

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

1N3600  
1N4150

SILICON SWITCHING DIODE

JEDEC DO-35 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 1N3600, 1N4150, silicon planar epitaxial diode is characterized by its miniature size, ultra fast switching speed, low capacitance, low leakage, and high conductance. Accordingly, it is ideally suited for applications such as pulse applications, avalanche circuits, core drivers, and for any critical circuit requiring high conductance at power dissipation without sacrificing fast recovery capability. (Both devices have identical electrical and mechanical specifications).

## MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

	SYMBOL		UNIT
Peak Working Inverse Voltage	$V_{RWM}$	50	V
Average Forward Current	$I_O$	200	mA
Forward Steady State Current	$I_F$	400	mA
Recurrent Peak Forward Current	$i_f$	600	mA
Peak Forward Surge Current (1.0s Pulse)	$I_{FSM}$	1.0	A
Peak Forward Surge Current (1.0us Pulse)	$I_{FSM}$	4.0	A
Power Dissipation	$P_D$	500	mW
Operating and Storage Junction Temperature	$T_J, T_{STG}$	-65 to +200	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
$I_R$	$V_R=\text{Rated } V_{RWM}$		100	nA
$I_R$	$V_R=\text{Rated } V_{RWM}, T_A=150^\circ\text{C}$		100	$\mu\text{A}$
$BV_R$	$I_R=5.0\mu\text{A}$	75		V
$V_F$	$I_F=1.0\text{mA}$	0.54	0.62	V
$V_F$	$I_F=10\text{mA}$	0.66	0.74	V
$V_F$	$I_F=50\text{mA}$	0.76	0.86	V
$V_F$	$I_F=100\text{mA}$	0.82	0.92	V
$V_F$	$I_F=200\text{mA}$	0.87	1.0	V
C	$V_R=0\text{V}, f=1.0\text{MHz}$		2.5	pF
$t_{fr}$	$V_{fr}=1.0\text{V}, I_f=200\text{mA}, t_r=0.4\text{ns}$		10	ns
$t_{rr}$	$I_f=I_r=10\text{mA to } 200\text{mA}, R_L=100\Omega$		4.0	ns
$t_{rr}$	$I_f=I_r=200\text{mA to } 400\text{mA}, R_L=100\Omega$		6.0	ns

## 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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