

CMSSH-3E CMSSH-3CE  
CMSSH-3AE CMSSH-3SE

**ENHANCED SPECIFICATION  
SURFACE MOUNT SILICON  
SCHOTTKY DIODES**



**SOT-323 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSSH-3E series devices are enhanced versions of the CMSSH-3 series of silicon Schottky diodes in an SOT-323 surface mount package.

**FEATURED ENHANCED SPECIFICATIONS:**

- ♦  $I_F$  from 100mA MAX to 200mA MAX
- ♦  $BV_R$  from 30V MIN to 40V MIN
- ♦  $V_F$  from 1.0V MAX to 0.8V MAX

**CMSSH-3E:** SINGLE  
**CMSSH-3AE:** DUAL, COMMON ANODE  
**CMSSH-3CE:** DUAL, COMMON CATHODE  
**CMSSH-3SE:** DUAL, IN SERIES

**MARKING CODE: 31E**  
**MARKING CODE: 3AE**  
**MARKING CODE: 3CE**  
**MARKING CODE: 3SE**

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

- ♦ **Peak Repetitive Reverse Voltage**
- ♦ **Continuous Forward Current**
  - Peak Repetitive Forward Current
  - Peak Forward Surge Current,  $t_p=10\text{ms}$
  - Power Dissipation
  - Operating and Storage Junction Temperature
  - Thermal Resistance

**SYMBOL**

SYMBOL		UNITS
$V_{RRM}$	40	V
$I_F$	200	mA
$I_{FRM}$	350	mA
$I_{FSM}$	750	mA
$P_D$	250	mW
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\Theta_{JA}$	500	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_R$	$V_R=25\text{V}$		90	500	nA
$I_R$	$V_R=25\text{V}, T_A=100^\circ\text{C}$		25	100	$\mu\text{A}$
♦ $BV_R$	$I_R=100\mu\text{A}$	40	50		V
$V_F$	$I_F=2.0\text{mA}$		0.29	0.33	V
♦ $V_F$	$I_F=15\text{mA}$		0.37	0.42	V
♦ $V_F$	$I_F=100\text{mA}$		0.51	0.80	V
♦♦ $V_F$	$I_F=200\text{mA}$		0.65	1.0	V
$C_J$	$V_R=1.0\text{V}, f=1.0\text{MHz}$		7.0		pF
$t_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$			5.0	ns

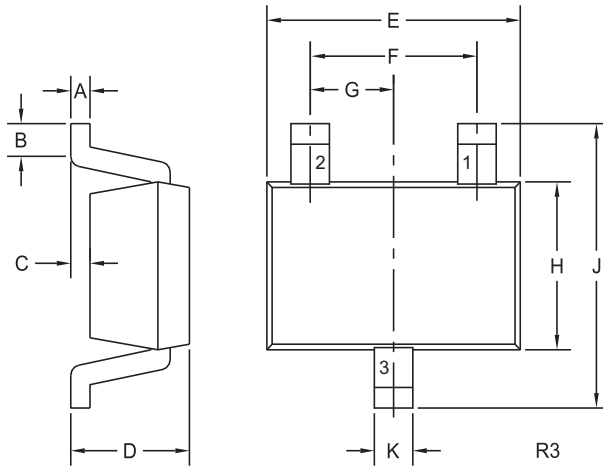
- ♦ Enhanced specification.
- ♦♦ Additional Enhanced specification.

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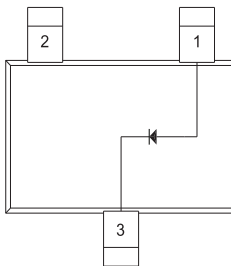
**SOT-323 CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.002	0.008	0.05	0.20
B	0.004	-	0.10	-
C	-	0.004	-	0.10
D	0.031	0.043	0.80	1.10
E	0.071	0.087	1.80	2.20
F	0.051		1.30	
G	0.026		0.65	
H	0.045	0.053	1.15	1.35
J	0.079	0.087	2.00	2.20
K	0.008	0.016	0.20	0.40

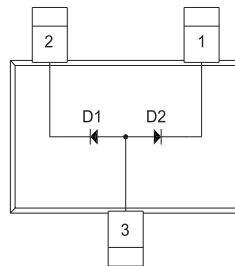
SOT-323 (REV: R3)

**PIN CONFIGURATIONS**



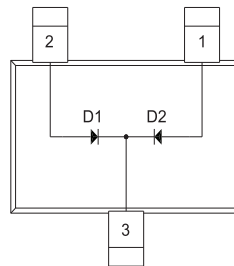
**CMSSH-3E**  
**LEAD CODE:**  
1) Anode  
2) NC  
3) Cathode

**MARKING CODE: 31E**



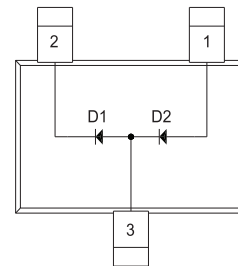
**CMSSH-3AE**  
**LEAD CODE:**  
1) Cathode D2  
2) Cathode D1  
3) Anode D1, D2

