

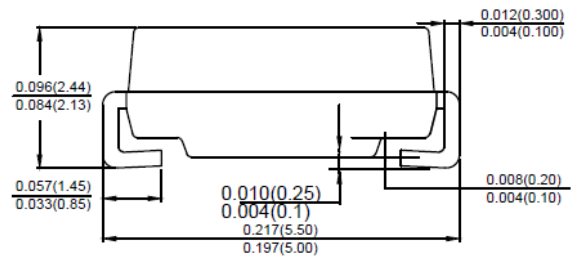
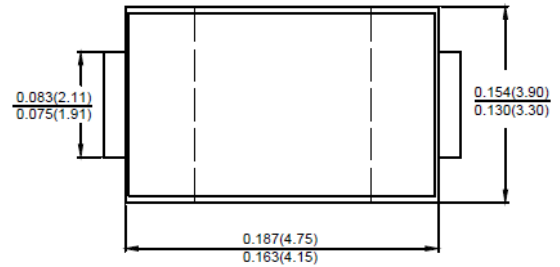
# SMBJ5333A --- SMBJ5388A

5W Surface Mount Silicon Zener Diodes

## Features

- Zener Voltage 3.3V to 200V.
- High Surge Current Capability
- Low profile package.
- Plastic material has UL flammability classification 94V-O
- RoHS compliant in lead-free versions

**SMB/DO-214AA**



Dimensions in inches and (millimeters)

## Mechanical Data

- CASE: JEDEC DO-214AA Molded Plastic
- Mounting Position: Any
- Polarity: by cathode band
- Terminal: solderable per MIL-STD-750, Method 2026

## Maximum Ratings & Thermal Characteristics (Ratings at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	5 ( note 1)	W
Operating and Storage Temperatures	$T_J, T_{STG}$	-55 to + 150	°C
Thermal Resistance	$R_{\theta JL}$	25	°C/W

### Notes:

1. Lead temperature at 25°C =  $T_L$  at mounting plane. Derate linearly above 25°C to zero power at 150°C
2. Mounted on 5.0mm<sup>2</sup> (0.03mm thick) Copper Pads to each terminal.

## Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Part Number	Zener voltage		Test current	Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max.DC current
	VZ /V		IZT	ZZT	IZK	ZZK	IR(Max.)	VR	IZM
	Vz(MIN)	Vz(MAX)	m A	Ω	m A	Ω	μAdc	V	m A
SMBJ5333A	3.135	3.465	380	3.0	1	400	300	1.0	1440
SMBJ5334A	3.420	3.780	350	2.5	1	500	150	1.0	1320
SMBJ5335A	3.705	4.095	320	2.0	1	500	50	1.0	1220
SMBJ5336A	4.085	4.515	290	2.0	1	500	10	1.0	1100
SMBJ5337A	4.465	4.935	260	2.0	1	450	50	1.0	1010
SMBJ5338A	4.845	5.355	240	1.5	1	400	1	1.0	930
SMBJ5339A	5.320	5.880	220	1.0	1	400	1	2.0	856
SMBJ5340A	5.7	6.3	200	1.0	1	300	1	3.0	790
SMBJ5341A	5.890	6.510	200	1.0	1	200	1	4.0	765
SMBJ5342A	6.460	7.140	175	1.0	1	200	150	4.9	700
SMBJ5343A	7.125	7.875	175	1.5	1	200	150	5.4	630
SMBJ5344A	7.790	8.610	150	1.5	1	200	150	5.9	580
SMBJ5345A	8.265	9.135	150	2.0	1	200	150	6.3	545
SMBJ5346A	8.645	9.555	150	2.0	1	150	150	6.6	520
SMBJ5347A	9.500	10.500	125	2.0	1	125	150	7.2	475
SMBJ5348A	10.450	11.550	125	2.5	1	125	150	8.0	430
SMBJ5349A	11.400	12.600	100	2.5	1	125	2.0	8.6	395
SMBJ5350A	12.350	13.650	100	2.5	1	100	1.0	9.4	365
SMBJ5351A	14.250	15.750	100	2.5	1	75	1.0	10.1	340
SMBJ5352A	15.200	16.800	75	2.5	1	75	1.0	10.8	315
SMBJ5353A	17.100	18.900	75	2.5	1	75	1.0	11.5	295
SMBJ5354A	19.000	21.000	70	2.5	1	75	0.5	12.2	280
SMBJ5355A	20.900	23.100	65	2.5	1	75	0.5	13.0	265
SMBJ5356A	22.800	25.200	65	8.0	1	75	0.5	13.7	250
SMBJ5357A	25.650	28.350	65	3.0	1	75	0.5	14.4	237
SMBJ5358A	28.500	31.500	50	3.5	1	75	0.5	15.8	216
SMBJ5359A	31.350	34.650	50	3.5	1	100	0.5	17.3	198
SMBJ5360A	23.75	26.25	50	4.0	1	110	0.5	18.0	190
SMBJ5361A	34.200	37.800	50	5.0	1	120	0.5	19.4	176
SMBJ5362A	37.050	40.950	50	6.0	1	130	0.5	20.1	170
SMBJ5363A	40.850	45.150	40	8.0	1	140	0.5	21.6	158
SMBJ5364A	44.650	49.350	40	10	1	150	0.5	23.8	144
SMBJ5365A	48.450	53.550	30	11	1	160	0.5	25.9	132

