

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

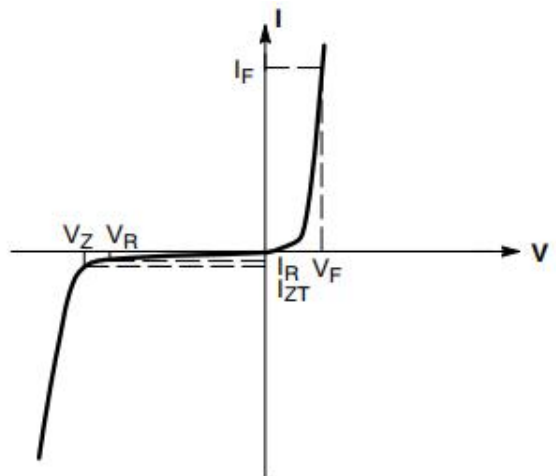
■SMA(DO-214AC) Internal Configuration 内部结构



■Features 特点

Characteristic 特性参数	Symbol 符号	Max 最大值	Unit 单位
Power dissipation 耗散功率	$P_D(T_A=25^\circ\text{C})$	500	mW
Power dissipation 耗散功率	$P_D(T_L=75^\circ\text{C})$	1500	mW
Forward Voltage 正向电压	$V_F(@ I_F=200\text{mA})$	1.5	V
Reverse Voltage 反向电压	$V_Z$	3.3-240	V
Thermal Resistance J-L 结到管脚热阻	$R_{\theta JL}$	83	$^\circ\text{C}/\text{W}$
Thermal Resistance J-A 结到环境热阻	$R_{\theta JA}$	250	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	$T_J, T_{\text{stg}}$	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 $^\circ\text{C}$ )

Type Number	V <sub>Z</sub> (V)@I <sub>ZT</sub>			I <sub>ZT</sub> (mA)	Z <sub>ZT</sub> (Ω) @I <sub>ZT</sub>	I <sub>R</sub> (uA) @V <sub>R</sub>	V <sub>R</sub> (V)	I <sub>ZRM</sub> (mA)	Marking
	Nom.	Min.	Max.						
1SMA5913B	3.3	3.10	3.50	75	10	100	1	285	913B
1SMA5914B	3.6	3.40	3.80	69	10	100	1	263	914B
1SMA5915B	3.9	3.70	4.10	64	9.0	50	1	243	915B
1SMA5916B	4.3	4.06	4.56	58	9.0	25	1	219	916B
1SMA5917B	4.7	4.50	4.93	53	8.0	10	1	203	917B
1SMA5918B	5.1	4.84	5.36	49	7.0	10	1	186	918B
1SMA5919B	5.6	5.32	5.92	45	5.0	10	2	170	919B
1SMA5920B	6.2	5.86	6.51	41	2.0	10	3	154	920B
1SMA5921B	6.8	6.46	7.18	37	3.5	10	4	140	921B
1SMA5922B	7.5	7.12	7.88	34	4.0	10	5	127	922B
1SMA5923B	8.2	7.79	8.67	31	4.5	10	6	116	923B
1SMA5924B	9.1	8.60	9.59	28	5.0	10	7	104	924B
1SMA5925B	10	9.50	10.5	25	7.0	10	7	95	925B
1SMA5926B	11	10.4	11.6	23	8.0	5	8	86	926B
1SMA5927B	12	11.4	12.6	21	9.0	5	9	79	927B
1SMA5928B	13	12.4	14.1	19	10	5	10	71	928B
1SMA5929B	15	13.8	15.8	17	14	5	11	63	929B
1SMA5930B	16	15.2	17.1	16	16	5	12	58	930B
1SMA5931B	18	16.8	19.2	14	20	5	13	52	931B
1SMA5932B	20	19.0	21.2	13	22	5	15	47	932B
1SMA5933B	22	20.8	23.3	12	23	5	17	43	933B
1SMA5934B	24	22.8	26.0	11	25	5	18	38	934B
1SMA5935B	27	25.3	28.9	9.5	35	5	21	35	935B
1SMA5936B	30	28.2	32.0	8.5	40	5	23	31	936B
1SMA5937B	33	31.3	34.9	7.5	45	5	25	28	937B
1SMA5938B	36	34.2	37.9	7.0	50	5	27	26	938B
1SMA5939B	39	37.2	41.5	6.5	60	5	30	24	939B
1SMA5940B	43	40.9	45.6	6.0	70	1	32	22	940B
1SMA5941B	47	44.9	49.8	5.5	80	1	35	20	941B
1SMA5942B	51	48.6	54.0	5.0	95	1	38	18	942B
1SMA5943B	56	53.6	58.8	4.5	110	1	42	17	943B
1SMA5944B	62	58.9	65.6	4.0	125	1	47	15	944B
1SMA5945B	68	64.6	71.7	3.7	150	1	52	14	945B
1SMA5946B	75	71.2	78.8	3.3	175	1	56	12	946B
1SMA5947B	82	77.9	87.0	3.0	200	1	62	11	947B
1SMA5948B	91	86.0	96.0	2.8	250	1	69	10	948B
1SMA5949B	100	95.0	105	2.5	350	1	76	9.5	949B
1SMA5950B	110	104	116	2.3	450	1	84	8.6	950B
1SMA5951B	120	114	127	2.0	550	1	91	7.8	951B
1SMA5952B	135	125	142	1.9	700	1	100	7.0	952B
1SMA5953B	150	140	157	1.7	900	1	110	6.3	953B
1SMA5954B	165	155	172	1.6	1100	1	120	5.8	954B
1SMA5955B	180	170	191	1.4	1200	1	135	5.2	955B
1SMA5956B	200	189	211	1.2	1400	1	150	4.7	956B
1SMA5957B	240	228	252	1.2	1600	1	185	4.5	957B

