

## 5W, 15V Surface Mount Zener Diode

### FEATURES

- Ideal for automated placement
- Glass passivated chip junction
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

### APPLICATIONS

- For general purpose regulation and protection applications

### MECHANICAL DATA

- Case : DO-214AB (SMC)
- Molding compound meets UL 94V-0 flammability rating
- Terminal : Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity : Indicated by cathode band
- Weight : 0.260g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$V_Z$	15	V
$P_D$	5	W
$T_{J\text{MAX}}$	150	°C
Package	DO-214AB (SMC)	
Configuration	Single die	



**DO-214AB (SMC)**



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Steady state power dissipation at $T_L = 75^\circ\text{C}$	$P_D$	5	W
Junction temperature	$T_J$	-55 to +150	°C
Storage temperature	$T_{STG}$	-55 to +150	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be attached.

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	55	°C/W

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

Part number (Note 1)	Marking code	Regulator Voltage (Note 2)	Test Current	Maximum Dynamic Impedance	Maximum Reverse Current	$I_R$ Test Voltage	Maximum Regulator Current	Maximum Dynamic Knee Impedance
		$V_Z@I_Z$	$I_Z$	$Z_Z$	$I_R$	$V_R$	$I_{ZM}$	$Z_{ZK}@1\text{mA}$
		V	mA	$\Omega$	$\mu\text{A}$	V	mA	$\Omega$
1SMC5352	352B	15	75	2.5	1.0	11.5	315	75

**Notes:**

1. Tolerance and voltage regulation designation. The type number listed indicates a tolerance of 5%.
2. Zener voltage ( $V_Z$ ) measurement  
Nominal Zener voltage is measured with the device junction in thermal equilibrium with ambient temperature  $25^\circ\text{C}$

