

CMHSH5-4

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



SOD-123 CASE



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	$^\circ\text{C}$
θ_{JL}	118	$^\circ\text{C/W}$
θ_{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	μA
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	μA
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

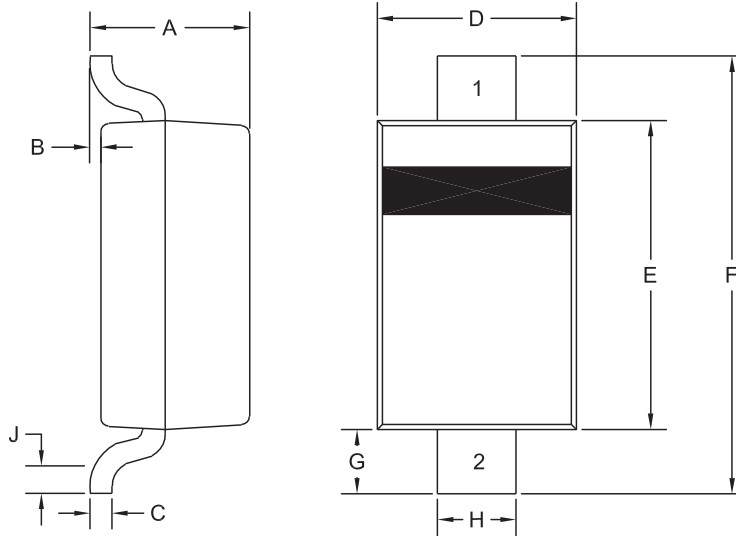
R6 (20-October 2015)

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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)

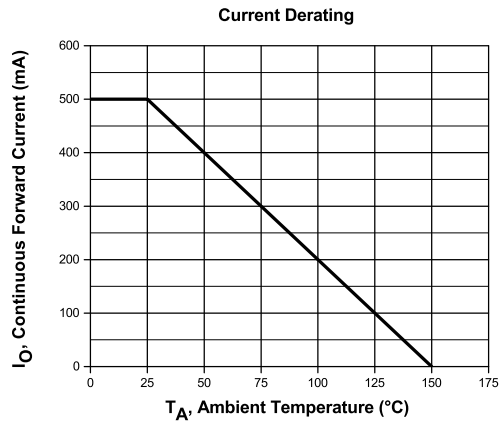
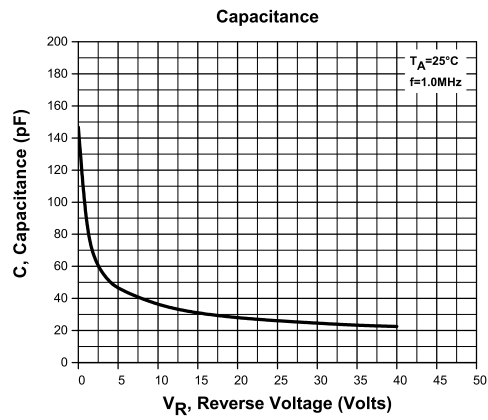
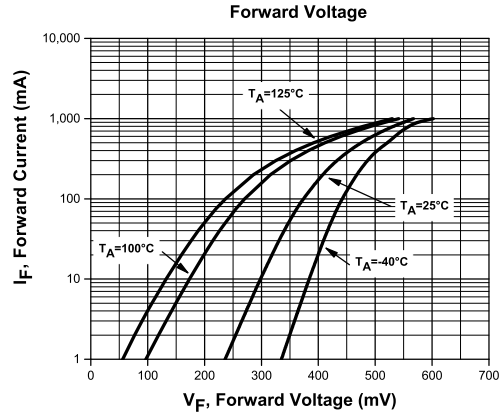
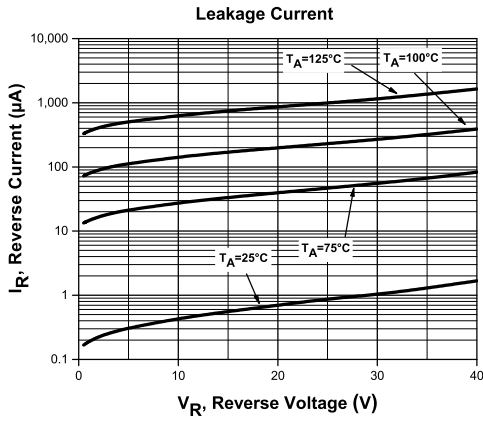
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TYPICAL ELECTRICAL CHARACTERISTICS



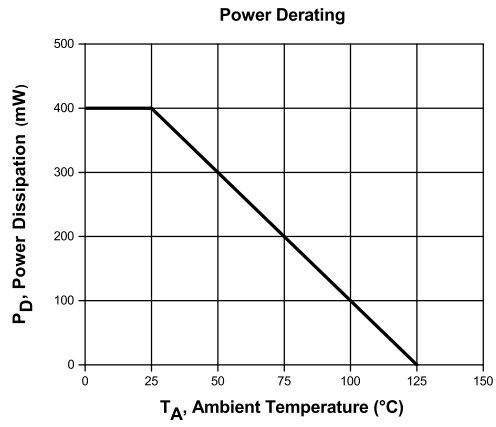
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TYPICAL ELECTRICAL CHARACTERISTICS



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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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