**MARKING CODE: 3AE**



**CMSSH-3CE**  
**LEAD CODE:**  
1) Anode D2  
2) Anode D1  
3) Cathode D1, D2

**MARKING CODE: 3CE**



**CMSSH-3SE**  
**LEAD CODE:**  
1) Anode D2  
2) Cathode D1  
3) Anode D1, Cathode D2

**MARKING CODE: 3SE**

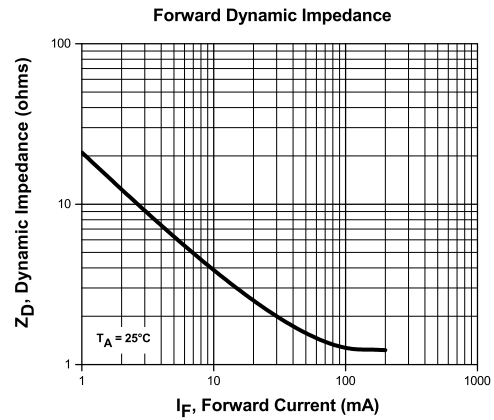
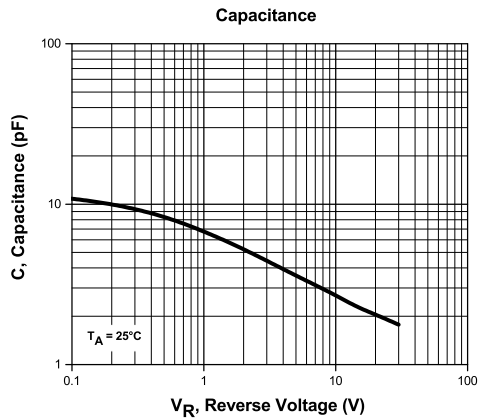
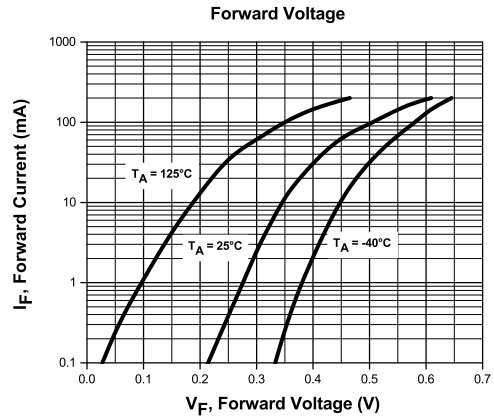
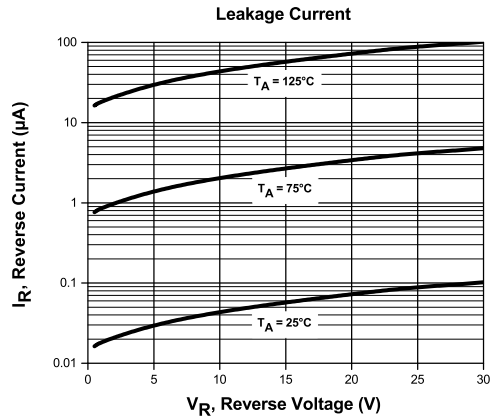
R3 (16-February 2016)

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**TYPICAL ELECTRICAL CHARACTERISTICS**



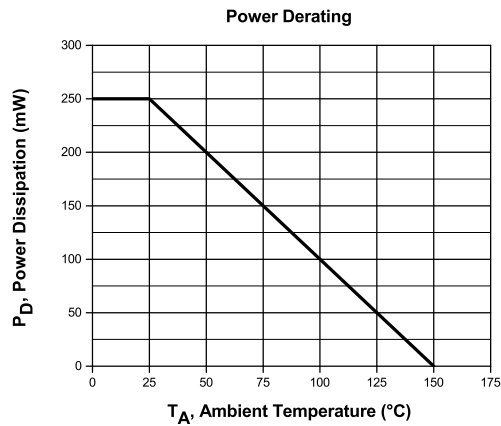
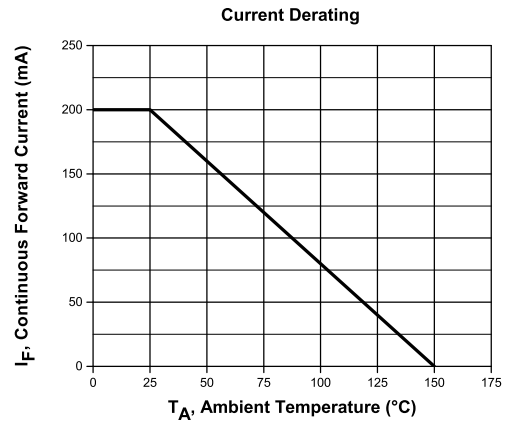
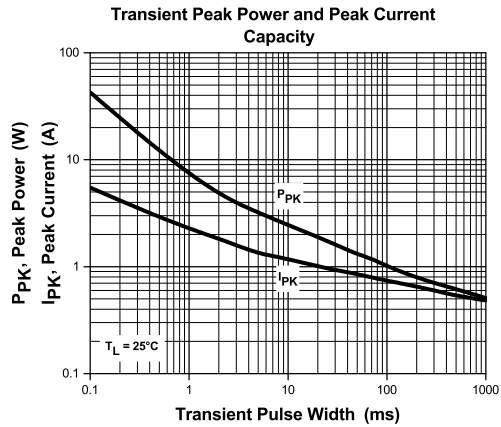
R3 (16-February 2016)

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**TYPICAL ELECTRICAL CHARACTERISTICS**



R3 (16-February 2016)

## 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

#### Corporate Headquarters & Customer Support Team

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