## **CMUDW6001**

## SURFACE MOUNT ULTRA LOW LEAKAGE SILICON SWITCHING DIODE





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## **DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMUDW6001 type is a silicon switching diode manufactured by the epitaxial planar process, epoxy molded in a ULTRAmini™ surface mount package, designed for switching applications requiring a 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 <sub>A</sub> =25°C)	SYMBOL		UNITS
Continuous Reverse Voltage	$V_{R}$	75	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Continuous Forward Current	I <sub>F</sub>	250	mA
Peak Repetitive Forward Current	IFRM	250	mA
Peak Forward Surge Current, tp=1.0µs	IFSM	4.0	Α
Peak Forward Surge Current, tp=1.0s	I <sub>FSM</sub>	1.0	Α
Power Dissipation	$P_{D}$	250	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	$\Theta_{\sf JA}$	500	°C/W

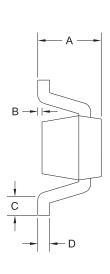
ELECTRICAL CHARACTERISTICS: (T <sub>A</sub> =25°C unless otherwise noted)								
SYMBOL I <sub>R</sub>	TEST CONDITIONS V <sub>R</sub> =75V	MIN	<b>TYP</b> 250	<b>MAX</b> 500	UNITS pA			
$BV_R$	I <sub>R</sub> =100μA	100	125		V			
$V_{F}$	I <sub>F</sub> =1.0mA		0.76	0.85	V			
VF	I <sub>F</sub> =10mA		0.85	0.95	V			
$V_{F}$	I <sub>F</sub> =100mA		0.99	1.1	V			
$C_T$	$V_R$ =0, f=1.0MHz		1.7	2.0	pF			
trr	$I_{R}=I_{F}=10\text{mA}, I_{rr}=1.0\text{mA}, R_{I}=100\Omega$			3.0	μs			

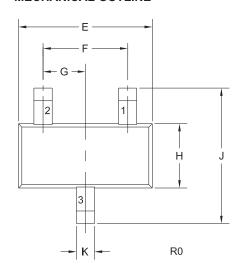
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# **SOT-523W CASE - MECHANICAL OUTLINE**





# LEAD CODE:

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

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DIMENSIONS							
	INCHES		MILLIMETERS				
SYMBOL	MIN	MAX	MIN	MAX			
Α	-	0.031	-	0.80			
В	0.000	0.004	0.00	0.10			
С	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				
Н	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)

R3 (23-November 2011)

# **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 (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

## **CONTACT US**

# Corporate Headquarters & Customer Support Team

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