



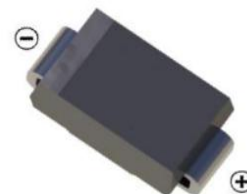
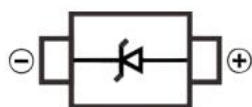
# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

SMB3ZXXA

SMB Surface Mounted Zener Diode 表面贴装稳压二极管

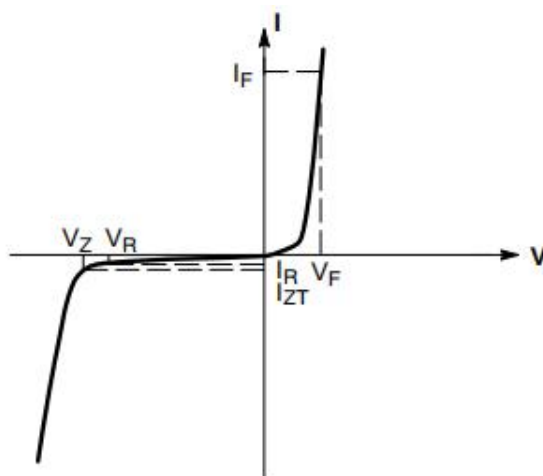
## ■SMB(DO-214AA) Internal Configuration 内部结构



## ■Features 特点

Characteristic 特性参数	Symbol 符号	Max 最大值	Unit 单位
Power dissipation 耗散功率	$P_D(T_a=25^\circ\text{C})$	550	mW
Power dissipation 耗散功率	$P_D(T_L=75^\circ\text{C})$	3000	mW
Forward Voltage 正向电压	$V_F(@ I_F=200\text{mA})$	1.2	V
Reverse Voltage 反向电压	$V_Z$	3.3-250	V
Thermal Resistance J-L 结到管脚热阻	$R_{\theta JL}$	41.6	$^\circ\text{C/W}$
Thermal Resistance J-A 结到环境热阻	$R_{\theta JA}$	226	$^\circ\text{C/W}$
Junction and Storage Temperature 结温和储藏温度	$T_J, T_{stg}$	150 $^\circ\text{C}$ , -55to+150 $^\circ\text{C}$	

ELECTRICAL CHARACTERISTICS	
SYMBOL	PARAMETER
$V_Z$	Reverse Zener voltage at $I_{ZT}$
$I_{ZT}$	Reverse current
$Z_{ZT}$	Maximum Zener impedance at $I_{ZT}$
$I_{ZK}$	Reverse current
$Z_{ZK}$	Maximum Zener impedance at $I_{ZK}$
$I_R$	Reverse leakage current at $V_R$
$V_R$	Reverse voltage
$I_F$	Forward current
$V_F$	Forward voltage at $I_F$
$I_{ZM}$	Maximum DC Zener current



## ■Electrical Characteristics 电特性

( $T_A=25^\circ\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^\circ\text{C}$ )