Part Number	Zener voltage		Test current	Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max.DC current
	VZ /V		IZT	ZZT	IZK	ZZK	IR(Max.)	VR	IZM
	Vz(MIN)	Vz(MAX)	m A	$\Omega$	m A	$\Omega$	$\mu$ Adc	V	m A
SMBJ5366A	53.200	58.800	30	14	1	170	0.5	28.1	122
SMBJ5367A	58.900	65.100	30	20	1	190	0.5	31.0	110
SMBJ5368A	64.600	71.400	25	25	1	210	0.5	33.8	100
SMBJ5369A	71.250	78.8	25	27	1	230	0.5	36.7	93.0
SMBJ5370A	77.900	86.1	20	35	1	280	0.5	40.3	86.0
SMBJ5371A	57	63	20	40	1	350	0.5	43.0	79.0
SMBJ5372A	86.450	95.6	20	42	1	400	0.5	44.6	76.0
SMBJ5373A	95.000	105.0	20	44	1	500	0.5	49.0	70.0
SMBJ5374A	104.500	115.5	20	45	1	620	0.5	54.0	63.0
SMBJ5375A	114.000	126.0	15	65	1	720	0.5	59.0	58.0
SMBJ5376A	82.65	91.35	15	75	1	760	0.5	63.0	54.5
SMBJ5377A	86.45	95.55	15	75	1	760	0.5	65.5	52.5
SMBJ5378A	95	105	12	90	1	800	0.5	72.0	47.5
SMBJ5379A	104.5	115.5	12	125	1	1000	0.5	79.2	43.0
SMBJ5380A	114	126	10	170	1	1150	0.5	86.4	39.5
SMBJ5381A	123.500	136.5	10	190	1	1250	0.5	93.2	36.6
SMBJ5382A	133	147	8	230	1	1500	0.5	101	34.0
SMBJ5383A	142.500	157.5	8	330	1	1500	0.5	108	31.6
SMBJ5384A	152.000	168.0	8	350	1	1650	0.5	115	29.4
SMBJ5385A	161.5	178.5	8	380	1	1750	0.5	122	28.0
SMBJ5386A	171.000	189.0	5	430	1	1750	0.5	130	26.4
SMBJ5387A	180.5	199.5	5	450	1	1850	0.5	137	25.0
SMBJ5388A	190.000	210.0	5	480	1	1850	0.5	144	23.6

