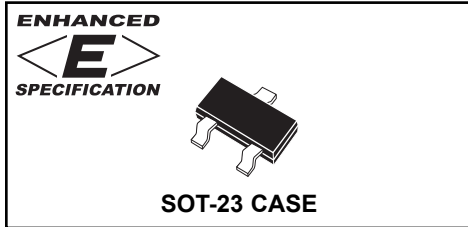


**CMPD914E**  
**ENHANCED SPECIFICATION**  
**SURFACE MOUNT**  
**HIGH SPEED**  
**SILICON SWITCHING DIODE**



# Central<sup>TM</sup>

## Semiconductor Corp.

**DESCRIPTION:**

The Central Semiconductor CMPD914E is an Enhanced version of the CMPD914 High Speed Switching Diode in a SOT-23 surface mount package, designed for high speed applications.

**MARKING CODE: C5DE**

**FEATURED ENHANCED SPECIFICATIONS:**

- ◆  $BV_R$  from 100V min to 120V min. (150V TYP)
- ◆  $V_F$  from 1.0V max to 0.85V max. (0.72V TYP)

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

	SYMBOL		UNITS
Continuous Reverse Voltage	$V_R$	75	V
◆ Peak Repetitive Reverse Voltage	$V_{RRM}$	<b>120</b>	<b>V</b>
Continuous Forward Current	$I_F$	250	mA
Peak Repetitive Forward Current	$I_{FRM}$	250	mA
Forward Surge Current, $t_p=1.0 \mu\text{s}$	$I_{FSM}$	4000	mA
Forward Surge Current, $t_p=1.0 \text{ms}$	$I_{FSM}$	2000	mA
Forward Surge Current, $t_p=1.0 \text{s}$	$I_{FSM}$	1000	mA
Power Dissipation	$P_D$	350	mW
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	357	$^\circ\text{C/W}$

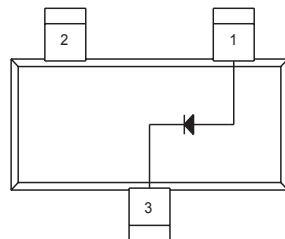
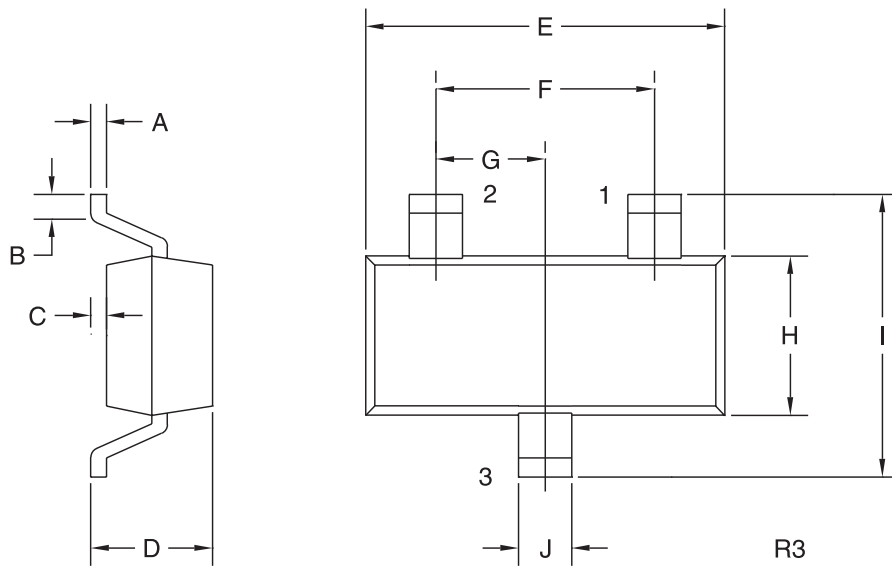
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
◆	$BV_R$	$I_R=100\mu\text{A}$	<b>120</b>	<b>150</b>		<b>V</b>
	$I_R$	$V_R=20\text{V}$			25	nA
	$I_R$	$V_R=75\text{V}$			5.0	$\mu\text{A}$
◆	$V_F$	$I_F=10\text{mA}$		<b>0.720</b>	<b>0.850</b>	<b>V</b>
◆◆	$V_F$	$I_F=100\text{mA}$		<b>0.915</b>	<b>0.970</b>	<b>V</b>
	$C_T$	$V_R=0\text{V}, f=1.0 \text{MHz}$			2.0	pF
	$t_{rr}$	$I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0 \text{mA}$			4.0	ns

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

R2 (6-August 2003)

**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) ANODE
- 2) NO CONNECTION
- 3) CATHODE

**MARKING CODE: C5DE**

DIMENSIONS				
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)