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Part Number	Device Marking	Nominal Zener Voltage @ I <sub>ZT</sub>			I <sub>ZT</sub> (mA)	Maximum Zener Impedance			Leakage Current		DC Current I <sub>ZM</sub> (mA)
		V <sub>Z AVE.</sub> (V)	V <sub>Z MIN.</sub> (V)	V <sub>Z MAX.</sub> (V)		Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub> (mA)	I <sub>R</sub> ( $\mu$ A)@V <sub>R</sub>	V <sub>R</sub> (V)	
SMB3Z3.3A	3H0	3.3	3.14	3.47	227.3	10.0	500.0	1.00	100.0	1.0	817.0
SMB3Z3.6A	3H1	3.6	3.42	3.78	208.3	9.0	500.0	1.00	100.0	1.0	749.0
SMB3Z3.9A	3H2	3.9	3.71	4.10	192.0	4.5	400.0	1.00	100.0	1.0	691.0
SMB3Z4.3A	3H3	4.3	4.09	4.52	174.0	4.5	400.0	1.00	50.0	1.0	627.0
SMB3Z4.7A	3H4	4.7	4.47	4.94	160.0	4.0	500.0	1.00	50.0	1.0	573.0
SMB3Z5.1A	3H5	5.1	4.85	5.36	147.0	3.5	550.0	1.00	10.0	1.0	528.0
SMB3Z5.6A	3H6	5.6	5.32	5.88	134.0	2.5	600.0	1.00	10.0	2.0	481.0
SMB3Z6.2A	3A0	6.2	5.89	6.51	121.0	1.5	700.0	1.00	10.0	3.0	435.0
SMB3Z6.8A	3A1	6.8	6.46	7.14	110.0	2.0	700.0	1.00	10.0	4.0	393.0
SMB3Z7.5A	3A2	7.5	7.13	7.88	100.0	2.0	700.0	0.50	10.0	5.0	360.0
SMB3Z8.2A	3A3	8.2	7.79	8.61	91.0	2.3	700.0	0.50	10.0	6.0	330.0
SMB3Z9.1A	3A4	9.1	8.65	9.56	82.0	2.5	700.0	0.50	10.0	7.0	297.0
SMB3Z10A	3A5	10.0	9.50	10.50	75.0	3.5	700.0	0.25	10.0	7.6	270.0
SMB3Z11A	3A6	11.0	10.45	11.55	68.0	4.0	700.0	0.25	0.5	8.4	225.0
SMB3Z12A	3A7	12.0	11.40	12.60	63.0	4.5	700.0	0.25	0.5	9.1	246.0
SMB3Z13A	3A8	13.0	12.35	13.65	58.0	4.5	700.0	0.25	0.5	9.9	208.0
SMB3Z14A	3A9	14.0	13.30	14.70	53.0	5.0	700.0	0.25	0.5	10.6	193.0
SMB3Z15A	3B0	15.0	14.25	15.75	50.0	5.5	700.0	0.25	0.5	11.4	180.0
SMB3Z16A	3B1	16.0	15.20	16.80	47.0	5.5	700.0	0.25	0.5	12.2	169.0
SMB3Z17A	3B2	17.0	16.15	17.85	44.0	6.0	750.0	0.25	0.5	13.0	159.0
SMB3Z18A	3B3	18.0	17.10	18.90	42.0	6.0	750.0	0.25	0.5	13.7	150.0
SMB3Z19A	3B4	19.0	18.05	19.95	40.0	7.0	750.0	0.25	0.5	14.4	142.0
SMB3Z20A	3B5	20.0	19.00	21.00	37.0	7.0	750.0	0.25	0.5	15.2	135.0
SMB3Z22A	3B6	22.0	20.90	23.10	34.0	8.0	750.0	0.25	0.5	16.7	123.0
SMB3Z24A	3B7	24.0	22.80	25.20	31.0	9.0	750.0	0.25	0.5	18.2	112.0
