

CMUDW6001

**SURFACE MOUNT SILICON
ULTRA LOW LEAKAGE
SWITCHING DIODE**



SOT-523W CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMUDW6001 is a silicon switching diode manufactured by the epitaxial planar process, epoxy molded in a SOT-523W surface mount package, designed for switching applications requiring an extremely low leakage diode.

MARKING CODE: 61W

APPLICATIONS:

- Steering diode
- Flyback diode
- Voltage multiplier
- Reverse polarity protection

FEATURES:

- Ultra low leakage current (500pA)
- High peak forward surge current (4.0A)
- Space saving package with gull-wing leads

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

Continuous Reverse Voltage
Peak Repetitive Reverse Voltage
Continuous Forward Current
Peak Repetitive Forward Current
Peak Forward Surge Current, $t_p=1.0\mu\text{s}$
Peak Forward Surge Current, $t_p=1.0\text{s}$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_R	75
V_{RRM}	100
I_F	250
I_{FRM}	250
I_{FSM}	4.0
I_{FSM}	1.0
P_D	250
T_J, T_{stg}	-65 to +150
θ_{JA}	500

UNITS

V
V
mA
mA
A
A
mW
$^{\circ}\text{C}$
$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_R	$V_R=75\text{V}$		250	500	pA
BV_R	$I_R=100\mu\text{A}$	100	125		V
V_F	$I_F=1.0\text{mA}$		0.76	0.85	V
V_F	$I_F=10\text{mA}$		0.85	0.95	V
V_F	$I_F=100\text{mA}$		0.99	1.1	V
C_J	$V_R=0, f=1.0\text{MHz}$		1.7	2.0	pF
t_{rr}	$I_R=I_F=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$			3.0	μs

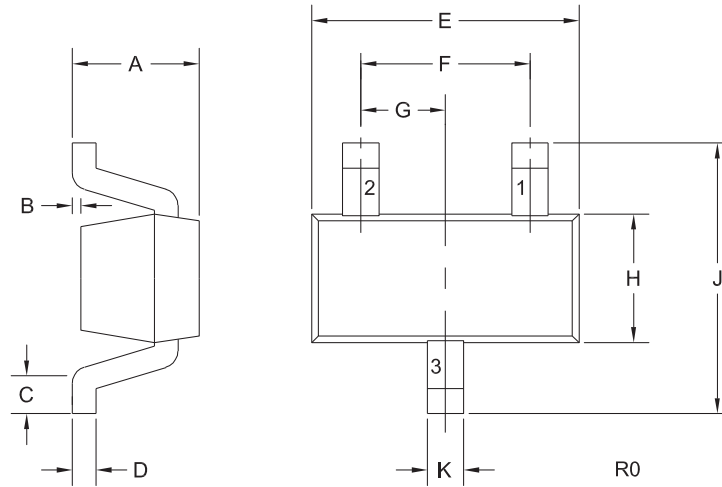
R4 (14-August 2017)

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SOT-523W CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Anode
- 2) No Connection
- 3) Cathode

MARKING CODE: 61W

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	-	0.031	-	0.80
B	0.000	0.004	0.00	0.10
C	0.006	0.012	0.15	0.30
D	0.005	0.006	0.13	0.15
E	0.058	0.066	1.48	1.68
F	0.039		1.00	
G	0.020		0.50	
H	0.026	0.034	0.66	0.86
J	0.059	0.067	1.50	1.70
K	0.007	0.009	0.19	0.24

SOT-523W (REV: R0)

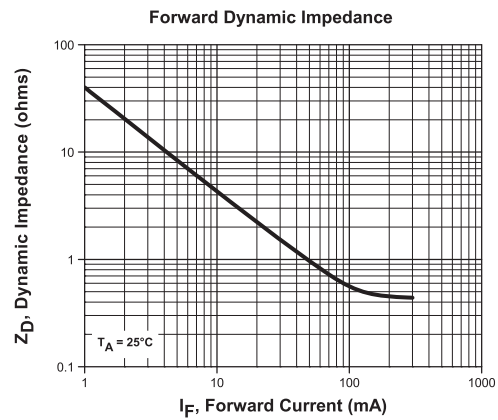
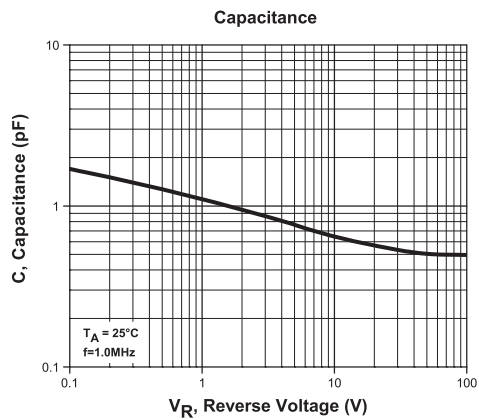
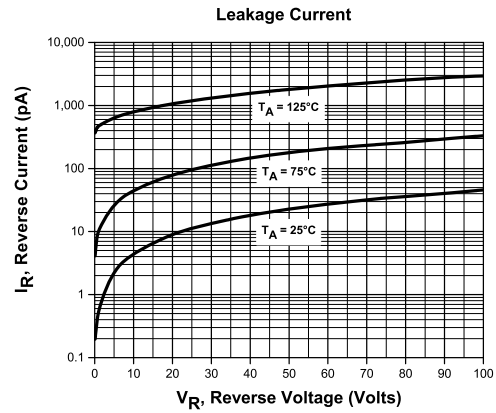
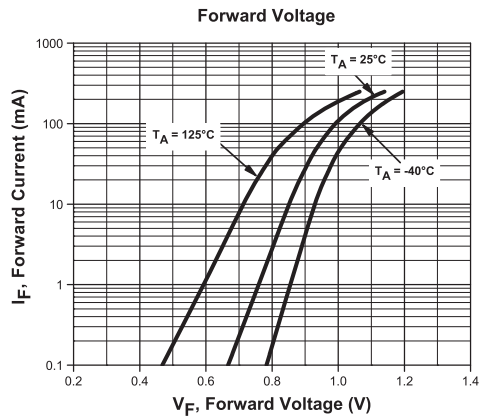
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TYPICAL ELECTRICAL CHARACTERISTICS



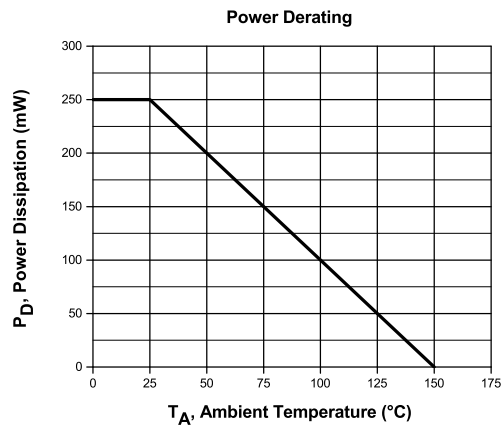
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TYPICAL ELECTRICAL CHARACTERISTICS



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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).

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