1SMB5913A-1SMB5956A

Vz : 3.3 - 200 Volts

PD : 3.0 Watts

Features

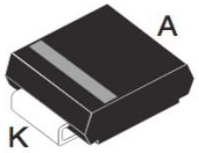
- Complete Voltage Range 3.3 to 200 Volts
- High peak reverse power dissipation
- Flat handling surface for accurate placement
- Low leakage current
- RoHS compliant package

Mechanical Data

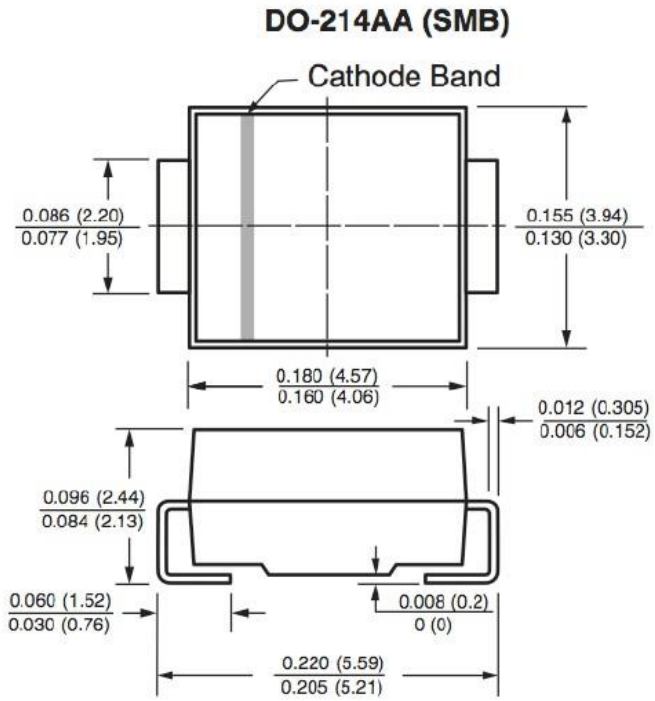
- Case : SMB Molded plastic
- Epoxy : UL94V-0 rate flame retardant
- Lead : Lead Formed for Surface Mount
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.93 gram

Packing & Order Information

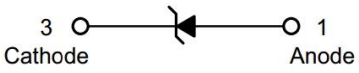
3,000/Reel



RoHS COMPLIANT



Graphic symbol



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Symbol	Parameter	Value	Unit
PD	Maximum Steady State Power Dissipation at TL = 75 °C Measured at Zero Lead Length Derate Above 75 °C	30 40	W mW/°C
RθJL	Thermal Resistance From Junction to Lead	25	°C/W
PD	Maximum Steady State Power Dissipation at TA = 25 °C Measured at Zero Lead Length Derate Above 75 °C	550 4.4	W mW/°C
RθJA	Thermal Resistance From Junction to Ambient	226	°C/W
VF	Maximum Forward Voltage at IF = 200 mA	1.5	V
TJ	Junction Temperature Range	-65 to +150	°C
Tstg	Storage Temperature Range	-65 to +150	°C

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Vz : 3.3 - 200 Volts

PD : 3.0 Watts

ELECTRICAL CHARACTERISTICS (Rating at 25ºC ambient temperature unless otherwise specified)

TYPE	Nominal Zener Voltage		Maximum Reverse Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	VZ @ IZT	IZT	ZZT @ IZT	ZZK @ IZK	IZK	IR @ VR		IZM
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMB5913A	3.3	113.6	10	500	1.0	100	1.0	454
1SMB5914A	3.6	104.2	9.0	500	1.0	75	1.0	416
1SMB5915A	3.9	96.1	7.5	500	1.0	25	1.0	384
1SMB5916A	4.3	87.2	6.0	500	1.0	5.0	1.0	348
1SMB5917A	4.7	79.8	5.0	500	1.0	5.0	1.5	319
1SMB5918A	5.1	73.5	4.0	350	1.0	5.0	2.0	294
1SMB5919A	5.6	66.9	2.0	250	1.0	5.0	3.0	267
1SMB5920A	6.2	60.5	2.0	200	1.0	5.0	4.0	241
1SMB5921A	6.8	55.1	2.5	200	1.0	5.0	5.2	220
1SMB5922A	7.5	50.0	3.0	400	0.5	5.0	6.0	200
1SMB5923A	8.2	45.7	3.5	400	0.5	5.0	6.5	182
1SMB5924A	9.1	41.2	4.0	500	0.5	5.0	7.0	164
1SMB5925A	10	37.5	4.5	500	0.25	5.0	8.0	150
1SMB5926A	11	34.1	5.5	550	0.25	1.0	8.4	136
1SMB5927A	12	31.2	6.5	550	0.25	1.0	9.1	125
1SMB5928A	13	28.8	7.0	550	0.25	1.0	9.9	115
1SMB5929A	15	25.0	9.0	600	0.25	1.0	11.4	100
1SMB5930A	16	23.4	10	600	0.25	1.0	12.2	93
1SMB5931A	18	20.	12	650	0.25	1.0	13.7	83
1SMB5932A	20	818.7	14	650	0.25	1.0	15.2	75
1SMB5933A	22	17.0	17.5	650	0.25	1.0	16.7	68
1SMB5934A	24	15.6	19	700	0.25	1.0	18.2	62
1SMB5935A	27	13.9	23	700	0.25	1.0	20.6	55
1SMB5936A	30	12.5	26	750	0.25	1.0	22.8	50
1SMB5937A	33	11.4	33	800	0.25	1.0	25.1	45
1SMB5938A	36	10.4	38	850	0.25	1.0	27.4	41
1SMB5939A	39	9.6	45	900	0.25	1.0	29.7	38
1SMB5940A	43	8.7	53	950	0.25	1.0	32.7	34
1SMB5941A	47	8.0	67	1000	0.25	1.0	35.8	31
1SMB5942A	51	7.3	70	1100	0.25	1.0	38.8	29