SMB3Z27A	3B8	27.0	25.65	28.35	28.0	10.0	750.0	0.25	0.5	20.6	100.0
SMB3Z30A	3B9	30.0	28.50	31.50	25.0	16.0	1000.0	0.25	0.5	22.5	90.0
SMB3Z33A	3C0	33.0	31.35	34.65	23.0	20.0	1000.0	0.25	0.5	25.1	82.0
SMB3Z36A	3C1	36.0	34.20	37.80	21.0	22.0	1000.0	0.25	0.5	27.4	75.0
SMB3Z39A	3C2	39.0	37.05	40.95	19.0	28.0	1000.0	0.25	0.5	29.7	69.0
SMB3Z43A	3C3	43.0	40.85	45.15	17.0	33.0	1500.0	0.25	0.5	32.7	63.0
SMB3Z47A	3C4	47.0	44.65	49.35	16.0	38.0	1500.0	0.25	0.5	35.6	57.0
SMB3Z51A	3C5	51.0	48.45	53.55	15.0	45.0	1500.0	0.25	0.5	38.8	53.0
SMB3Z56A	3C6	56.0	53.20	58.80	13.0	50.0	2000.0	0.25	0.5	42.6	48.0
SMB3Z62A	3C7	62.0	58.90	65.10	12.0	55.0	2000.0	0.25	0.5	47.1	44.0
SMB3Z68A	3C8	68.0	64.60	71.40	11.0	70.0	2000.0	0.25	0.5	51.7	40.0
SMB3Z75A	3C9	75.0	71.25	78.75	10.0	85.0	2000.0	0.25	0.5	56.0	36.0
SMB3Z82A	3F0	82.0	77.90	86.10	9.1	95.0	3000.0	0.25	0.5	62.2	33.0
SMB3Z91A	3F1	91.0	86.45	95.55	8.2	115.0	3000.0	0.25	0.5	69.2	30.0
SMB3Z100A	3F2	100.0	95.00	105.00	7.5	160.0	3000.0	0.25	0.5	76.0	27.0
SMB3Z110A	3F3	110.0	104.50	115.50	6.8	225.0	4000.0	0.25	0.5	83.6	25.0
SMB3Z120A	3F4	120.0	114.00	126.00	6.3	300.0	4500.0	0.25	0.5	91.2	22.0
SMB3Z130A	3F5	130.0	123.50	136.50	5.8	375.0	5000.0	0.25	0.5	98.8	21.0
SMB3Z140A	3F6	140.0	133.00	147.00	5.3	475.0	5000.0	0.25	0.5	106.4	19.0
SMB3Z150A	3F7	150.0	142.50	157.50	5.0	550.0	6000.0	0.25	0.5	114.0	18.0
SMB3Z160A	3F8	160.0	152.00	168.00	4.7	625.0	6500.0	0.25	0.5	121.6	17.0
SMB3Z170A	3F9	170.0	161.50	178.50	4.4	650.0	7000.0	0.25	0.5	130.4	16.0
SMB3Z180A	3G1	180.0	171.00	189.00	4.2	700.0	7000.0	0.25	0.5	136.8	15.0
SMB3Z190A	3G2	190.0	180.50	199.50	4.0	800.0	8000.0	0.25	0.5	144.8	14.0
SMB3Z200A	3G3	200.0	190.00	210.00	3.7	875.0	8000.0	0.25	0.5	152.0	13.0
SMB3Z210A	3G4	210.0	199.50	220.50	3.5	950.0	8300.0	0.25	0.5	169.0	12.3
SMB3Z220A	3G5	220.0	209.00	231.00	3.3	1600.0	8500.0	0.25	0.5	178.0	11.6
SMB3Z230A	3G6	230.0	218.50	241.50	3.1	2000.0	9000.0	0.25	0.5	186.0	10.9
SMB3Z240A	3G7	240.0	228.00	252.00	2.9	2500.0	9000.0	0.25	0.5	195.0	10.2
SMB3Z250A	3G8	250.0	237.50	262.50	2.7	3000.0	9500.0	0.25	0.5	205.0	9.5

