A  
2N1774A  
2N1776A  
2N1777A

**SILICON CONTROLLED RECTIFIER**  
**7.4 AMP, 100 THRU 400 VOLT**



**TO-64 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N1772A series devices are reverse blocking triode thyristors designed for use in low power switching and phase control applications requiring blocking voltages up to 400 volts, and RMS load currents up to 7.4 amps.

**MARKING: FULL PART NUMBER**

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

	SYMBOL	2N1772A	2N1774A	2N1776A	2N1777A	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}$	100	200	300	400	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	200	300	400	V
Peak Non-Repetitive Reverse Voltage	$V_{RSM}$	150	300	400	500	V
Peak Reverse Gate Voltage	$V_{RGM}$			10		V
RMS On-State Current	$I_T(\text{RMS})$			7.4		A
Average On-State Current ( $T_C=105^\circ\text{C}$ )	$I_O$			4.7		A
Peak Forward Gate Current	$I_{FGM}$			2.0		A
Peak One Cycle Surge Current (60Hz)	$I_{TSM}$			60		A
$I^2t$ Value for Fusing, $t_p=8.3\text{ms}$	$I^2t$			15		$\text{A}^2\text{s}$
Critical Rate of Rise of On-State Current	$di/dt$			60		$\text{A}/\mu\text{s}$
Peak Gate Power Dissipation	$P_{GM}$			5.0		W
Average Gate Power Dissipation	$P_{G(\text{AV})}$			0.5		W
Operating Junction Temperature	$T_J$		-65 to +125			$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-65 to +150			$^\circ\text{C}$
Thermal Resistance	$\Theta_{JC}$			3.1		$^\circ\text{C}/\text{W}$
Mounting Torque	-			15		in-lb
Mounting Torque (metric)	-			17.5		kg-cm

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}$	$V_{DRM}=100\text{V}$ , $T_J=125^\circ\text{C}$			9.0	mA
$I_{RRM}$	$V_{RRM}=100\text{V}$ , $T_J=125^\circ\text{C}$			9.0	mA
$I_{DRM}$	$V_{DRM}=200\text{V}$ , $T_J=125^\circ\text{C}$			6.0	mA
$I_{RRM}$	$V_{RRM}=200\text{V}$ , $T_J=125^\circ\text{C}$			6.0	mA
$I_{DRM}$	$V_{DRM}=300\text{V}$ , $T_J=125^\circ\text{C}$			4.0	mA
$I_{RRM}$	$V_{RRM}=300\text{V}$ , $T_J=125^\circ\text{C}$			4.0	mA
$I_{DRM}$	$V_{DRM}=400\text{V}$ , $T_J=125^\circ\text{C}$			2.0	mA
$I_{RRM}$	$V_{RRM}=400\text{V}$ , $T_J=125^\circ\text{C}$			2.0	mA
$I_{GT}$	$V_D=12\text{V}$ , $R_L=250\Omega$			15	mA
$I_{GT}$	$V_D=12\text{V}$ , $R_L=250\Omega$ , $T_J=-65^\circ\text{C}$			30	mA
$V_{GT}$	$V_D=12\text{V}$ , $R_L=250\Omega$ , $T_J=150^\circ\text{C}$			2.0	V
$V_{GD}$	$V_D=100\text{V}$ , $R_L=250\Omega$ , $T_J=150^\circ\text{C}$	0.2			V
$V_{TM}$	$I_T=15\text{A}$			1.85	V
$I_H$	$V_D=24\text{V}$ , $R_L=20\Omega$ , $T_J=25^\circ\text{C}$			25	mA
$dv/dt$	-		20		$\text{V}/\mu\text{s}$

