

## Surface Mount Power Voltage-Regulating Diodes



DO-214AC (SMA)

### FEATURES

- Low profile package
- Ideal for automated placement
- Low Zener impedance
- Low regulation factor
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

For general purpose regulation and protection applications.

### PRIMARY CHARACTERISTICS

$V_Z$	5.6 V to 68 V
$P_D$	1.5 W at $T_L = 75\text{ °C}$
$P_D$	0.5 W at $T_A = 25\text{ °C}$
$T_J$ max.	150 °C

### MECHANICAL DATA

**Case:** DO-214AC (SMA)

Molding compound meets UL 94 V-0 flammability rating

Base P/N-E3 - RoHS compliant, commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** Color band denotes cathode end

### MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ , unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation at $T_L = 75\text{ °C}$ (Fig. 1) <sup>(1)</sup>	$P_D$	1.5	W
Power dissipation at $T_A = 25\text{ °C}$ (Fig. 1) <sup>(2)</sup>	$P_D$	0.5	
Maximum instantaneous forward voltage at 200 mA for all types <sup>(3)</sup>	$V_F$	1.5	V
Operating junction and storage temperature range	$T_J, T_{STG}$	- 65 to + 150	°C

#### Notes:

(1) Mounted on P.C.B. with 5.0 x 5.0 mm copper pads attached to each terminal

(2) Mounted on minimum recommended pad layout

(3) Pulse test: 300  $\mu$ s pulse width, 1 % duty cycle





THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	LIMIT	UNIT
Typical thermal resistance, junction to lead <sup>(1)</sup>	$R_{\theta JL}$	50	$^\circ\text{C/W}$
Typical thermal resistance, junction to ambient <sup>(2)</sup>	$R_{\theta JA}$	250	$^\circ\text{C/W}$

**Notes:**

- (1) Mounted on P.C.B. with 5.0 x 5.0 mm copper pads attached to each terminal
- (2) Mounted on minimum recommended pad layout

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SMAZ5925B-E3/61	0.064	61	1800	7" diameter plastic tape and reel
SMAZ5925B-E3/5A	0.064	5A	7500	13" diameter plastic tape and reel

