

CMHSH5-4

**SURFACE MOUNT SILICON  
SCHOTTKY RECTIFIER  
500mA, 40 VOLT**



**SOD-123 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMHSH5-4 type is a silicon Schottky rectifier, epoxy molded in a surface mount package, designed for high current applications requiring a low forward voltage drop.

**MARKING CODE: C54**

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

Peak Repetitive Reverse Voltage
Peak Working Reverse Voltage
DC Blocking Voltage
Average Rectified Current
Peak Repetitive Forward Current
(@ rated $V_R$ , square wave, 20kHz, $T_C=115^\circ\text{C}$ )
Peak Forward Surge Current
(@ rated load, halfwave, single phase, 60Hz)
Power Dissipation
Operating Junction Temperature
Storage Temperature
Thermal Resistance
Thermal Resistance

SYMBOL		UNITS
$V_{RRM}$	40	V
$V_{RWM}$	40	V
$V_R$	40	V
$I_O$	500	mA
$I_{FRM}$	1.0	A
$I_{FSM}$	5.5	A
$P_D$	400	mW
$T_J$	-65 to +125	$^\circ\text{C}$
$T_{stg}$	-65 to +150	$^\circ\text{C}$
$\theta_{JL}$	118	$^\circ\text{C/W}$
$\theta_{JA}$	250	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_R$	$V_R=20\text{V}$		0.7	10	$\mu\text{A}$
$I_R$	$V_R=20\text{V}, T_A=100^\circ\text{C}$		0.2	5.0	mA
$I_R$	$V_R=40\text{V}$		1.7	20	$\mu\text{A}$
$I_R$	$V_R=40\text{V}, T_A=100^\circ\text{C}$		0.38	13	mA
$BV_R$	$I_R=10\mu\text{A}$	40			V
$V_F$	$I_F=500\text{mA}$		460	510	mV
$V_F$	$I_F=500\text{mA}, T_A=100^\circ\text{C}$		411	460	mV
$V_F$	$I_F=1.0\text{A}$		567	620	mV
$V_F$	$I_F=1.0\text{A}, T_A=100^\circ\text{C}$		541	610	mV
$C_J$	$V_R=0, f=1.0\text{MHz}$		147		pF
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz}$		50		pF

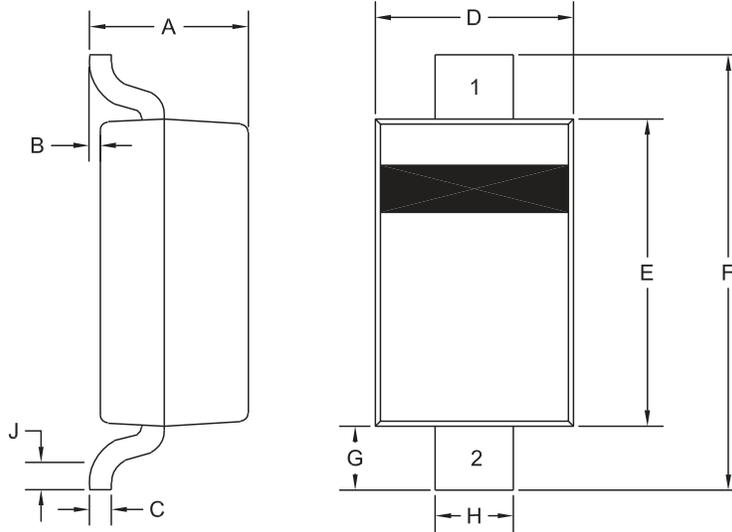
R6 (20-October 2015)

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SOD-123 CASE - MECHANICAL OUTLINE



R5

LEAD CODE

- 1) Cathode
- 2) Anode

MARKING CODE: C54

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.037	0.053	0.95	1.35
B	0.000	0.005	0.00	0.12
C	-	0.008	-	0.20
D	0.055	0.071	1.40	1.80
E	0.098	0.110	2.50	2.80
F	0.142	0.154	3.60	3.90
G	0.016	-	0.40	-
H	0.020	0.028	0.50	0.70
J	0.010	-	0.25	-