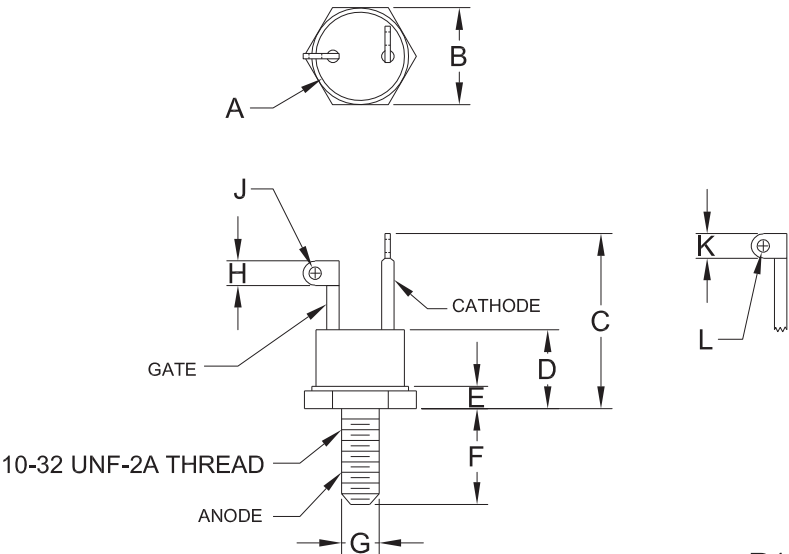
R3 (20-March 2019)

2N1772A  
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2N1777A

SILICON CONTROLLED RECTIFIER  
7.4 AMP, 100 THRU 400 VOLT



TO-64 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	-	0.424	-	10.77
B	0.424	0.437	10.77	11.10
C	0.700	0.855	17.78	21.72
D	0.300	0.400	7.62	10.16
E	0.060	0.175	1.52	4.45
F	0.400	0.453	10.16	11.51
G (DIA)	0.166	0.170	4.21	4.31
H	0.080	0.136	2.03	3.45
J (DIA)	0.040	0.075	1.02	1.91
K	0.080	0.136	2.03	3.45
L (DIA)	0.040	0.075	1.02	1.91

TO-64 (REV: R1)

MARKING: FULL PART NUMBER

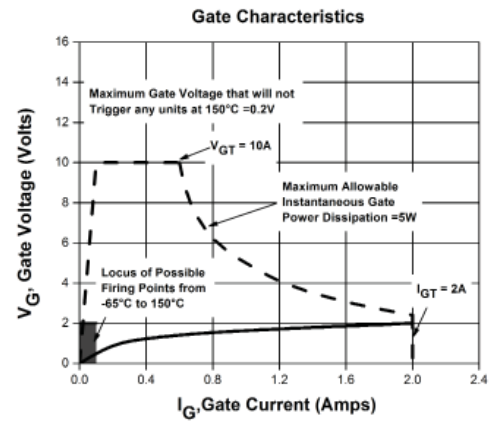
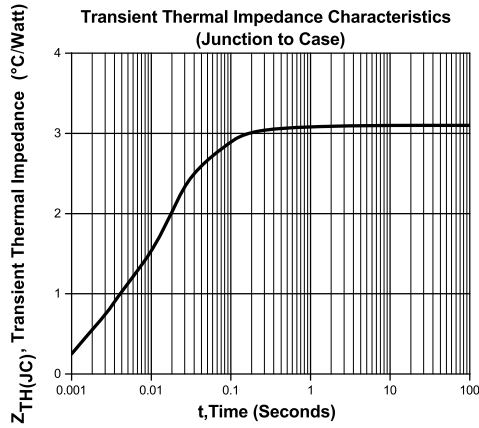
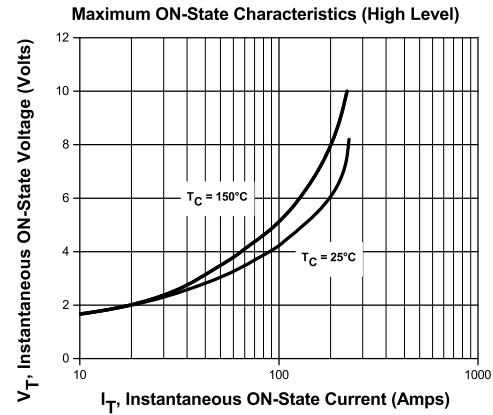
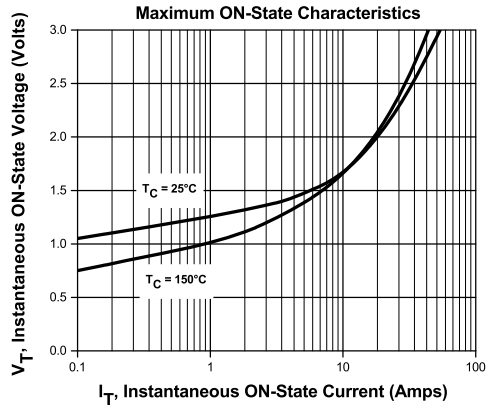
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## TYPICAL ELECTRICAL CHARACTERISTICS



