

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

1N4606

SILICON SWITCHING DIODE

JEDEC DO-35 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 1N4606 silicon high current 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.

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

	SYMBOL		UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	70	V
Average Forward Current	I_O	200	mA
Forward Steady State Current	I_F	250	mA
Recurrent Peak Forward Current	i_f	600	mA
Peak Forward Surge Current (1.0 μ s 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	$V_R=50\text{V}$		100	nA
I_R	$V_R=50\text{V}, T_A=150^\circ\text{C}$		25	nA
I_R	$V_R=70\text{V}$		250	nA
B_{VR}	$I_R=100\mu\text{A}$	85		V
V_F	$I_F=1.0\text{mA}$	540	660	mV
V_F	$I_F=10\text{mA}$	650	770	mV
V_F	$I_F=50\text{mA}$	740	860	mV
V_F	$I_F=100\text{mA}$	790	920	mV
V_F	$I_F=200\text{mA}$	860	1000	mV
V_F	$I_F=250\text{mA}$	-	1100	mV
C	$V_R=0\text{V}$		2.5	pF
t_{rr}	$I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}$		6.0	ns
t_{rr}	$I_F=I_R=10$ to $200\text{mA}, I_{rr}=0.1I_F$		4.0	ns
t_{rr}	$I_F=I_R=200$ to $400\text{mA}, I_{rr}=0.1I_F$		6.0	ns
Q_s	$I_F=10\text{mA}$		42	pC

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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