SOD-123 (REV:R5)

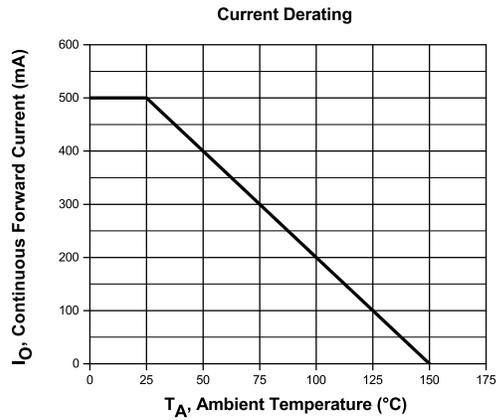
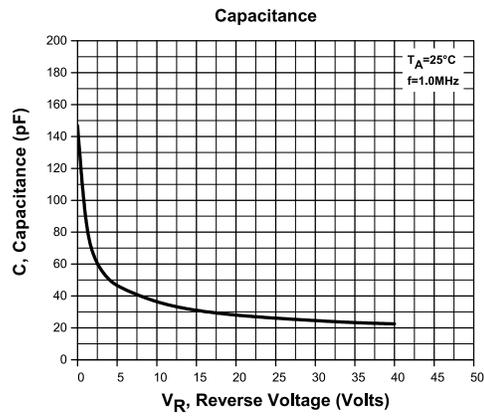
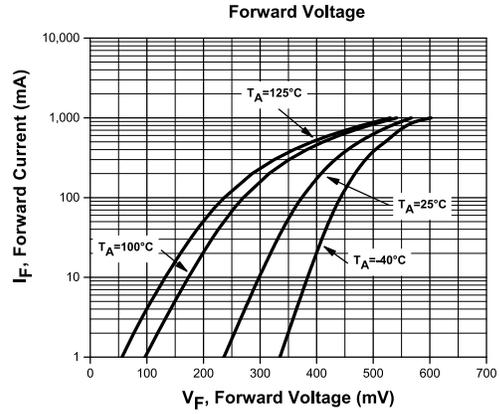
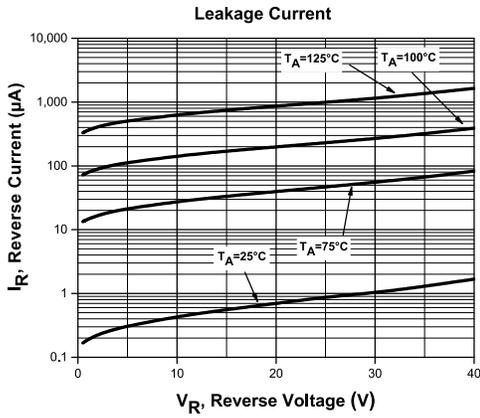
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TYPICAL ELECTRICAL CHARACTERISTICS

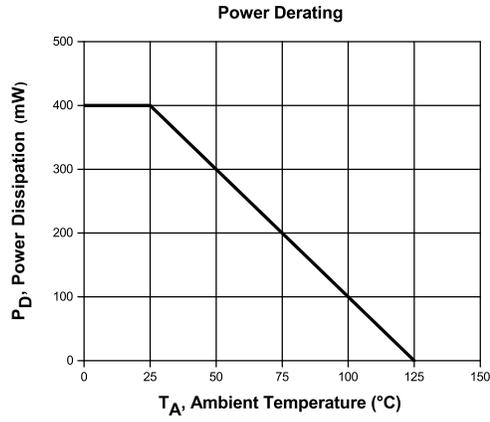


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### TYPICAL ELECTRICAL CHARACTERISTICS



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## 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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