2N1772A
2N1774A
2N1776A
2N1777A

SILICON CONTROLLED RECTIFIER
7.4 AMP, 100 THRU 400 VOLT

TO-64 CASE

Central Semiconductor Corp.

www.centralsemi.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°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	$I_{T(RMS)}$		7.4			A
Average On-State Current (T_C=105°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, tp=8.3ms	I^2t		15			A^2s
Critical Rate of Rise of On-State Current	di/dt		60			A/µs
Peak Gate Power Dissipation	P_{GM}		5.0			W
Average Gate Power Dissipation	$P_{G(AV)}$		0.5			W
Operating Junction Temperature	T_J		–65 to +125			°C
Storage Temperature	T_{stg}		–65 to +150			°C
Thermal Resistance	Θ_{JC}		3.1			°C/W
Mounting Torque	-		15			in-lb
Mounting Torque (metric)	-		17.5			kg-cm

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

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

R3 (20-March 2019)

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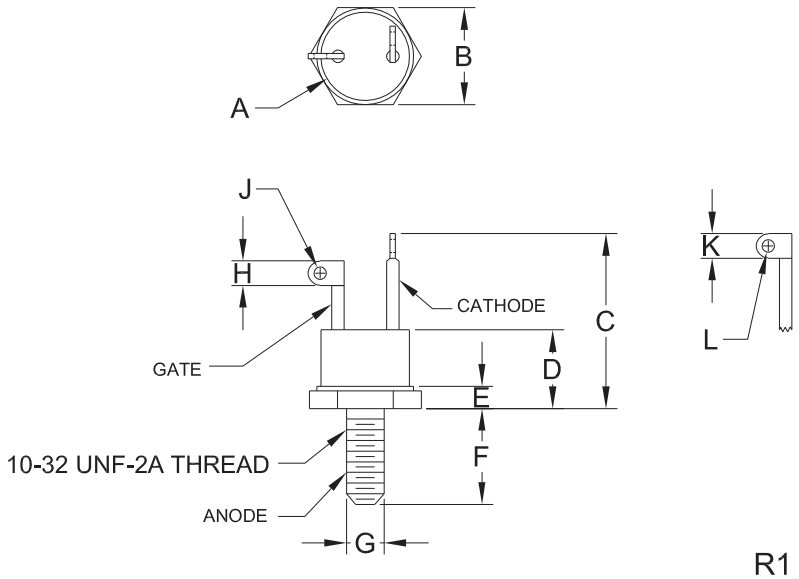
TO-64 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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

R3 (20-March 2019)

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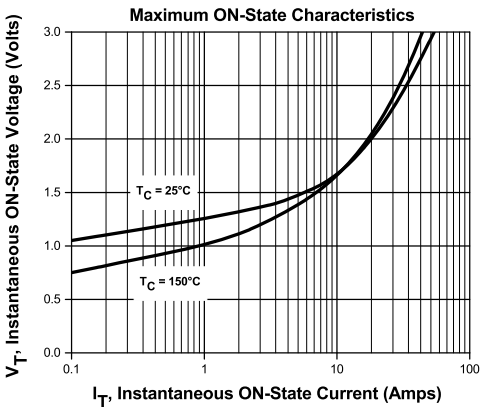
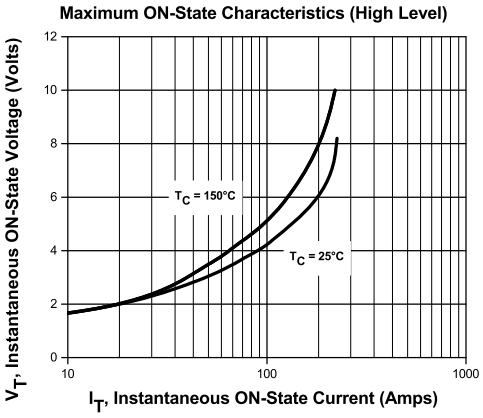
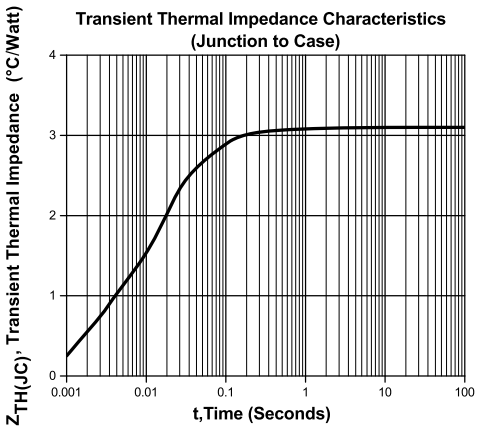
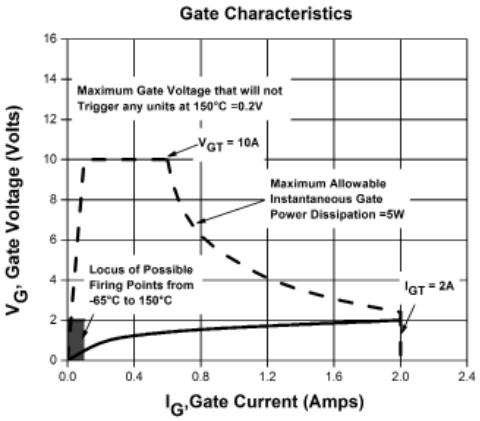
TYPICAL ELECTRICAL CHARACTERISTICS









