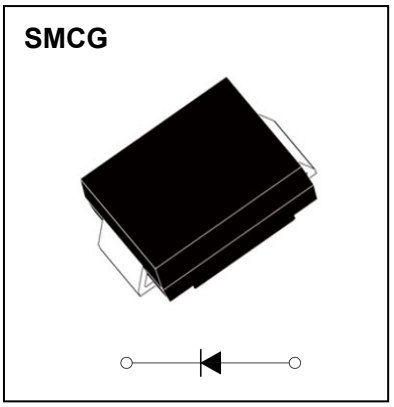
SMC5333B THRU SMC5388B

RoHS COMPLIANT

HALOGEN FREE

SMCG Plastic-Encapsulate Diodes

Zener Diodes



Features

- P_d 5.0W
- V_z 3.3V-200V
- Range 5%

Applications

- Stabilizing Voltage

Mechical Data

- Case:JEDEC DO-214AB molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Power dissipation	P_d	W	T_L=75℃	5.0
Zener current	I_Z	mA		P_V /V_Z
Maximum junction temperature	T_j	℃		-65 to +150
Storage temperature range	T_{stg}	℃		-65 to +150
Forward voltage	V_F	V	I_F=200mA	1.2

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Type (Note1)	Zener voltage V Z@IZT	IZT	Z ZT @IZT	Z ZK @IZK	I ZK	IR@VR	VR	@V(BR) I ZM @ 50℃ (Note3)
	V	mA	Ω	Ω	mA	μA	V	mA
SMC5333B	3.3	380	3	400	1	300	1.0	1440
SMC5334B	3.6	350	2.5	500	1	150	1.0	1320
SMC5335B	3.9	320	2	500	1	50	1.0	1220
SMC5336B	4.3	290	2	500	1	10	1.0	1100
SMC5337B	4.7	260	2	450	1	5	1.0	1010
SMC5338B	5.1	240	1.5	400	1	1	1.0	930
SMC5339B	5.6	220	1	400	1	1	2.0	856
SMC5340B	6.0	200	1	300	1	1	3.0	790
SMC5341B	6.2	200	1	200	1	1	4.0	765
SMC5342B	6.8	175	1	200	1	10	4.9	700
SMC5343B	7.5	175	1.5	200	1	10	5.4	630
SMC5344B	8.2	150	1.5	200	1	10	5.9	580
SMC5345B	8.7	150	2	200	1	10	6.3	545
SMC5346B	9.1	150	2	150	1	7.5	6.6	520
SMC5347B	10	125	2	125	1	5	7.2	475
SMC5348B	11	125	2.5	125	1	5	8	430
SMC5349B	12	100	2.5	125	1	2	8.6	395
SMC5350B	13	100	2.5	100	1	1	9.4	365
SMC5351B	14	100	2.5	75	1	1	10.1	340
SMC5352B	15	75	2.5	75	1	1	10.8	315
SMC5353B	16	75	2.5	75	1	1	11.5	295
SMC5354B	17	70	2.5	75	1	0.5	12.2	280
SMC5355B	18	65	2.5	75	1	0.5	13	265
SMC5356B	19	65	3	75	1	0.5	13.7	250
SMC5357B	20	50	3	75	1	0.5	14.4	237
SMC5358B	22	50	3.5	75	1	0.5	15.8	216
SMC5359B	24	50	3.5	100	1	0.5	17.3	198
SMC5360B	25	50	4	110	1	0.5	18	190
SMC5361B	27	50	5	120	1	0.5	19.4	176
SMC5362B	28	50	6	130	1	0.5	20.1	170
SMC5363B	30	40	8	140	1	0.5	21.6	158
SMC5364B	33	40	10	150	1	0.5	23.8	144
SMC5365B	36	30	11	160	1	0.5	25.9	132
SMC5366B	39	30	14	170	1	0.5	28.1	122
SMC5367B	43	30	20	190	1	0.5	31	110
SMC5368B	47	25	25	210	1	0.5	33.8	100
SMC5369B	51	25	27	230	1	0.5	36.7	93
SMC5370B	56	20	35	280	1	0.5	40.3	86
SMC5371B	60	20	40	350	1	0.5	43	79
SMC5372B	62	20	42	400	1	0.5	44.6	76
SMC5373B	68	20	44	500	1	0.5	49	70
SMC5374B	75	20	45	620	1	0.5	54	63
SMC5375B	82	15	65	720	1	0.5	59	58
SMC5376B	87	15	75	760	1	0.5	63	54.5
SMC5377B	91	15	75	760	1	0.5	65.5	52.5
SMC5378B	100	12	90	800	1	0.5	72	47.5
SMC5379B	110	12	125	1000	1	0.5	79.2	43
SMC5380B	120	10	170	1150	1	0.5	86.4	39.5
SMC5381B	130	10	190	1250	1	0.5	93.2	36.6
SMC5382B	140	8	230	1500	1	0.5	101	34
SMC5383B	150	8	330	1500	1	0.5	108	31.6
SMC5384B	160	8	350	1650	1	0.5	115	29.4
SMC5385B	170	8	380	1750	1	0.5	122	28
SMC5386B	180	5	430	1750	1	0.5	130	26.4
SMC5387B	190	5	450	1850	1	0.5	137	25
SMC5388B	200	5	480	1850	1	0.5	144	23.6

