

## 5W, 15V Surface Mount Zener Diode

### FEATURES

- Ideal for automated placement
- Glass passivated junction
- Moisture sensitivity level: level 1, per J-STD-020
- AEC-Q101 qualified available:  
ordering code with suffix "H"
- Compliant to RoHS Directive 2011/65/EU and  
in accordance to WEEE 2002/96/EC

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$V_Z$	15	V
Test current $I_{ZT}$	75	mA
$P_D$	5	W
$T_{J\text{MAX}}$	150	°C
Package	DO-214AB (SMC)	
Configuration	Single die	

### 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 : As marked
- Weight : 0.26 g (approximately)



**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

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ 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

**Note:**

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  $25^\circ\text{C}$

<b>ORDERING INFORMATION</b>		
ORDERING CODE (Note 1, 2)	PACKAGE	PACKING
1SMC5352HR7G	SMC	850 / 7" Plastic reel
1SMC5352HR6G	SMC	3,000 / 13" Paper reel
1SMC5352HM6G	SMC	3,000 / 13" Plastic reel
1SMC5352 R7G	SMC	850 / 7" Plastic reel
1SMC5352 R6G	SMC	3,000 / 13" Paper reel
1SMC5352 M6G	SMC	3,000 / 13" Plastic reel
1SMC5352HV7G	Matrix SMC	850 / 7" Plastic reel
1SMC5352HV6G	Matrix SMC	3,000 / 13" Plastic reel
1SMC5352 V7G	Matrix SMC	850 / 7" Plastic reel
1SMC5352 V6G	Matrix SMC	3,000 / 13" Plastic reel
1SMC5352HR7	SMC	850 / 7" Plastic reel
1SMC5352HR6	SMC	3,000 / 13" Paper reel
1SMC5352HM6	SMC	3,000 / 13" Plastic reel
1SMC5352 R7	SMC	850 / 7" Plastic reel
1SMC5352 R6	SMC	3,000 / 13" Paper reel
1SMC5352 M6	SMC	3,000 / 13" Plastic reel

**Note 1:**

"H" means AEC-Q101 qualified

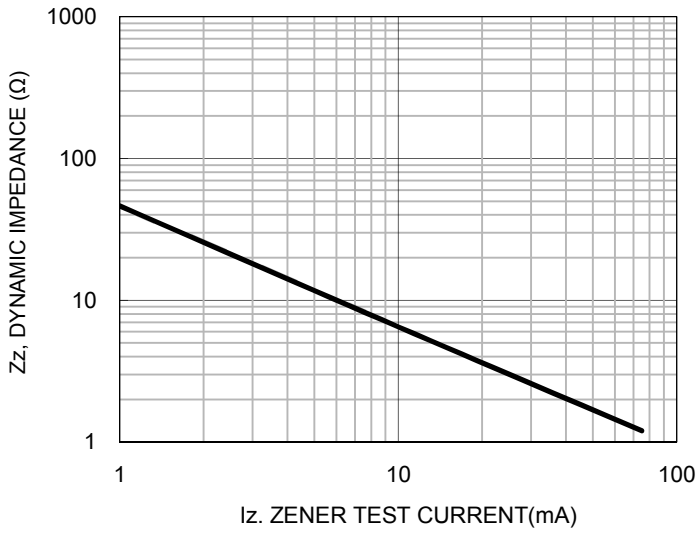
**Note 2:**

"G" means green compound (halogen free)