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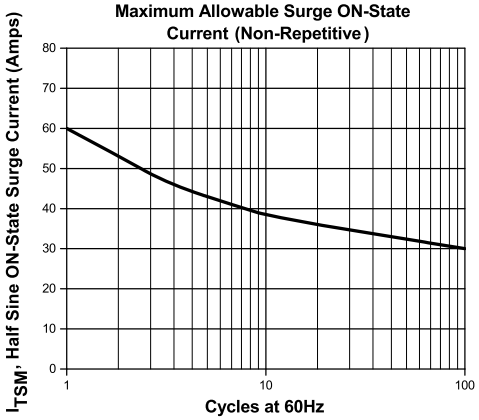

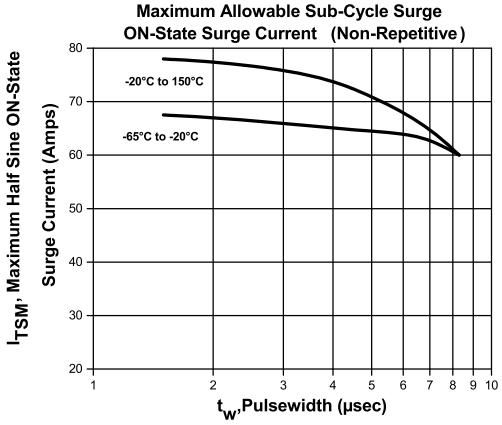

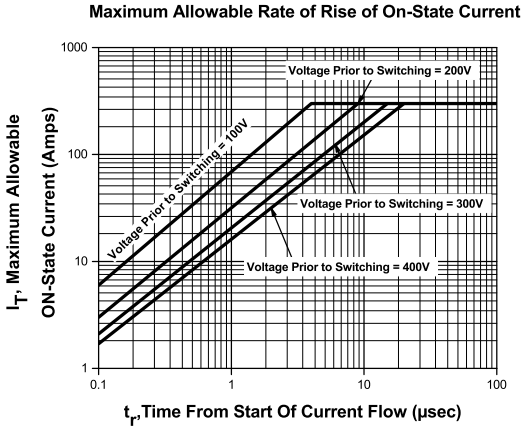

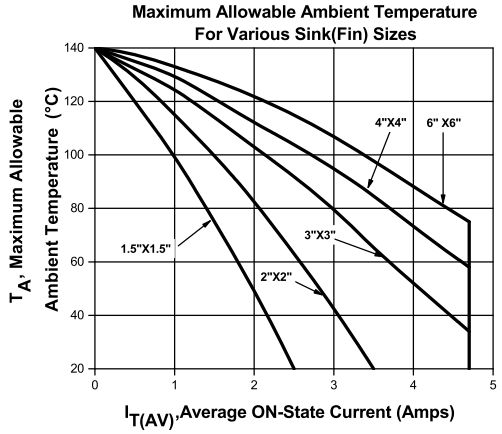

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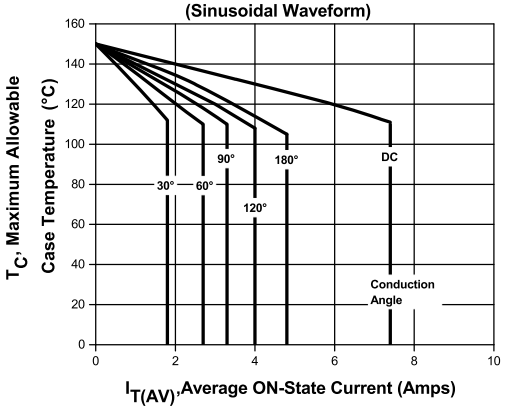
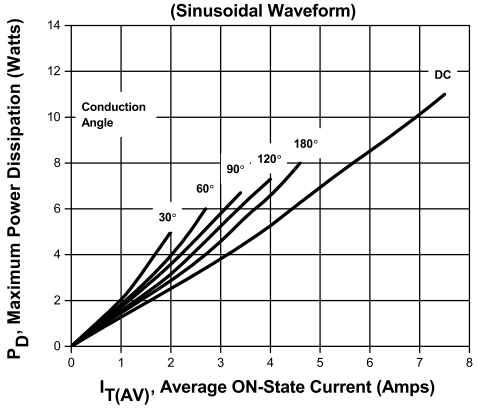
TYPICAL ELECTRICAL CHARACTERISTICS

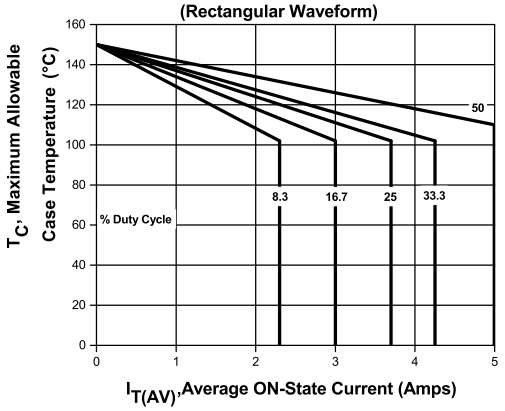
Maximum Allowable Case Temperature