Notes :

1. Zener Tolerance: ±5% .
2. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK}.
3. The max zener current is not absolute , Please confirm that the product of the voltage and current should not exceed the rated Power dissipation in actual zener application.

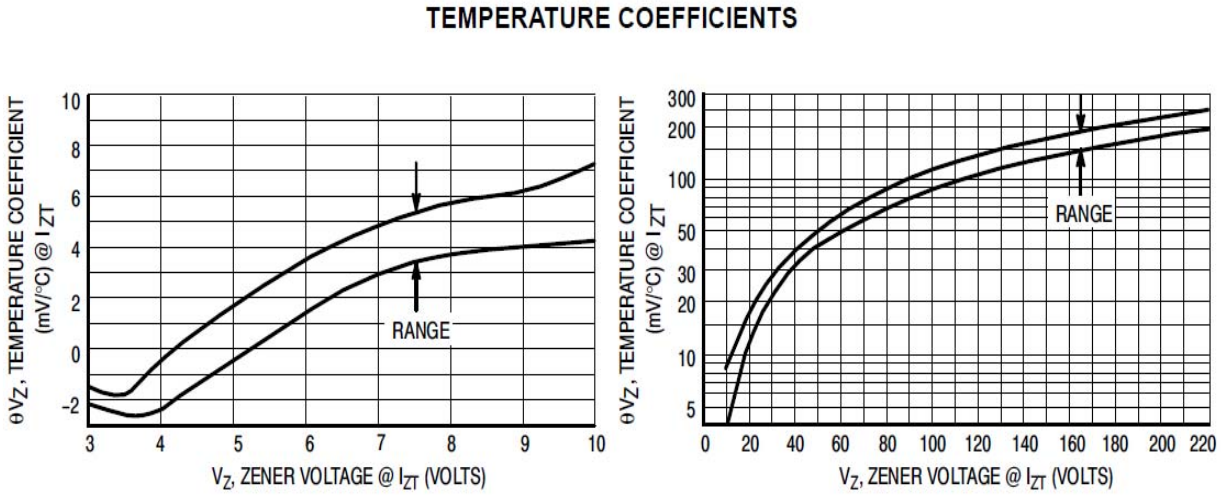


Figure 2. Temperature Coefficient-Range for Units 3 to 10 Volts