### Typical Characteristics

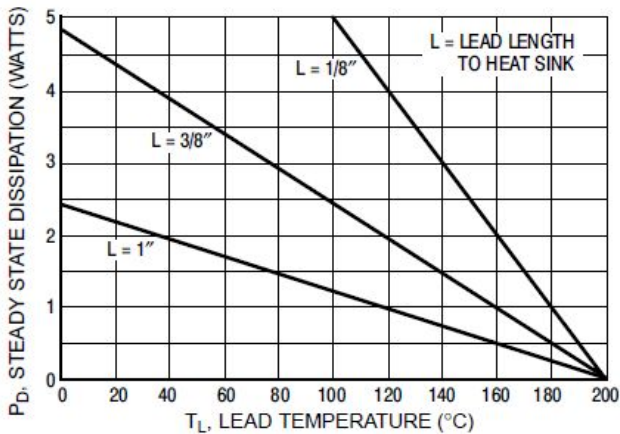


Figure 1. Power Temperature Derating Curve

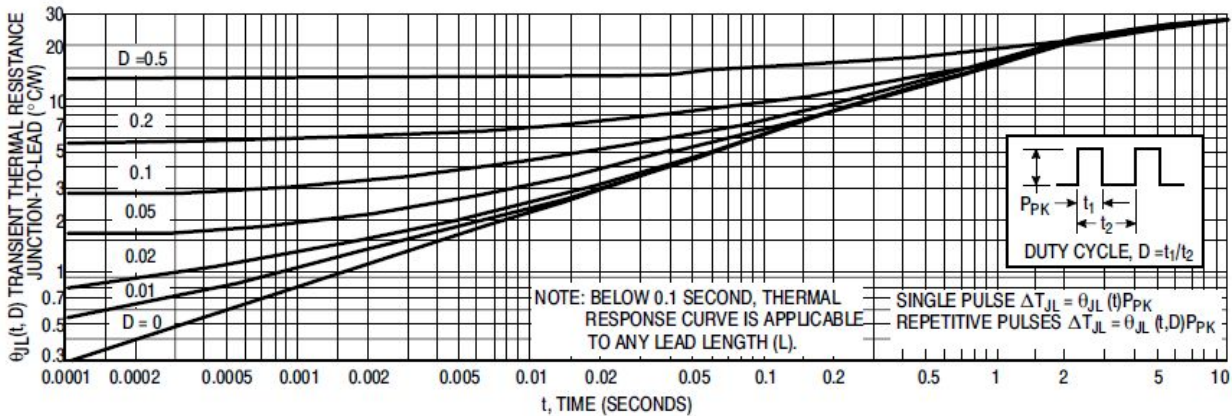


Figure 2. Typical Thermal Response L, Lead Length = 3/8 Inch

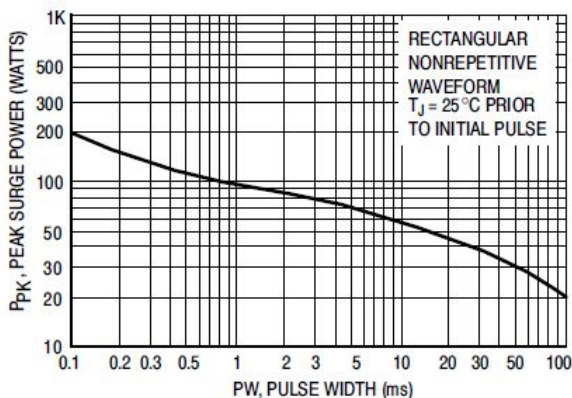


Figure 3. Maximum Surge Power

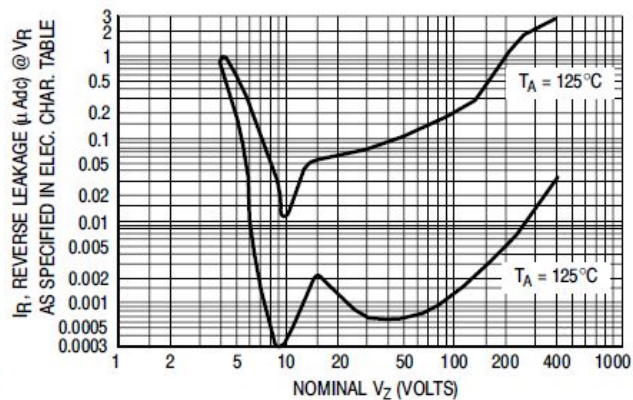


Figure 4. Typical Reverse Leakage