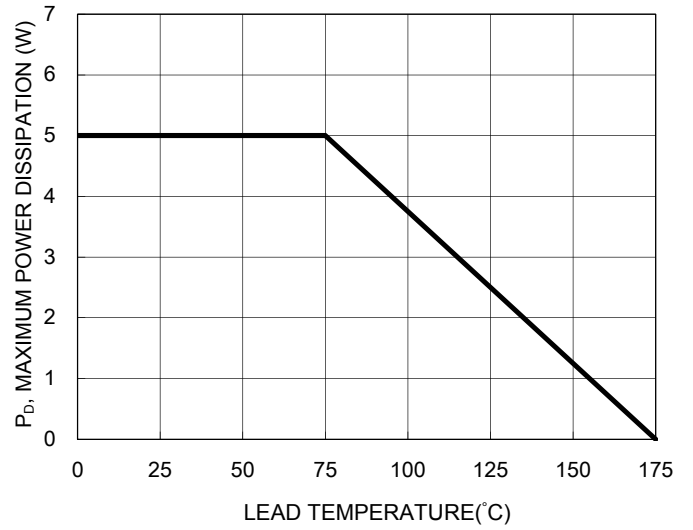
**CHARACTERISTICS CURVES**

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

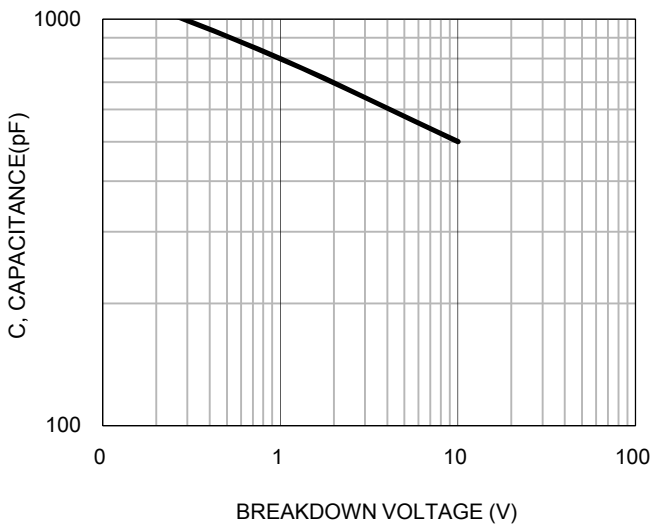
**Fig.1 Effect Of Zener Current**



**Fig.2 Steady State Power Derating**

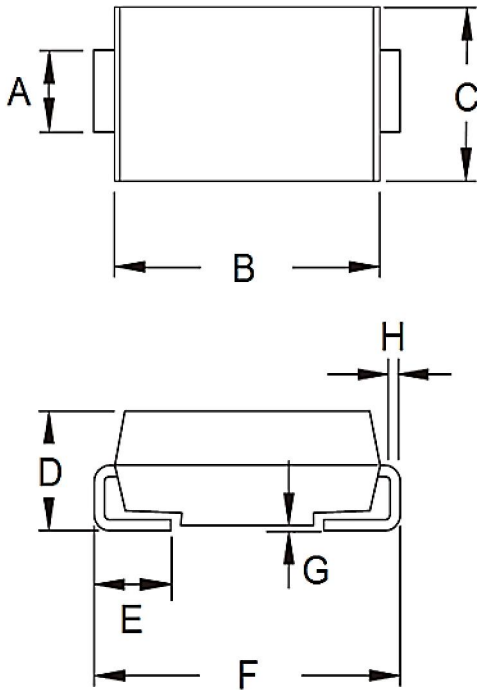


**Fig.3 Typical Junction Capacitance**



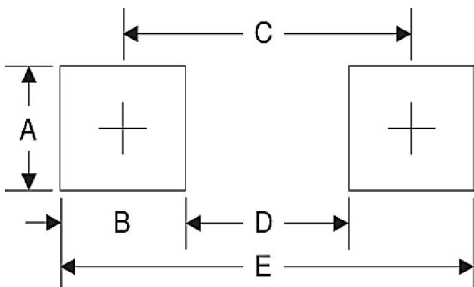
**PACKAGE OUTLINE DIMENSIONS**

DO-214AB (SMC)



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

**SUGGESTED PAD LAYOUT**



Symbol	Unit (mm)	Unit (inch)
A	3.30	0.130
B	2.50	0.098
C	6.80	0.268
D	4.40	0.173
E	9.40	0.370

**MARKING DIAGRAM**

SMC

Matrix SMC



P/N =Marking Code

G =Green Compound

YW =Date Code

F =Factory Code

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