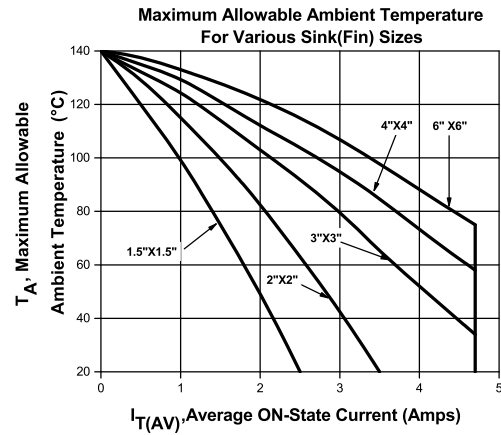
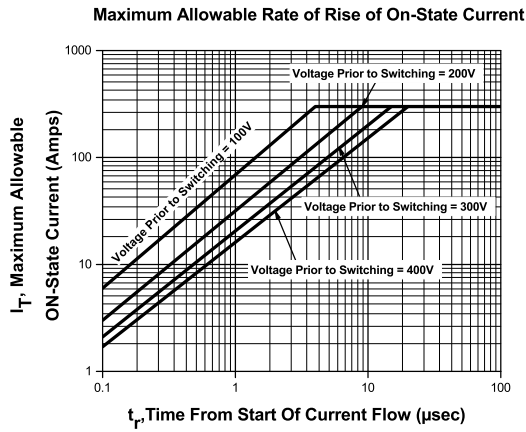
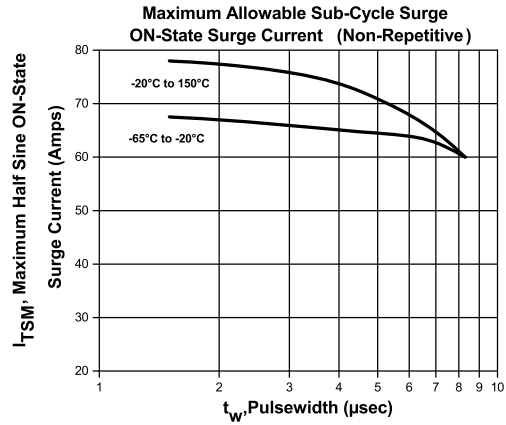
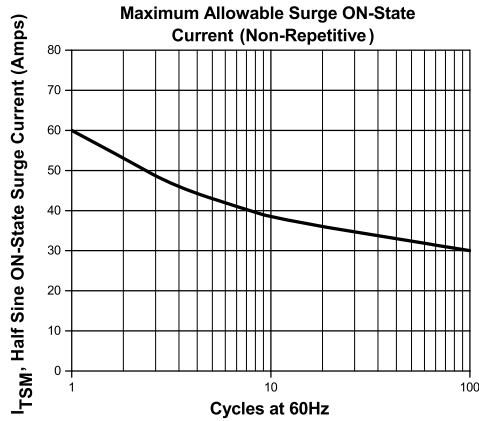
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## TYPICAL ELECTRICAL CHARACTERISTICS