Figure 3. Temperature Coefficient-Range for Units 10 to 220 Volts

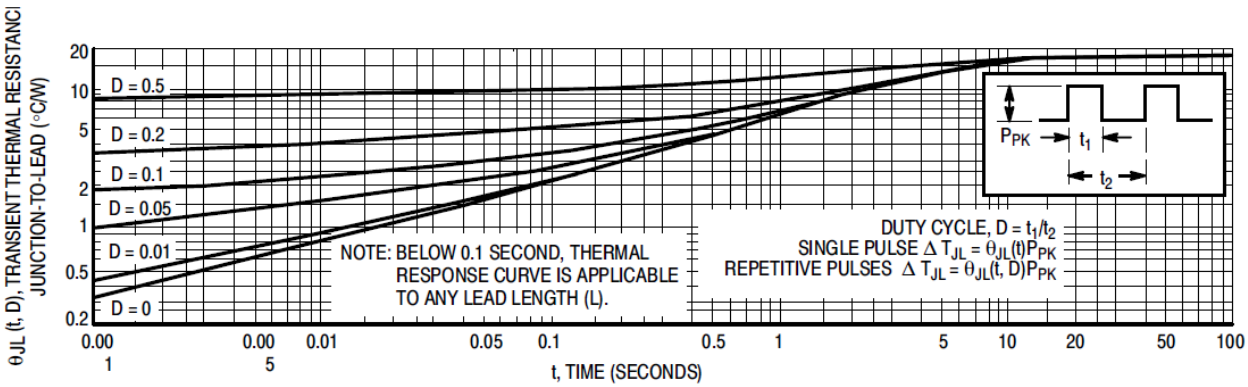


Figure 4. Typical Thermal Response
L, Lead Length = 3/8 Inch

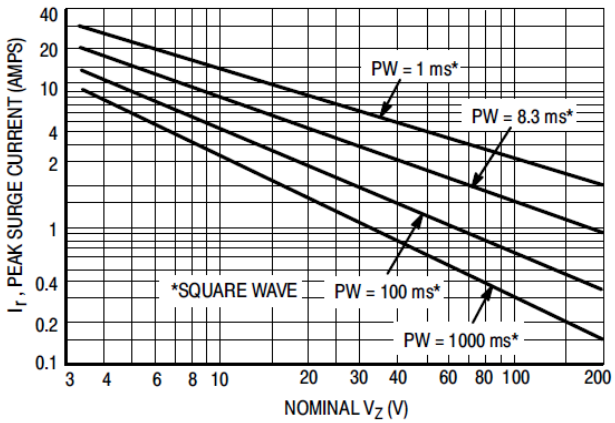


Figure 5. Maximum Non-Repetitive Surge Current versus Nominal Zener Voltage

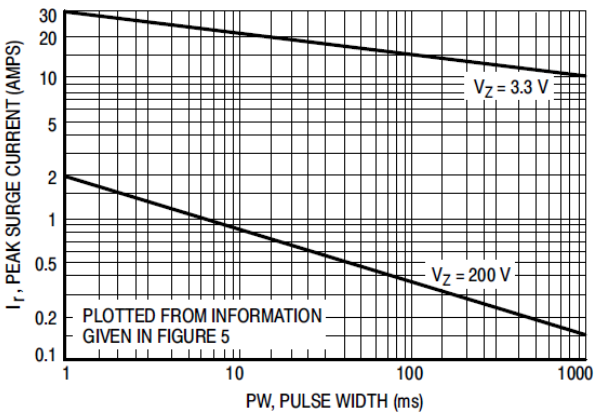


Figure 6. Peak Surge Current versus Pulse Width

Typical Characteristics