■ Typical Characteristic Curve 典型特性曲线

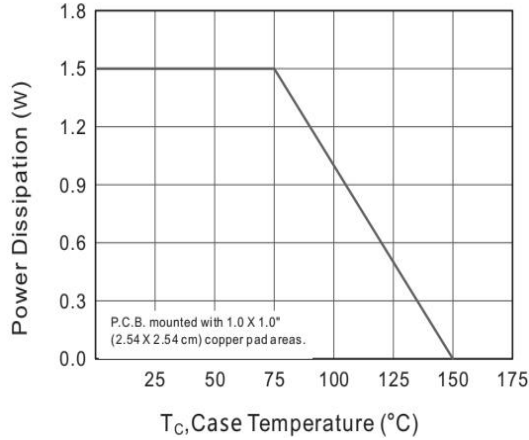


Figure 1: Power Derating Curve

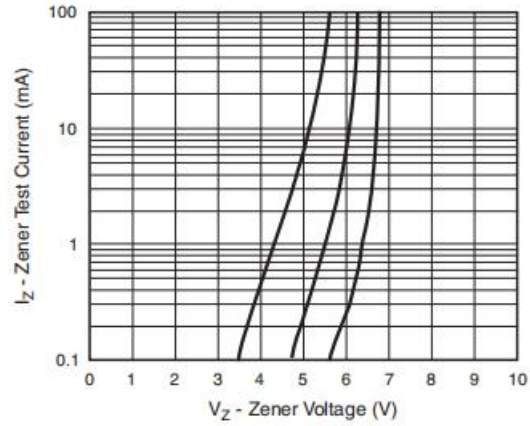


Figure 2: Zener Breakdown Characteristics

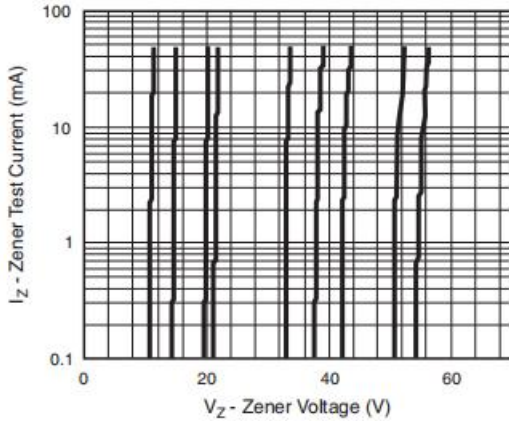


Figure 3: Zener Breakdown Characteristics

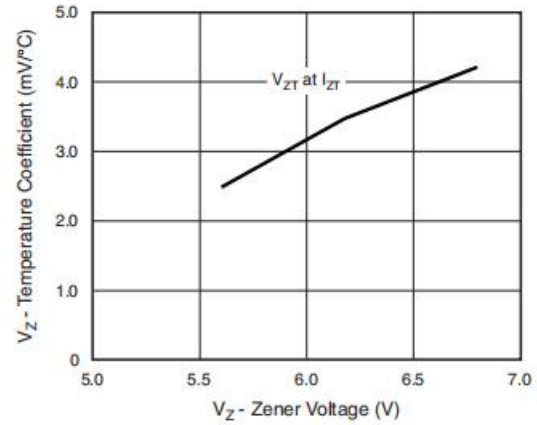


