

**CMDSH05-45**  
**SURFACE MOUNT SILICON**  
**LOW  $V_F$**   
**SCHOTTKY DIODE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMDSH05-45 is a 45 volt Schottky diode packaged in a space saving surface mount SOD-323 case. This device has been designed for applications requiring a low forward voltage drop.



**SOD-323 CASE**

**MARKING CODE: 45C**

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

Peak Repetitive Reverse Voltage	$V_{RRM}$	45	V
Continuous Forward Current	$I_F$	500	mA
Peak Repetitive Forward Current, $t_p \leq 1.0\text{ms}$	$I_{FRM}$	3.5	A
Peak Forward Surge Current, $t_p = 8.0\text{ms}$	$I_{FSM}$	10	A
Power Dissipation	$P_D$	250	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	500	$^\circ\text{C/W}$

**SYMBOL**

$V_{RRM}$	45	V
$I_F$	500	mA
$I_{FRM}$	3.5	A
$I_{FSM}$	10	A
$P_D$	250	mW
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\theta_{JA}$	500	$^\circ\text{C/W}$

**UNITS**

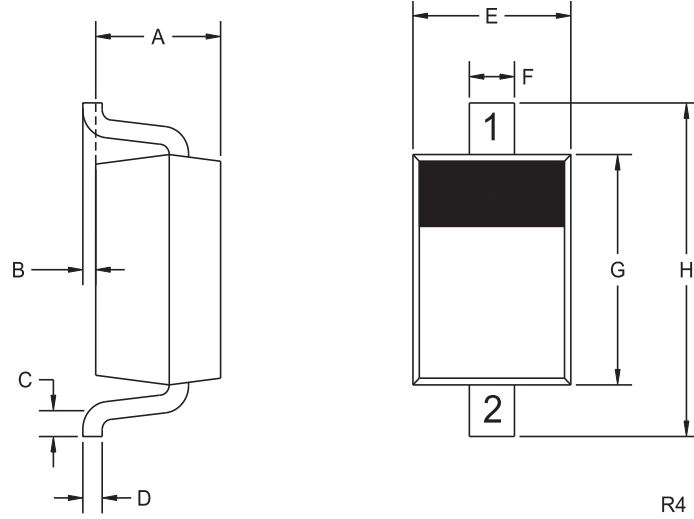
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_R$	$V_R=30\text{V}$		60	100	$\mu\text{A}$
$I_R$	$V_R=30\text{V}, T_A=85^\circ\text{C}$		2.5		mA
$I_R$	$V_R=30\text{V}, T_A=100^\circ\text{C}$		6.0		mA
$BV_R$	$I_R=500\mu\text{A}$	45			V
$V_F$	$I_F=100\mu\text{A}$			0.13	V
$V_F$	$I_F=1.0\text{mA}$			0.21	V
$V_F$	$I_F=10\text{mA}$			0.27	V
$V_F$	$I_F=100\text{mA}$			0.35	V
$V_F$	$I_F=500\text{mA}$			0.47	V
$C_J$	$V_R=1.0\text{V}, f=1.0\text{MHz}$			50	pF

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SOD-323 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode

MARKING CODE: 45C

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.031	0.039	0.80	1.00
B	0.000	0.004	0.00	0.10
C	0.008	-	0.20	-
D	0.004	0.007	0.11	0.19
E	0.045	0.053	1.15	1.35
F	-	0.014	-	0.35
G	0.063	0.071	1.60	1.80
H	0.094	0.102	2.40	2.60