**RATINGS AND CHARACTERISTICS CURVES**

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

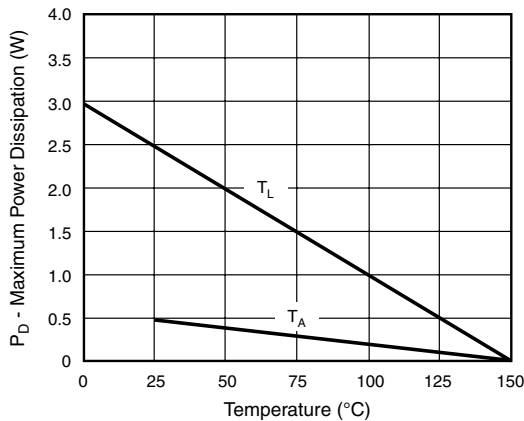


Figure 1. Steady State Power During

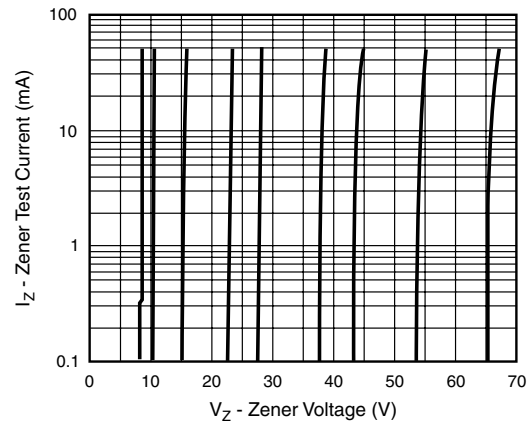


Figure 3. Typical Zener Voltage

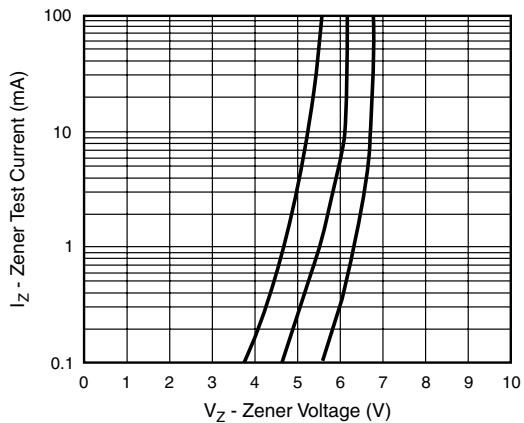


Figure 2. Typical Zener Voltage

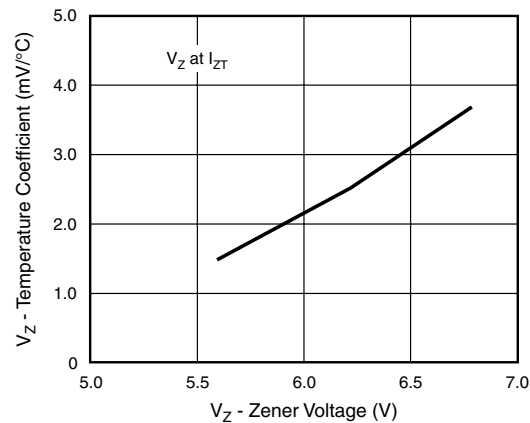


Figure 4. Typical Temperature Coefficients

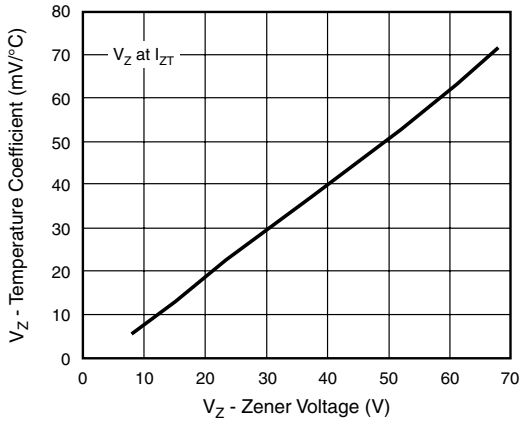


Figure 5. Typical Temperature Coefficients

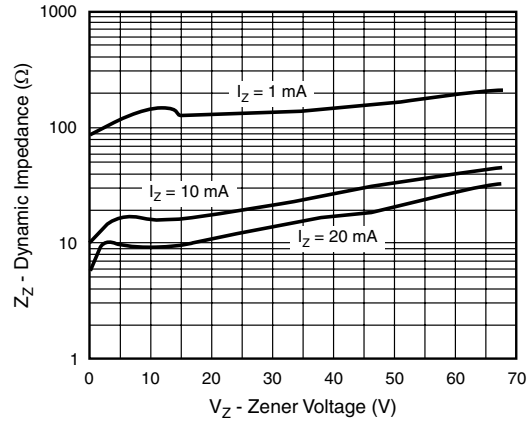


Figure 7. Typical Zener Impedance

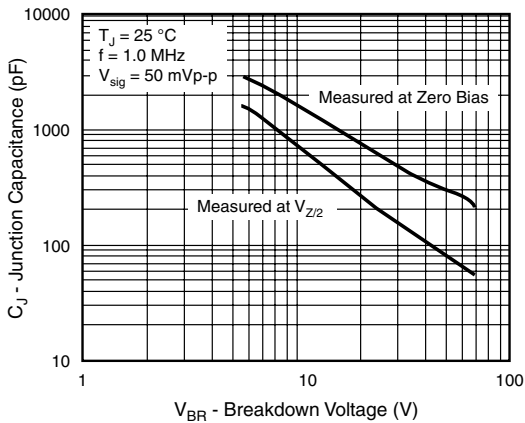
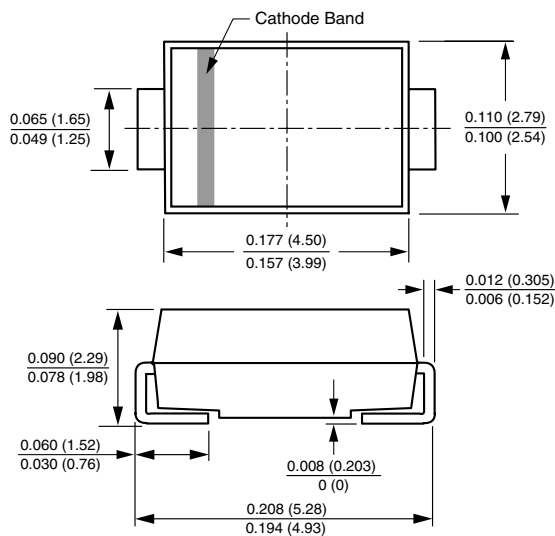


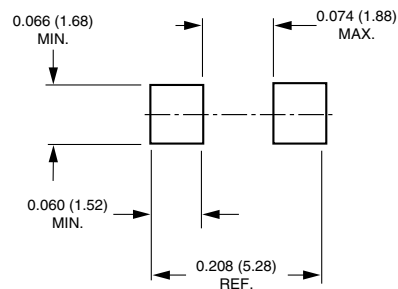
Figure 6. Typical Junction Capacitance

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**DO-214AC (SMA)**



**Mounting Pad Layout**





## Disclaimer

All product specifications and data are subject to change without notice.

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