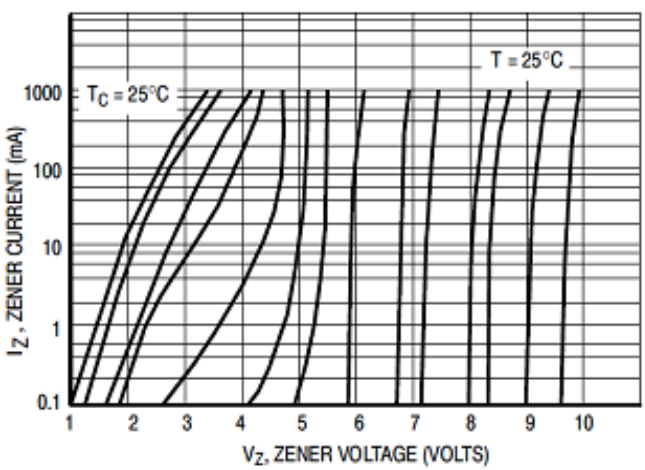


Figure 7. Zener Voltage versus Zener Current
V_Z = 3.3 thru 10 Volts

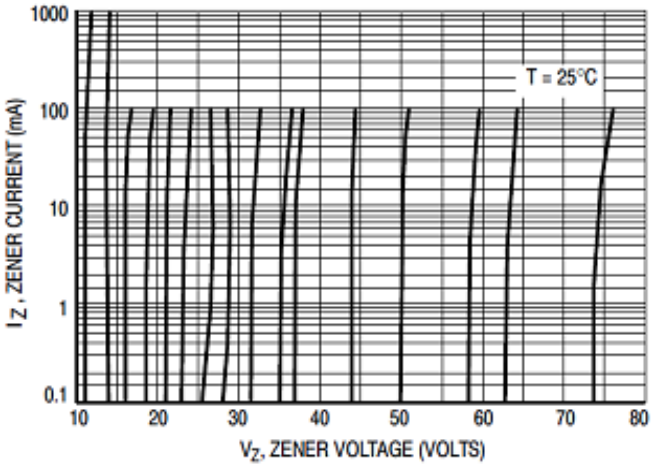


Figure 8. Zener Voltage versus Zener Current
V_Z = 11 thru 75 Volts

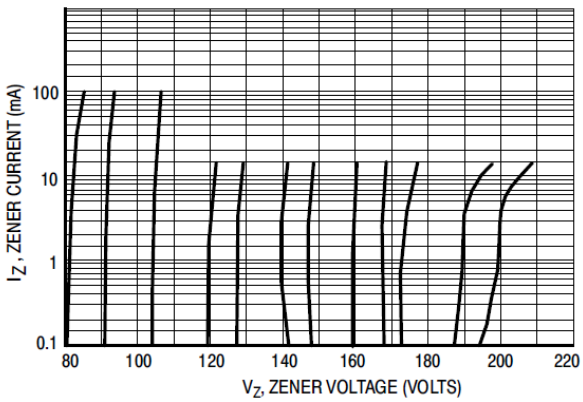
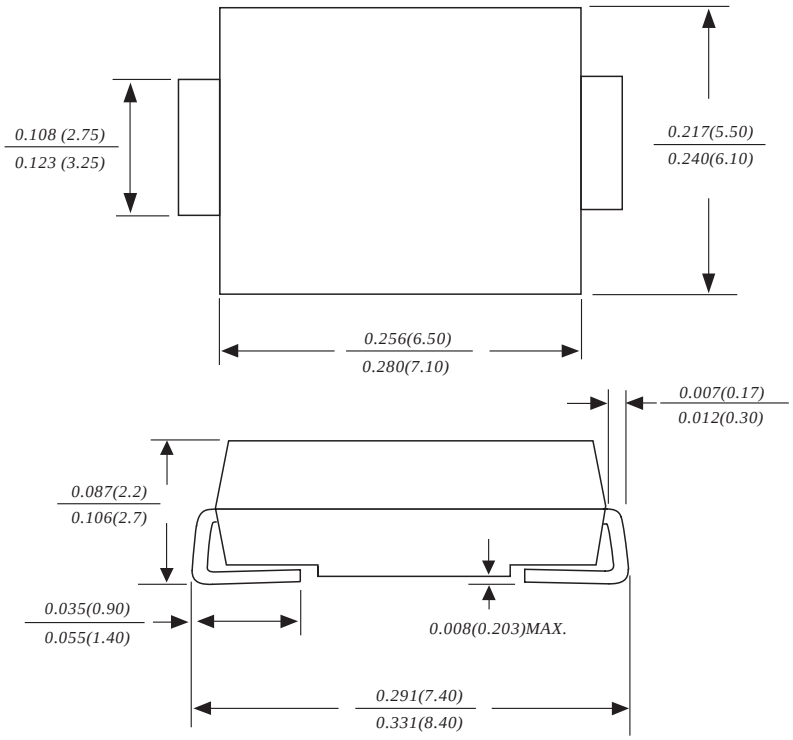


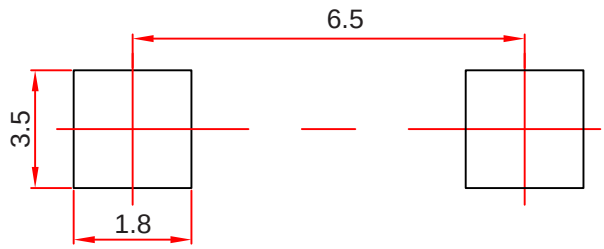
Figure 9. Zener Voltage versus Zener Current
V_Z = 82 thru 200 Volts