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Vz : 3.3 - 200 Volts

PD : 3.0 Watts

ELECTRICAL CHARACTERISTICS (Rating at 25ºC ambient temperature unless otherwise specified)

TYPE	Nominal Zener Voltage		Maximum Reverse Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	VZ @ IZT	IZT	ZZT @ IZT	ZZK @ IZK	IZK	IR @ VR		IZM
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMB5943A	56	6.7	86	1300	0.25	1.0	42.6	26
1SMB5944A	62	6.0	100	1500	0.25	1.0	47.1	24
1SMB5945A	68	5.5	120	1700	0.25	1.0	51.7	22
1SMB5946A	75	5.0	140	2000	0.25	1.0	56.0	20
1SMB5947A	82	4.6	160	2500	0.25	1.0	62.2	18
1SMB5948A	91	4.1	200	3000	0.25	1.0	69.2	16
1SMB5949A	100	3.7	250	3100	0.25	1.0	76.0	15
1SMB5950A	110	3.4	300	4000	0.25	1.0	83.6	13
1SMB5951A	120	3.1	380	4500	0.25	1.0	91.2	12
1SMB5952A	130	2.9	450	5000	0.25	1.0	98.8	11
1SMB5953A	150	2.5	600	6000	0.25	1.0	114.0	10
1SMB5954A	160	2.3	700	6500	0.25	1.0	121.6	9.0
1SMB5955A	180	2.1	900	7000	0.25	1.0	136.8	8.0
1SMB5956A	200	1.9	1200	8000	0.25	1.0	152.0	7.0

Note :

(1) Suffix " A " indicates ± 10% tolerance, suffix " B " indicates ± 5.0% tolerance.

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Vz : 3.3 - 200 Volts

PD : 3.0 Watts

■RATING AND CHARACTERISTIC CURVES (1.5KE6.8C SERIES)

