

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

**ENHANCED SPECIFICATION
SURFACE MOUNT SILICON
SCHOTTKY DIODES**



www.centralsemi.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



SOT-23 CASE

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 Current
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	350	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Θ_{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	μA
◆ 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

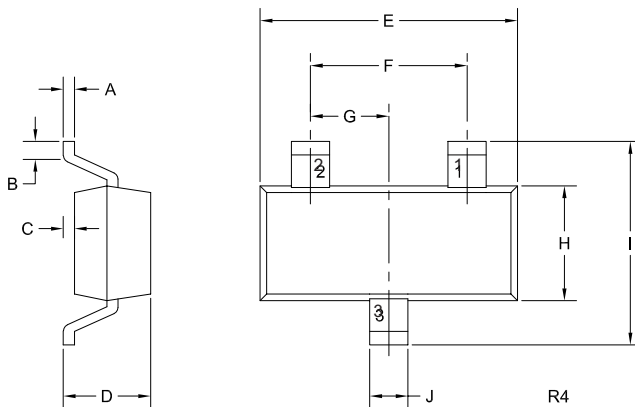
- ◆ Enhanced specification.
- ◆◆ Additional Enhanced specification.

CMPSH-3E
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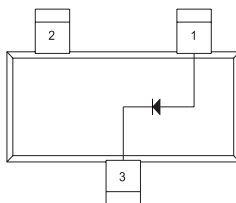
SOT-23 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	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	0.044	0.89	1.12
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	0.104	2.10	2.64
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R4)

PIN CONFIGURATIONS

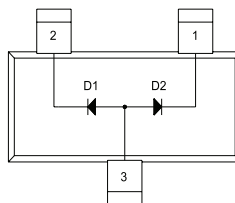


CMPSH-3E

LEAD CODE:

- 1) Anode
- 2) No Connection
- 3) Cathode

MARKING CODE: D95E

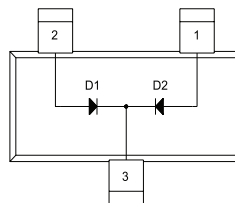


CMPSH-3AE

LEAD CODE:

- 1) Cathode D2
- 2) Cathode D1
- 3) Anode D1, D2

MARKING CODE: DB1E

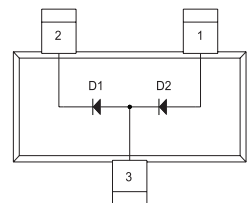


CMPSH-3CE

LEAD CODE:

- 1) Anode D2
- 2) Anode D1
- 3) Cathode D1, D2

MARKING CODE: DB2E



CMPSH-3SE

LEAD CODE:

- 1) Anode D2
- 2) Cathode D1
- 3) Anode D1, Cathode D2

MARKING CODE: DA5E

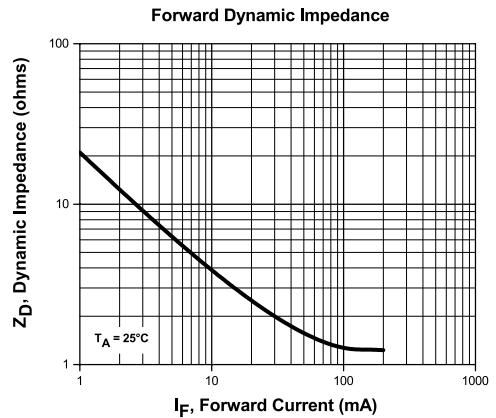
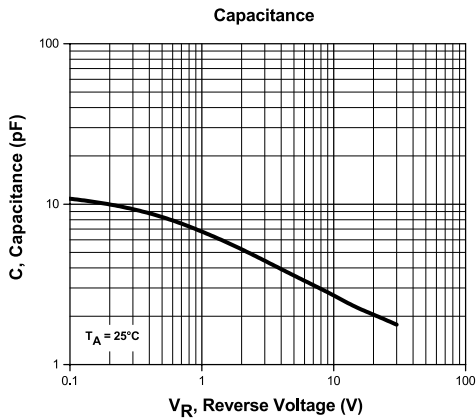
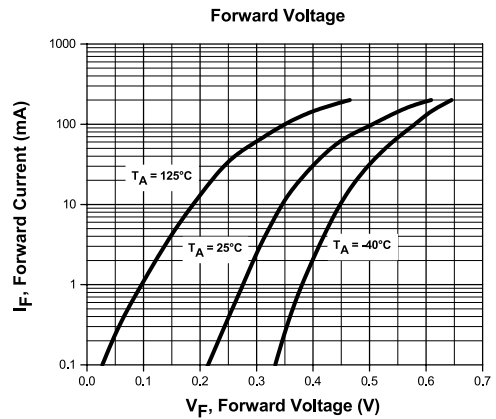
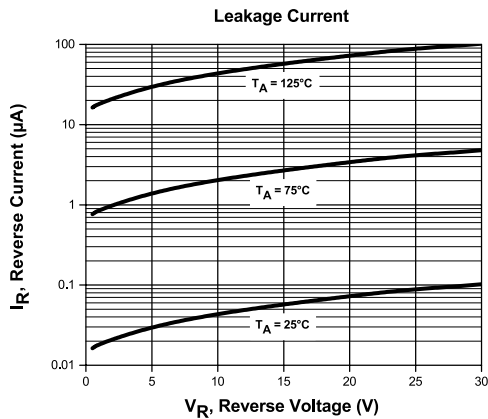
R4 (16-February 2016)

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TYPICAL ELECTRICAL CHARACTERISTICS



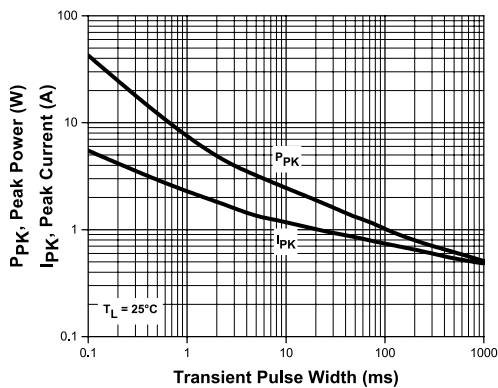
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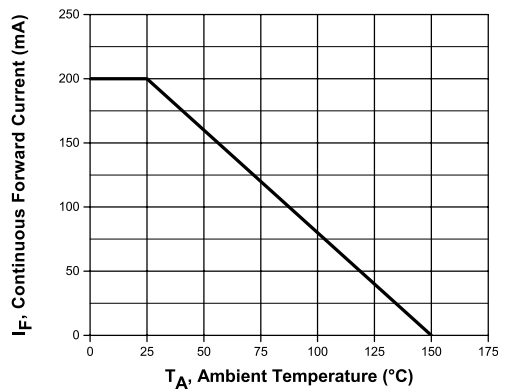


TYPICAL ELECTRICAL CHARACTERISTICS

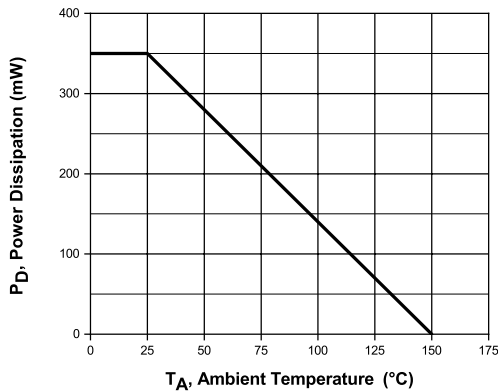
Transient Peak Power and Peak Current Capacity



Current Derating



Power Derating



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).

CONTACT US

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