

FEATURES

- | 5.1 Thru 200 Volt Voltage Range

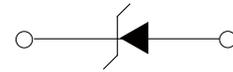
- | Glass Passivated Junction

- | Surface Mount Application

- | Epoxy Meets UL 94 V-0 Flammability Rating



DO-214AC(SMA)



Schematic Symbol

MECHANICAL DATA

- | Case : Molded plastic body

- | Polarity : Polarity symbol marking on body

- | Mounting Position : Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
DC Power dissipation at $T_L = 50^\circ\text{C}$	P_D	3.0	W
Maximum instantaneous forward voltage@ $I_F=200\text{mA}$	V_F	1.5	V
Maximum junction temperature	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

Part Number	Device Marking Code	Zener Voltage ⁽³⁾	Test current	Maximum Dynamic Impedance	Knee Current	Knee Impedance	Maximum Reverse Current	Reverse Voltage	Maximum DC Zener Current
		V _Z (V)	I _{ZT} (mA)	Z _{ZT} @ I _{ZT} (Ω)	I _{ZK} (mA)	Z _{ZK} (Ω)	I _R (μA)	V _R (V)	I _{ZM} (mA)
SMA3Z5918B	H18B	5.1	73.5	4	1	350	5	2	588
SMA3Z5919B	H19B	5.6	66.9	2	1	250	5	3	534
SMA3Z5920B	H20B	6.2	60.5	2	1	200	5	4	482
SMA3Z5921B	H21B	6.8	55.1	2.5	1	200	5	5.2	440
SMA3Z5922B	H22B	7.5	50	3	0.5	400	5	6	400
SMA3Z5923B	H23B	8.2	45.7	3.5	0.5	400	5	6.5	364
SMA3Z5924B	H24B	9.1	41.2	4	0.5	500	5	7	328
SMA3Z5925B	H25B	10	37.5	4.5	0.25	500	5	8	300
SMA3Z5926B	H26B	11	34.1	5.5	0.25	550	1	8.4	272
SMA3Z5927B	H27B	12	31.2	6.5	0.25	550	1	9.1	250
SMA3Z5928B	H28B	13	28.8	7	0.25	550	1	9.9	230
SMA3Z5929B	H29B	15	25	9	0.25	600	1	11.4	200
SMA3Z5930B	H30B	16	23.4	10	0.25	600	1	12.2	186
SMA3Z5931B	H31B	18	20.8	12	0.25	650	1	13.7	166
SMA3Z5932B	H32B	20	18.7	14	0.25	650	1	15.2	150
SMA3Z5933B	H33B	22	17	17.5	0.25	650	1	16.7	136
SMA3Z5934B	H34B	24	15.6	19	0.25	700	1	18.2	124
SMA3Z5935B	H35B	27	13.9	23	0.25	700	1	20.6	110
SMA3Z5936B	H36B	30	12.5	28	0.25	750	1	22.8	100
SMA3Z5937B	H37B	33	11.4	33	0.25	800	1	25.1	90
SMA3Z5938B	H38B	36	10.4	38	0.25	850	1	27.4	82
SMA3Z5939B	H39B	39	9.6	45	0.25	900	1	29.7	76
SMA3Z5940B	H40B	43	8.7	53	0.25	950	1	32.7	68
SMA3Z5941B	H41B	47	8	67	0.25	1000	1	35.8	62
SMA3Z5942B	H42B	51	7.3	70	0.25	1100	1	38.8	58
SMA3Z5943B	H43B	56	6.7	86	0.25	1300	1	42.6	52
SMA3Z5944B	H44B	62	6	100	0.25	1500	1	47.1	48
SMA3Z5945B	H45B	68	5.5	120	0.25	1700	1	51.7	44
SMA3Z5946B	H46B	75	5	140	0.25	2000	1	56	40
SMA3Z5947B	H47B	82	4.6	160	0.25	2500	1	62.2	36

