

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
$T_{J\ MAX}$	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

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	Ω	μA	V	mA	Ω
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°C

ORDERING INFORMATION		
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

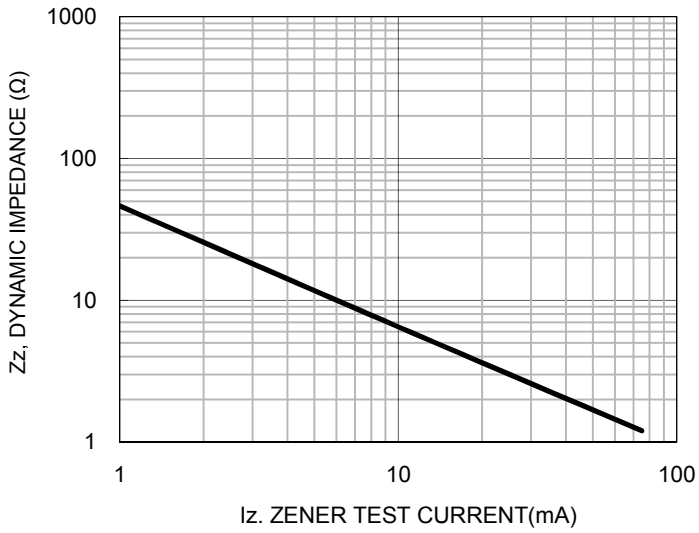


Fig.2 Steady State Power Derating

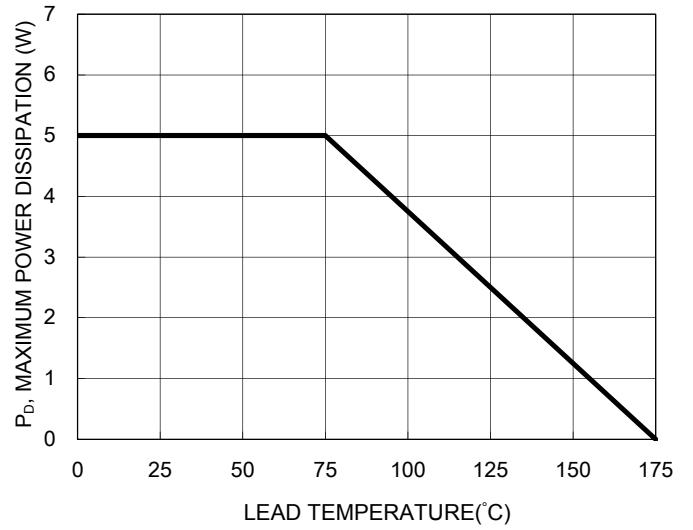
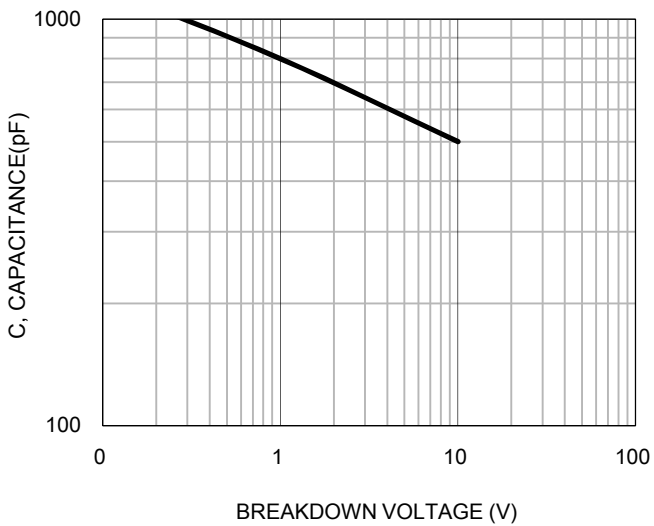
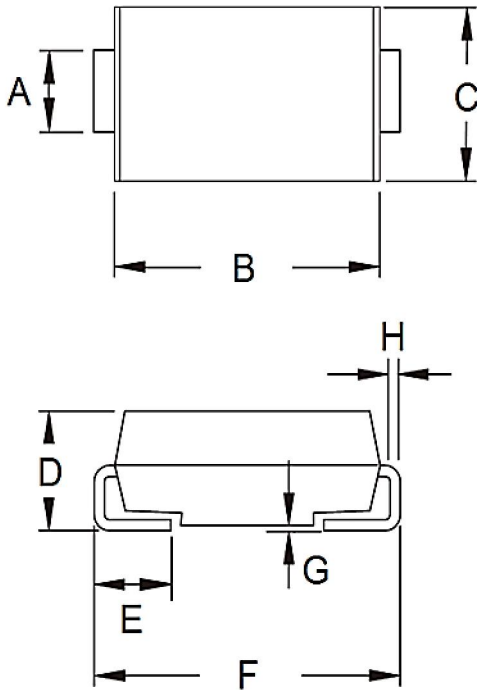


Fig.3 Typical Junction Capacitance



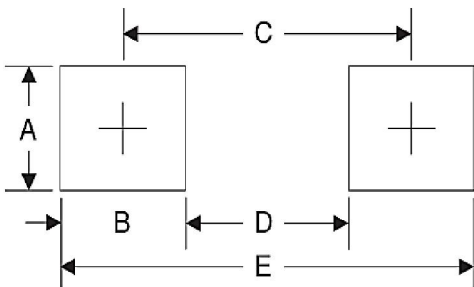
PACKAGE OUTLINE DIMENSIONS

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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