Figure 4: Temperature Coefficient

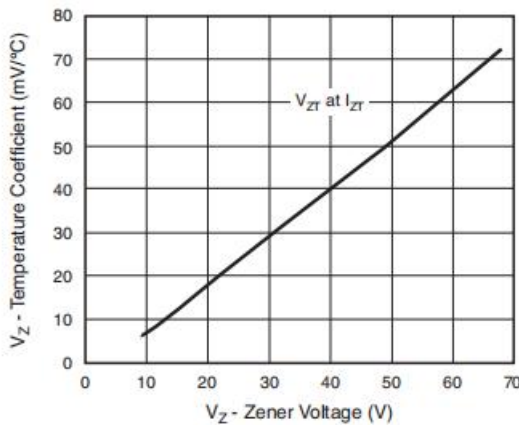


Figure 5: Temperature Coefficient

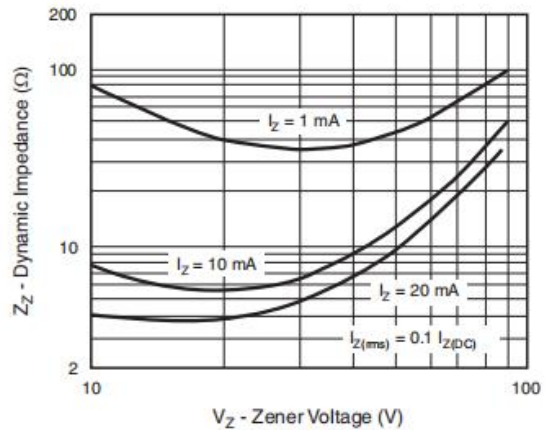
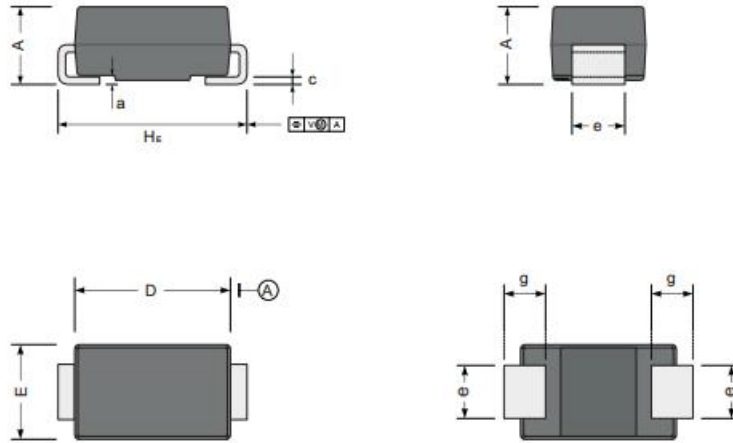


Figure 6: Zener Impedance

■Dimension 外形封装尺寸



UNIT		A	D	E	H <sub>E</sub>	c	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	