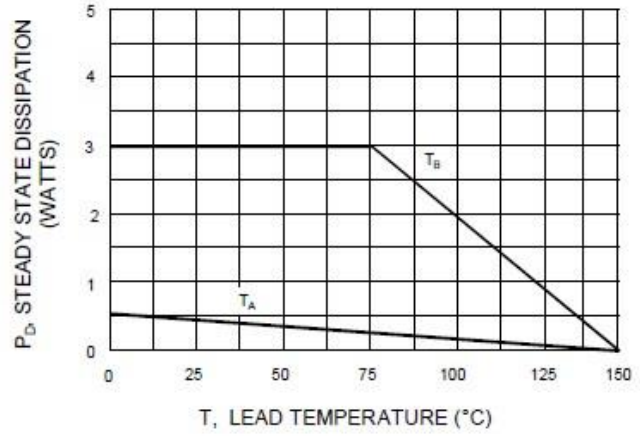


FIG.1 - POWER TEMPERATURE DERATING CURVE

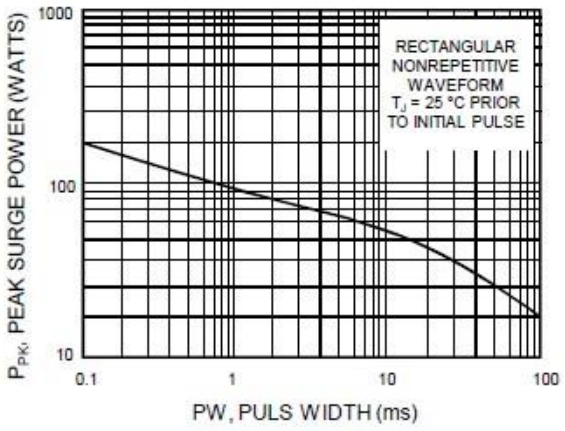


FIG.2 - MAXIMUM SURGE POWER

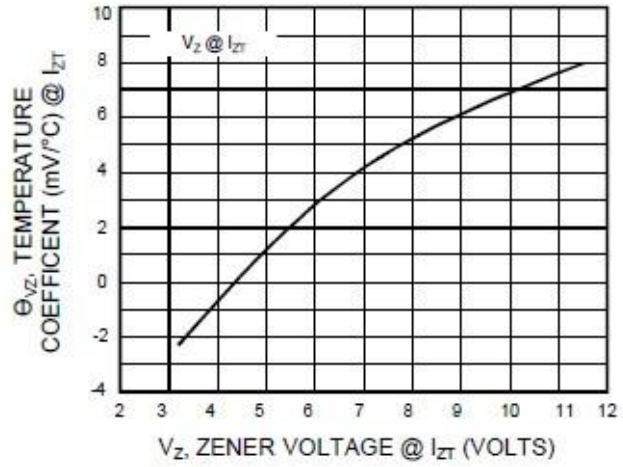


FIG.3 -TEMPERATURE COEFFICIENT RANGES UNITS TO 12 VOLTS

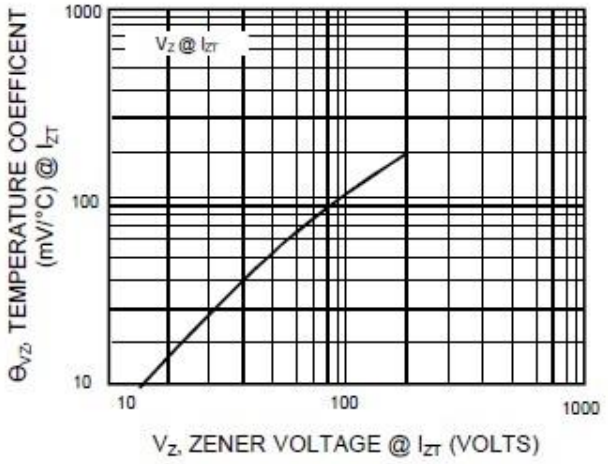


FIG.4 - TEMPERATURE COEFFICIENT RANGES UNITS 10 TO 400 VOLTS

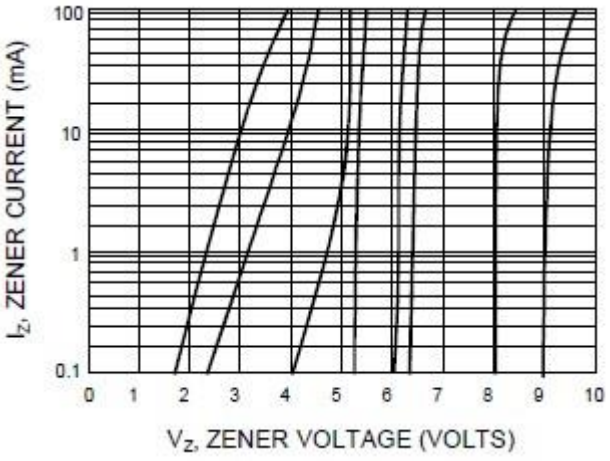


FIG.5 -ZENER VOLTAGE VS. ZENER CURRENT VZ = 3.3 thru 10 VOLTS

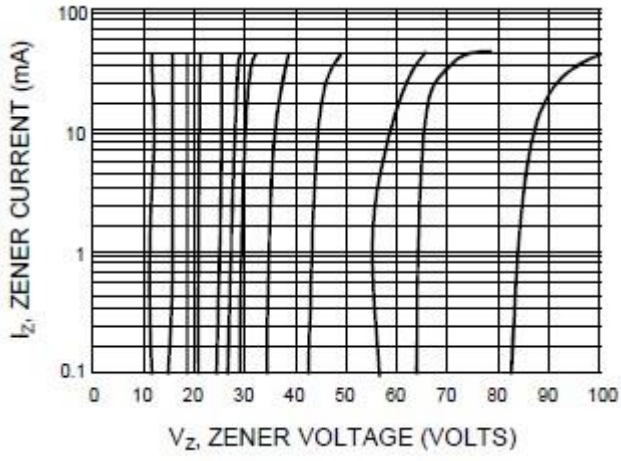


FIG.6 -ZENER VOLTAGE VS. ZENER CURRENT VZ = 12 thru 82 VOLTS

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Vz : 3.3 - 200 Volts

PD : 3.0 Watts

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