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		V_Z (V)	I_{ZT} (mA)	$Z_{ZT}@I_{ZT}$ (Ω)	I_{ZK} (mA)	Z_{ZK} (Ω)	I_R (μ A)	V_R (V)	I_{ZM} (mA)
SMA3Z5948B	H48B	91	4.1	200	0.25	3000	1	69.2	32
SMA3Z5949B	H49B	100	3.7	250	0.25	3100	1	76	30
SMA3Z5950B	H50B	110	3.4	300	0.25	4000	1	83.6	26
SMA3Z5951B	H51B	120	3.1	380	0.25	4500	1	91.2	24
SMA3Z5952B	H52B	130	2.9	450	0.25	5000	1	98.8	22
SMA3Z5953B	H53B	150	2.5	600	0.25	6000	1	114	20
SMA3Z5954B	H54B	160	2.3	700	0.25	6500	1	121.6	18
				350 (@5mA)					
SMA3Z5955B	H55B	180	2.1	900	0.25	7000	1	136.8	16
SMA3Z5956B	H56B	200	1.9	1200	0.25	8000	1	152	14

Note : 3.TOLERANCE AND VOLTAGE DESIGNATION - The type numbers listed indicate a tolerance of +/-5%

CHARACTERISTIC CURVES

Fig.1-Power Derating Curve

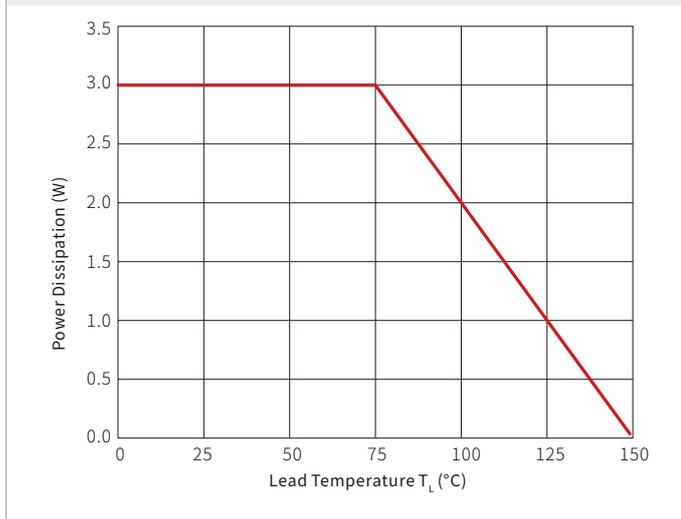


Fig.2-Typical Zener Breakdown Characteristics

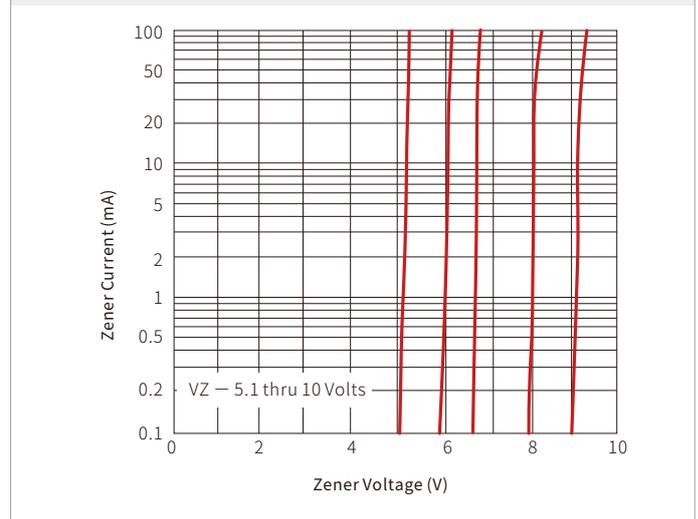
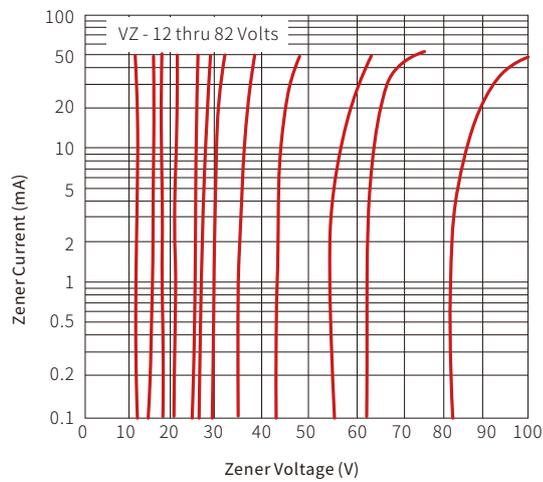
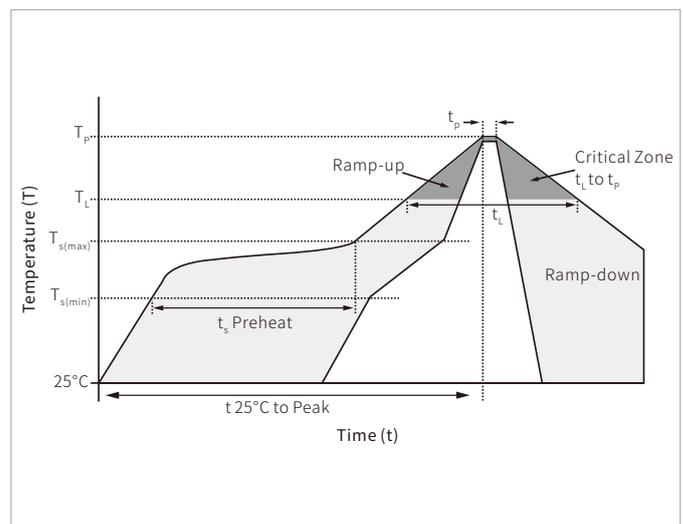