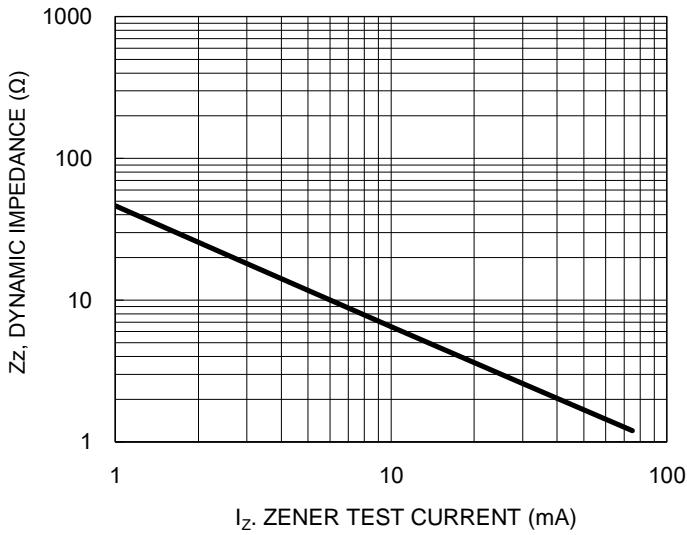
**ORDERING INFORMATION**

ORDERING CODE	PACKAGE	PACKING
1SMC5352	DO-214AB (SMC)	3,000 / Tape & Reel

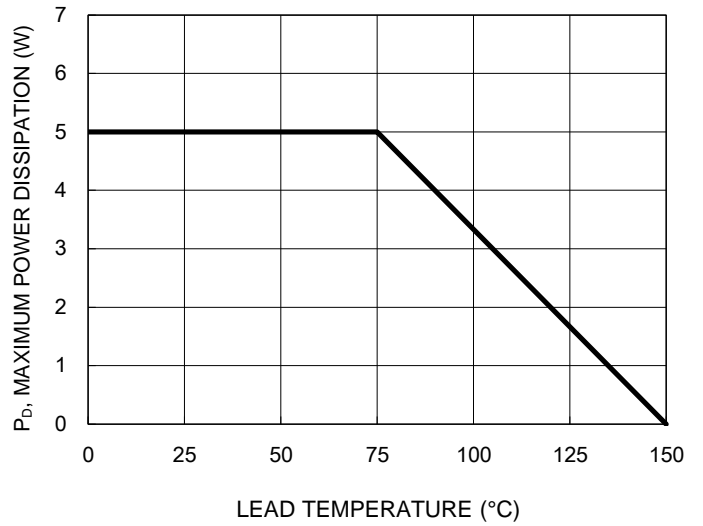
**CHARACTERISTICS CURVES**

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

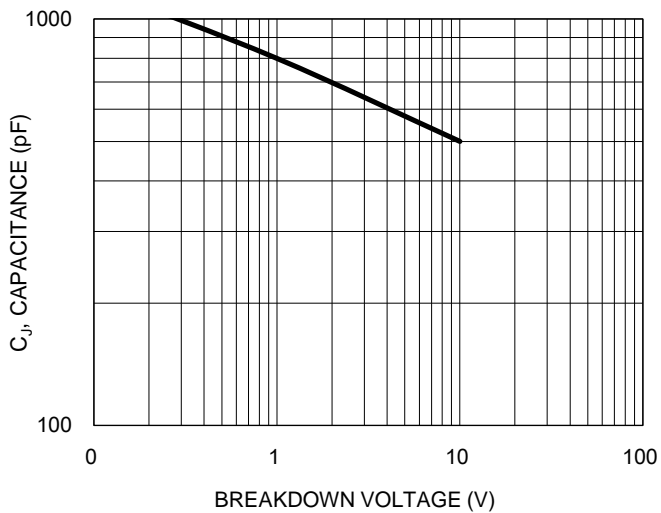
**Fig.1 Effect Of Zener Current**



**Fig.2 Steady State Power Derating**

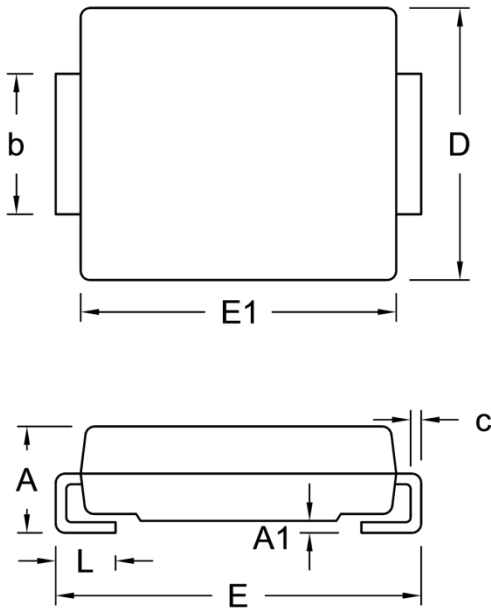


**Fig.3 Typical Junction Capacitance**



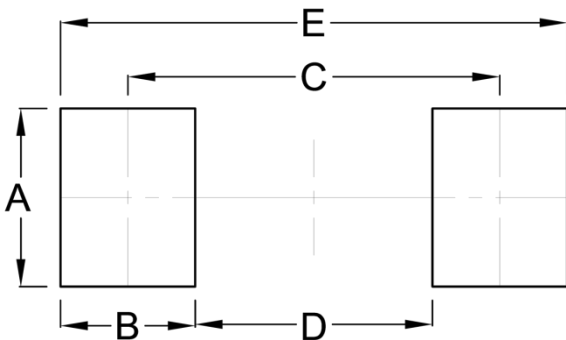
**PACKAGE OUTLINE DIMENSIONS**

DO-214AB (SMC)



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.00	2.62	0.079	0.103
A1	0.10	0.20	0.004	0.008
b	2.90	3.20	0.114	0.126
c	0.15	0.31	0.006	0.012
D	5.59	6.22	0.220	0.245
E	7.75	8.13	0.305	0.320
E1	6.60	7.11	0.260	0.280
L	1.00	1.60	0.039	0.063

**SUGGESTED PAD LAYOUT**



Symbol	Unit (mm)	Unit (inch)
A	3.30	0.130
B	2.50	0.098
C	6.90	0.272
D	4.40	0.173
E	9.40	0.370

**MARKING DIAGRAM**



- P/N = Marking Code
- G = Green Compound
- YW = Date Code
- F = Factory Code

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