SMCG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMCG Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Ordering Information

Part Number	Package	Shipping Quantity
SMC5333B SMC5388B	SMCG	3000/tape&Reel

Marking Diagram

XX：From33 To 88

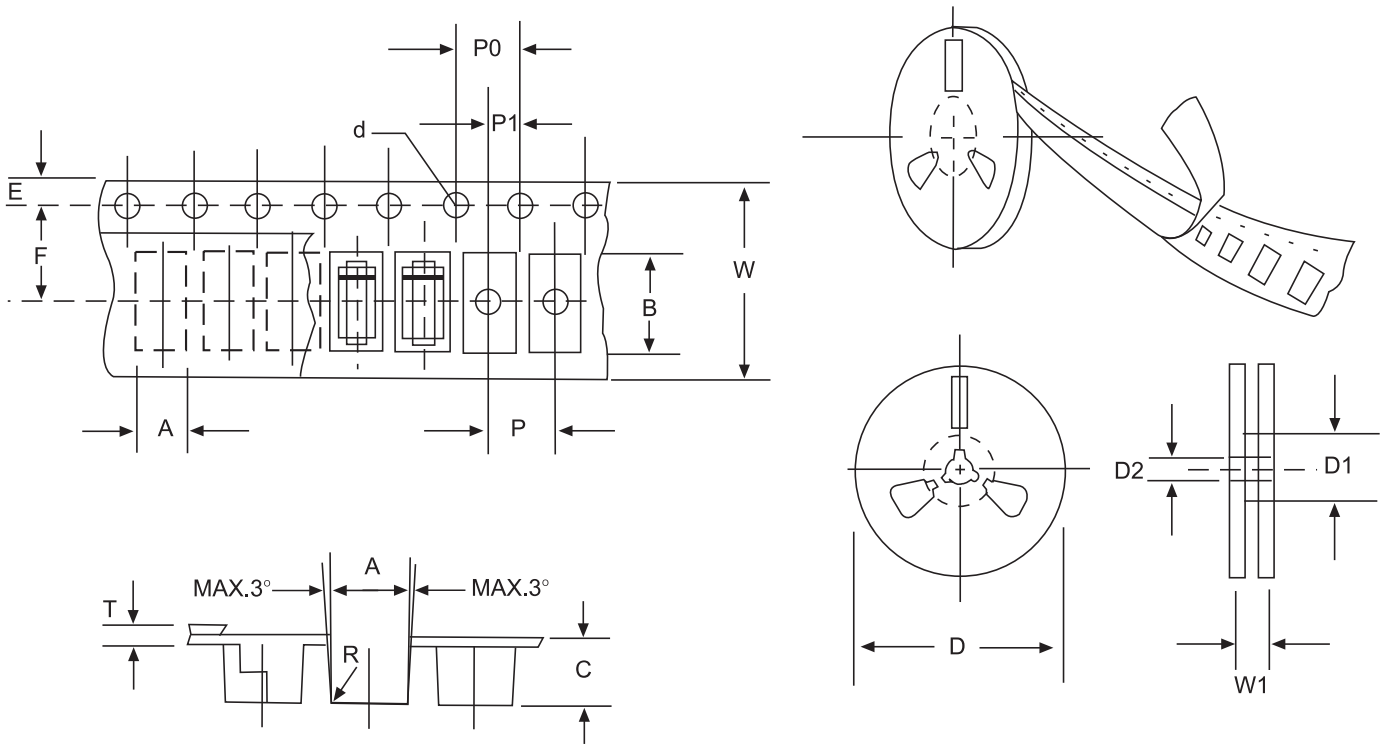


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMCG mm(inch)
Carrier width	A	6.05±0.1(0.238±0.004)
Carrier length	B	8.31±0.1(0.327±0.004)
Carrier depth	C	2.70±0.1(0.106±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	330±2.0(13±0.079)
Reel inner diameter	D1	75±1.0(2.95±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	7.65±0.05(0.301±0.002)
Punch hole pitch	P	8.0±0.1(0.315±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.3±0.1(0.012±0.004)
Tape width	W	16.0±0.2(0.630±0.008)
Reel width	W1	24.0±2.0(0.945±0.079)

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.