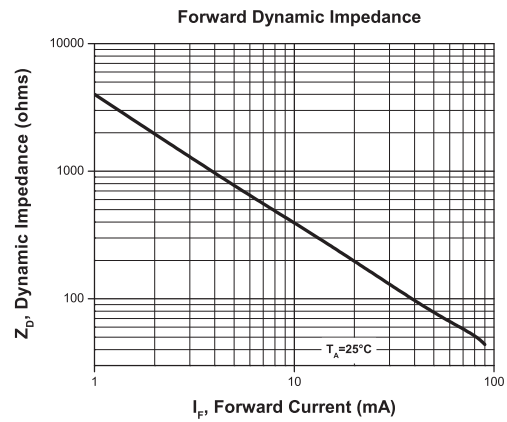
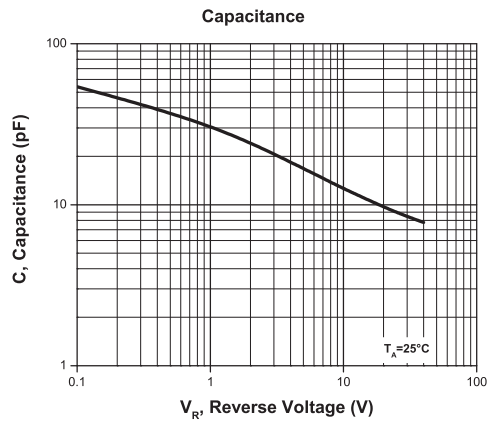
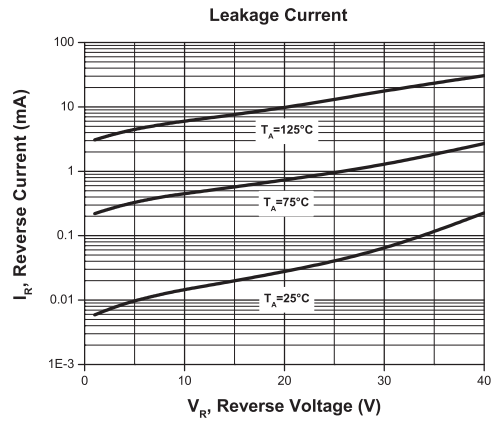
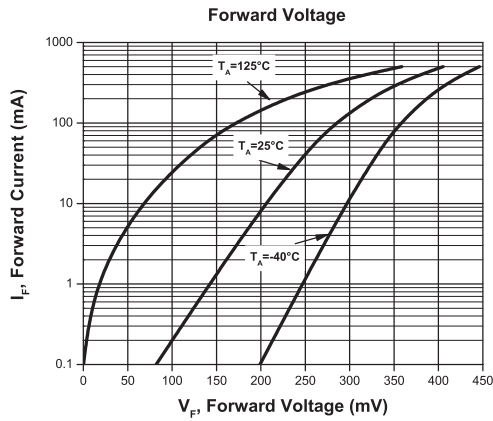
SOD-323 (REV: R4)

R1 (30-September 2015)

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**TYPICAL ELECTRICAL CHARACTERISTICS**

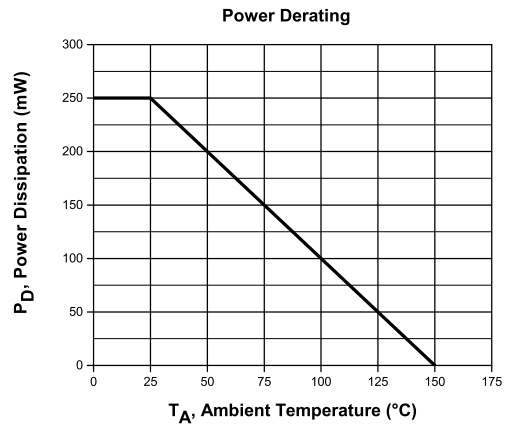
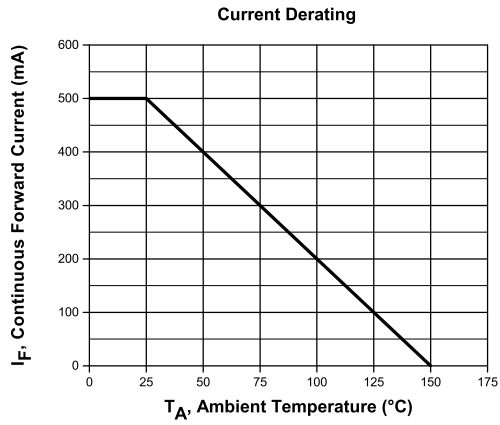


R1 (30-September 2015)

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TYPICAL ELECTRICAL CHARACTERISTICS



R1 (30-September 2015)

## 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

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