(Sinusoidal Waveform)



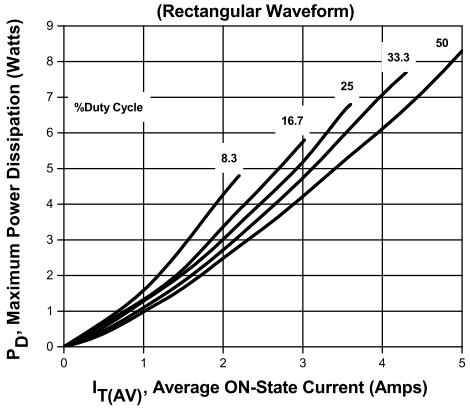
Maximum ON-State Power Dissipation
(Sinusoidal Waveform)



Maximum Allowable Case Temperature
(Rectangular Waveform)



Maximum ON-State Power Dissipation
(Rectangular Waveform)



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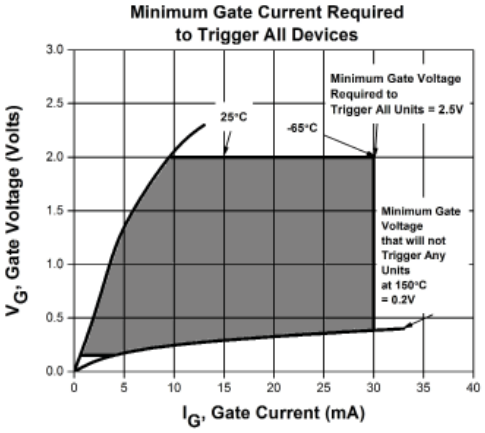

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

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