

Zener Diodes DO-214AB SMC

SMC53-B Series

MERITEK

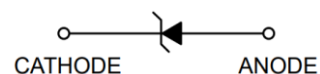
FEATURE

- Zener Voltage Range: 5.1V to 200V
- Zener Voltage Tolerance: $\pm 5\%$
- Power Dissipation: 5W
- Glass Passivation Junction, Low Inductance
- Built- In Strain Relief
- High Peak Reverse Power Dissipation



MECHANICAL DATA

- Flammability Classification Rating UL 94V-0
- Solderable Per MIL-STD-750, Method 2026
- Polarity: Color Band Denoted Cathode End



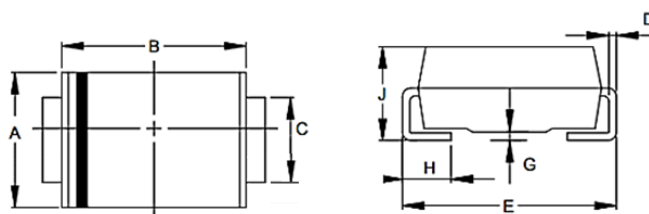
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$	P_D	5.0	W
Maximum Forward Voltage at $I_F = 1\text{A}$	V_F	1.2	V
Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Note: $T_A = 25^\circ\text{C}$ unless otherwise noted

DIMENSIONS

Item	DO-214AB (SMC)	
	Min (mm)	Max (mm)
A	5.55	6.04
B	6.60	7.15
C	2.90	3.20
D	0.15	0.30
E	7.75	7.95
G	0.00	0.20
H	0.75	1.51
J	1.98	2.53



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ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max Zener Current
	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$		I_{ZM}
	V	mA	Ω	Ω	mA	μA	V	mA
SMC5338B	5.1	240	1.5	400	1	1.0	1.0	930
SMC5339B	5.6	220	1.0	400	1	1.0	2.0	846
SMC5340B	6.0	200	1.0	300	1	1.0	3.0	790
SMC5341B	6.2	200	1.0	200	1	1.0	30	765
SMC5342B	6.8	175	1.0	200	1	10.0	5.2	700
SMC5343B	7.5	175	1.5	200	1	10.0	5.7	630
SMC5344B	8.2	150	1.5	200	1	10.0	6.2	580
SMC5345B	8.7	150	2.0	200	1	10.0	6.6	545
SMC5346B	9.1	150	2.0	150	1	7.5	6.9	520
SMC5347B	10.0	125	2.0	125	1	5.0	7.6	475
SMC5348B	11.0	125	2.5	125	1	5.0	8.4	430
SMC5349B	12.0	100	2.5	125	1	2.0	9.1	395
SMC5350B	13.0	100	2.5	100	1	1.0	9.9	365
SMC5351B	14.0	100	2.5	75	1	1.0	10.6	340
SMC5352B	15.0	75	2.5	75	1	1.0	11.5	315
SMC5353B	16.0	75	2.5	75	1	1.0	12.2	295
SMC5354B	17.0	70	2.5	75	1	0.5	12.9	280
SMC5355B	18.0	65	2.5	75	1	0.5	13.7	265
SMC5356B	19.0	65	3.0	75	1	0.5	14.4	250
SMC5357B	20.0	65	3.0	75	1	0.5	15.2	237
SMC5358B	22.0	50	3.5	75	1	0.5	16.7	216
SMC5359B	24.0	50	3.5	100	1	0.5	18.2	198
SMC5360B	25.0	50	4.0	110	1	0.5	19.0	190
SMC5361B	27.0	50	5.0	120	1	0.5	20.6	176
SMC5362B	28.0	50	6.0	130	1	0.5	21.2	170
SMC5363B	30.0	40	8.0	140	1	0.5	22.8	158
SMC5364B	33.0	40	10.0	150	1	0.5	25.1	144
SMC5365B	36.0	30	11.0	160	1	0.5	27.4	132
SMC5366B	39.0	30	14.0	170	1	0.5	29.7	122
SMC5367B	43.0	30	20.0	190	1	0.5	32.7	110
SMC5368B	47.0	25	25.0	210	1	0.5	35.8	100
SMC5369B	51.0	25	27.0	230	1	0.5	38.8	93.0
SMC5370B	56.0	20	35.0	280	1	0.5	42.6	86.0
SMC5371B	60.0	20	40.0	350	1	0.5	45.5	79.0
SMC5372B	62.0	20	42.0	400	1	0.5	47.1	76.0
SMC5373B	68.0	20	44.0	500	1	0.5	51.7	70.0
SMC5374B	75.0	20	45.0	620	1	0.5	56.0	63.0
SMC5375B	82.0	15	65.0	720	1	0.5	62.2	58.0
SMC5376B	87.0	15	75.0	760	1	0.5	66.0	54.5
SMC5377B	91.0	15	75.0	760	1	0.5	69.2	52.5
SMC5378B	100	12	90.0	800	1	0.5	76.0	47.5
SMC5379B	110	12	125	1000	1	0.5	83.6	43.0
SMC5380B	120	10	170	1150	1	0.5	91.2	39.5
SMC5381B	130	10	190	1250	1	0.5	98.8	36.6
SMC5382B	140	8	230	1500	1	0.5	106	34.0

ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max DC Zener Current
	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$		I_{ZM}
	V	mA	Ω	Ω	mA	μA	V	mA
SMC5383B	150	8	330	1500	1	0.5	114	31.6
SMC5384B	160	8	350	1650	1	0.5	122	29.4
SMC5385B	170	8	380	1750	1	0.5	129	28.0
SMC5386B	180	5	430	1750	1	0.5	137	26.4
SMC5387B	190	5	450	1850	1	0.5	144	25.0
SMC5388B	200	5	480	1850	1	0.5	152	23.6

Note:

- $T_A = 25^\circ C$ unless otherwise noted
- Standard tolerance on the nominal Zener voltage: $\pm 5\%$
- The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method

CHARACTERISTIC CURVES

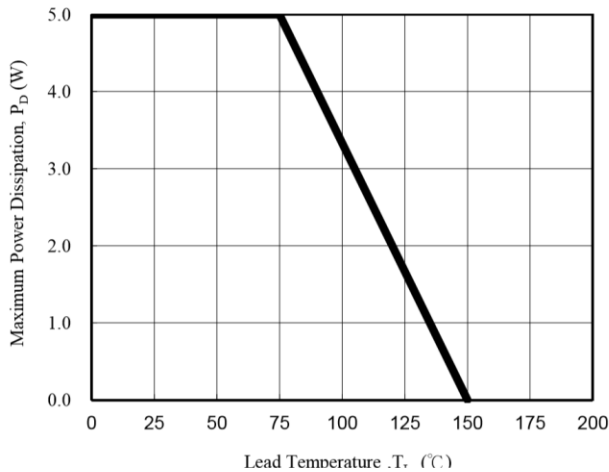


Fig. 1 - Power Temperature Derating Curve

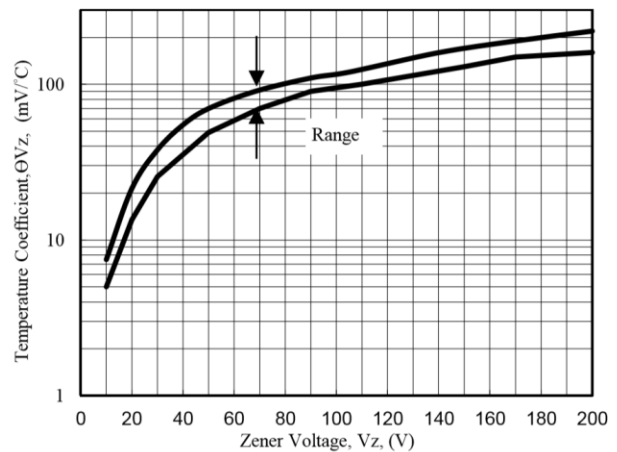


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

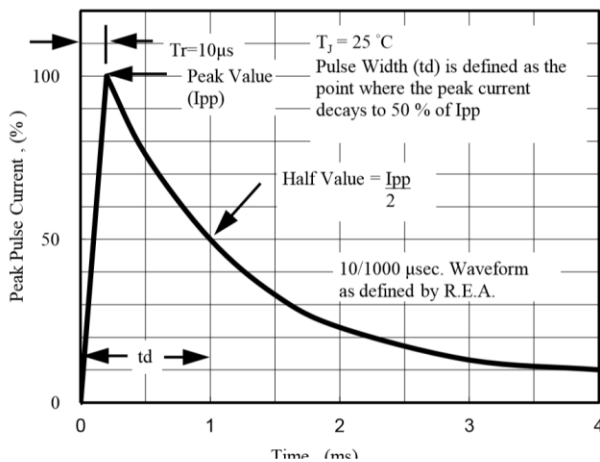


Fig. 3 - Pulse Waveform

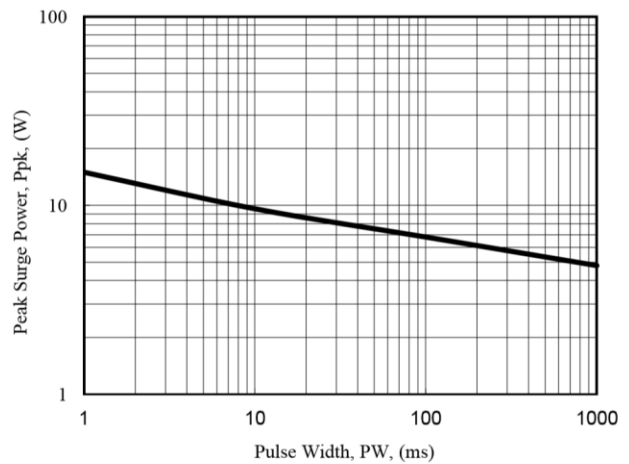


Fig. 4 - Maximum Surge Power

*Specifications subject to change without notice