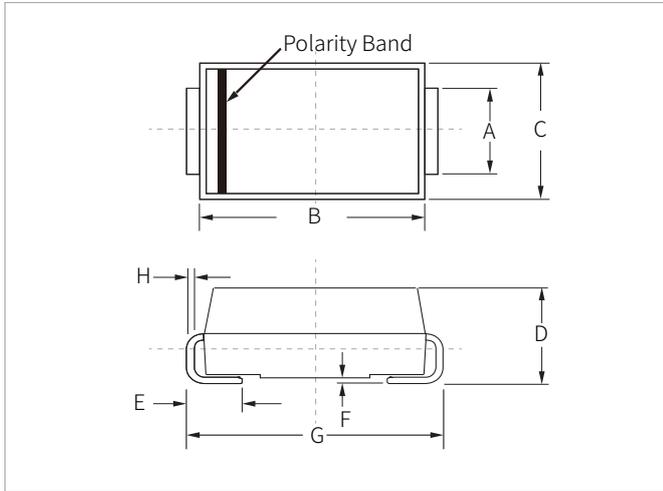
Fig.3-Typical Zener Breakdown Characteristics


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

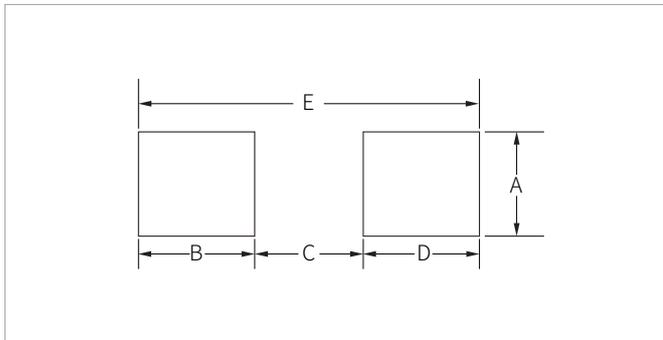


DO-214AC(SMA) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.20	1.60	0.047	0.063
B	4.20	4.60	0.165	0.181
C	2.40	2.80	0.094	0.110
D	2.00	2.40	0.079	0.094
E	0.76	1.52	0.030	0.060
F	0.02	0.20	0.001	0.008
G	4.85	5.25	0.191	0.207
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.63	-	0.064	-
B	1.45	-	0.057	-
C	-	2.80	-	0.090
D	1.45	-	0.057	-
E	5.28REF		0.208REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SMA3Z	DO-214AC(SMA)	5000PCS	13"

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