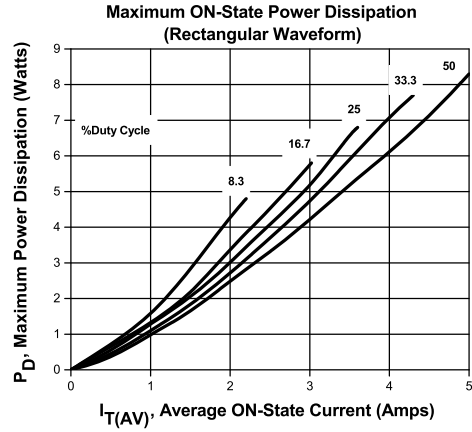
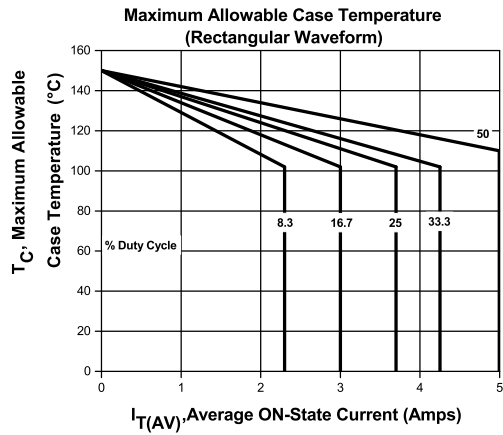
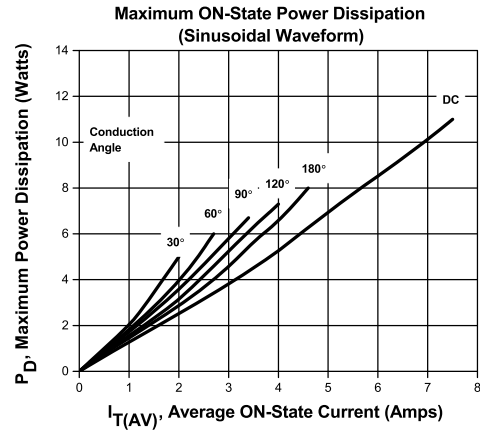
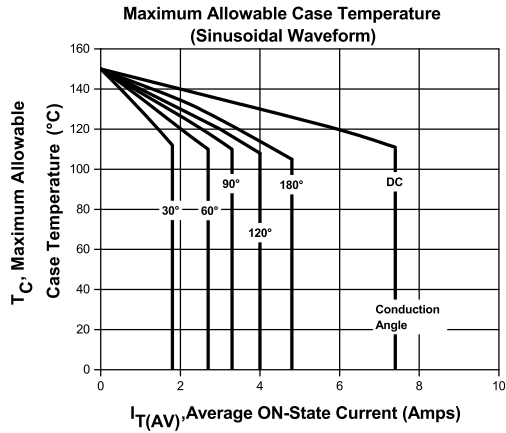
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## TYPICAL ELECTRICAL CHARACTERISTICS



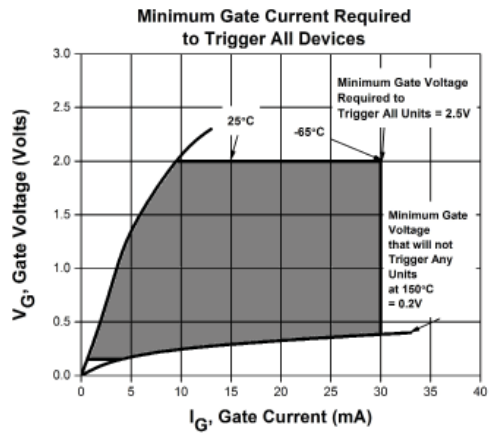
R3 (20-March 2019)

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## TYPICAL ELECTRICAL CHARACTERISTICS



R3 (20-March 2019)

## 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

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

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)



<http://www.centrasemi.com>

## Product End of Life Notification

PDN ID:	PDN01150
Notification Date:	6/05/20
Last Buy Date:	Stock Only
Last Shipment Date	Stock Only

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. We are unable to accept any further orders for these products unless we have available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor Corp.

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DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.





<http://www.centrasemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01150
<b>Notification Date:</b>	6/05/20
<b>Last Buy Date:</b>	Stock Only
<b>Last Shipment Date</b>	Stock Only

Summary: All Silicon Controlled Rectifiers in the TO-64 package are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
2N1772A	N/A, Stock Only
2N1776A	N/A, Stock Only

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.