



# THE DATASHEET OF CMPSH-3



CMP SH-3E  
 CMP SH-3AE  
 CMP SH-3CE  
 CMP SH-3SE

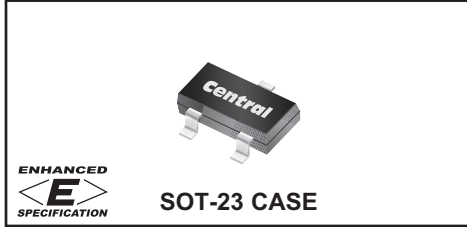
**ENHANCED SPECIFICATION  
 SURFACE MOUNT SILICON  
 SCHOTTKY DIODES**



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMP SH-3E series devices are enhanced versions of the CMP SH-3 series of silicon Schottky diodes in an SOT-23 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

CMP SH-3E: SINGLE  
 CMP SH-3AE: DUAL, COMMON ANODE  
 CMP SH-3CE: DUAL, COMMON CATHODE  
 CMP SH-3SE: DUAL, IN SERIES

**MARKING CODE: D95E**  
**MARKING CODE: DB1E**  
**MARKING CODE: DB2E**  
**MARKING CODE: DA5E**

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

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

SYMBOL		UNITS
$V_{RRM}$	40	V
$I_F$	200	mA
$I_{FRM}$	350	mA
$I_{FSM}$	750	mA
$P_D$	350	mW
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\Theta_{JA}$	357	$^\circ\text{C/W}$

**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

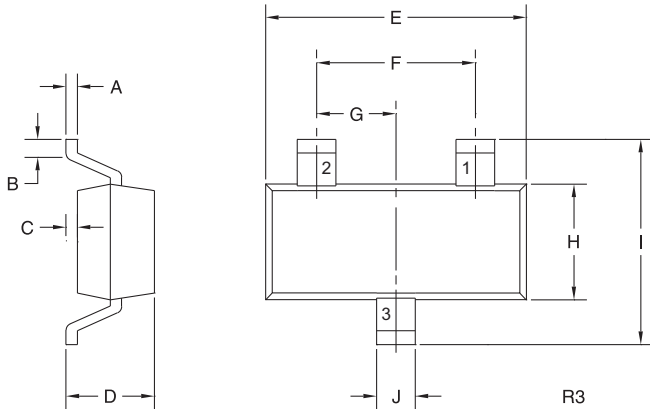
- ◆ Enhanced specification.
- ◆◆ Additional Enhanced specification.

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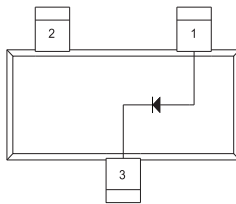
**SOT-23 CASE - MECHANICAL OUTLINE**



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

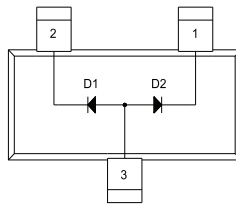
SOT-23 (REV: R3)

**PIN CONFIGURATIONS**



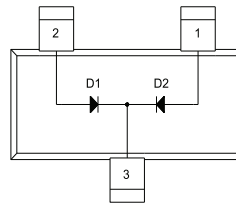
**CMP SH-3E**  
**LEAD CODE:**  
 1) Anode  
 2) No Connection  
 3) Cathode

**MARKING CODE: D95E**



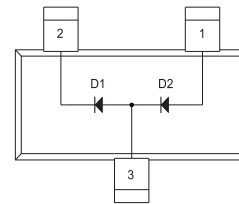
**CMP SH-3AE**  
**LEAD CODE:**  
 1) Cathode D2  
 2) Cathode D1  
 3) Anode D1, D2