## ■ Typical Characteristic Curve 典型特性曲线

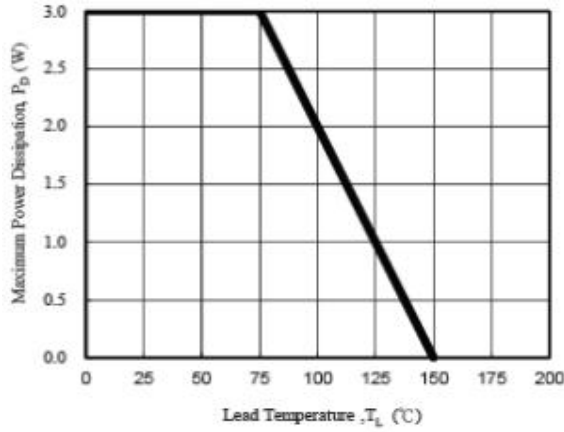


Fig. 1 - Power Temperature Derating Curve

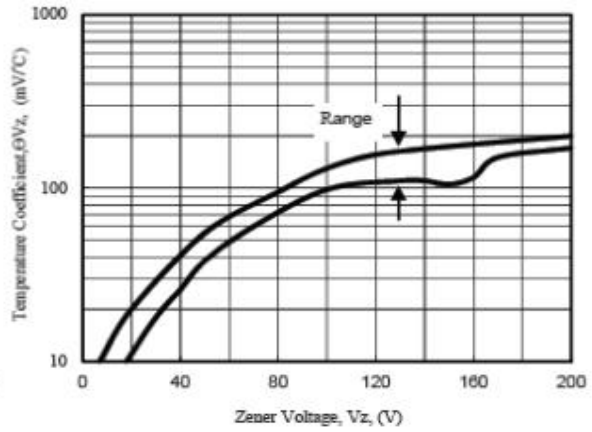


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

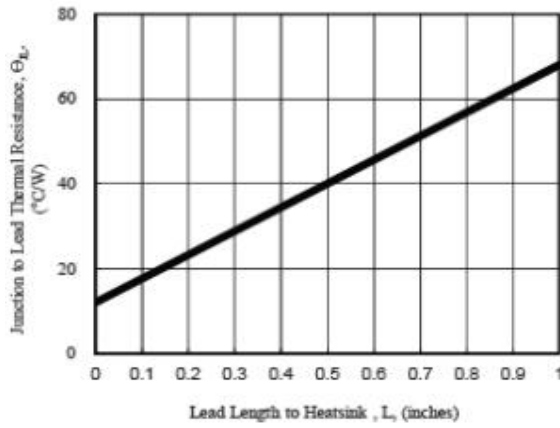


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

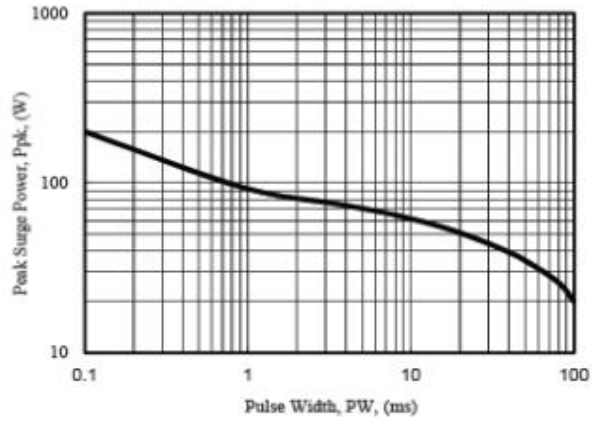


Fig. 4 - Maximum Surge Power

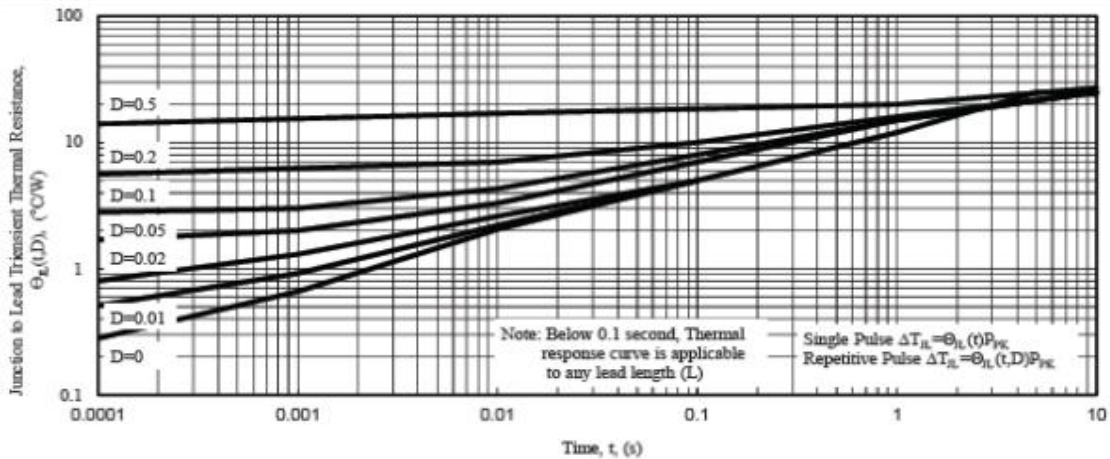


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

■Dimension 外形封装尺寸