**MARKING CODE: DB1E**



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

**MARKING CODE: DB2E**



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

**MARKING CODE: DA5E**

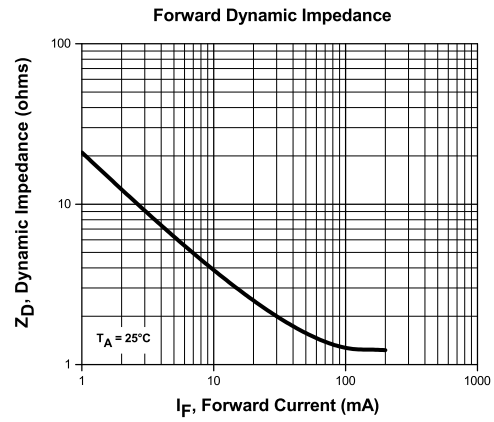
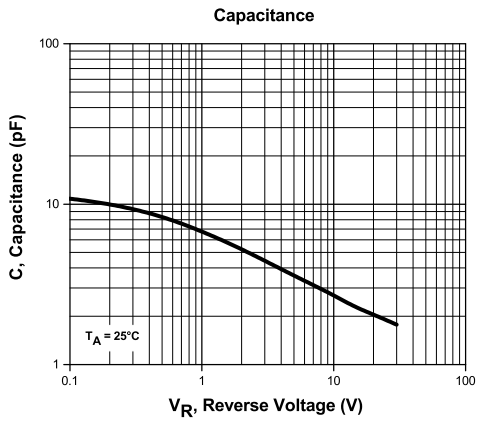
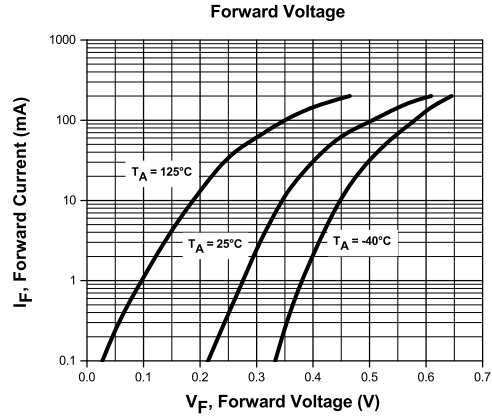
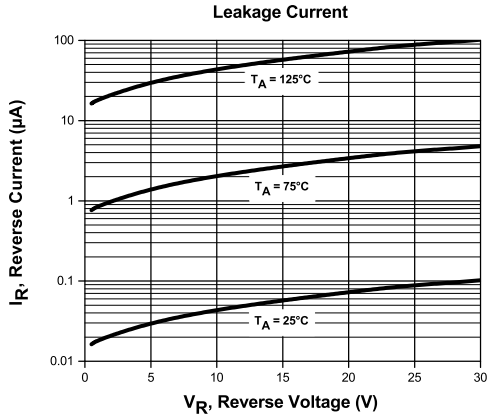
R4 (16-February 2016)

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**TYPICAL ELECTRICAL CHARACTERISTICS**

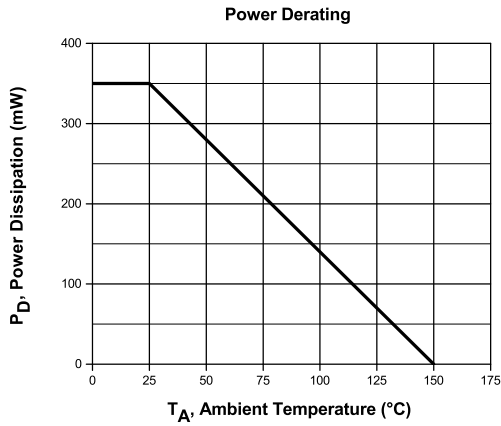
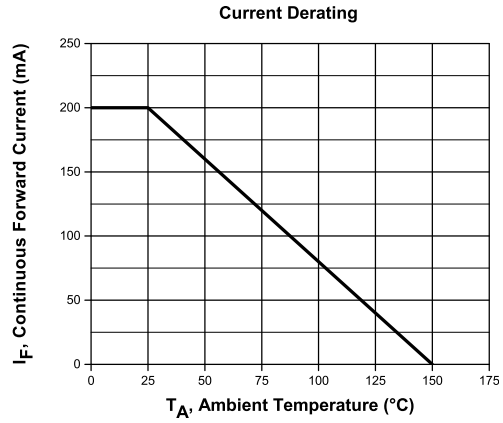
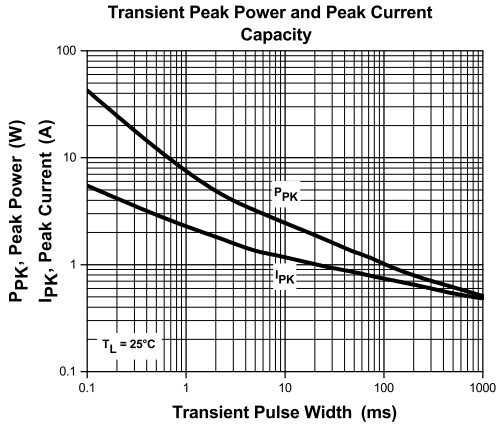


R4 (16-February 2016)

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**TYPICAL ELECTRICAL CHARACTERISTICS**



R4 (16-February 2016)

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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

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- 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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