表面安装稳压二极管

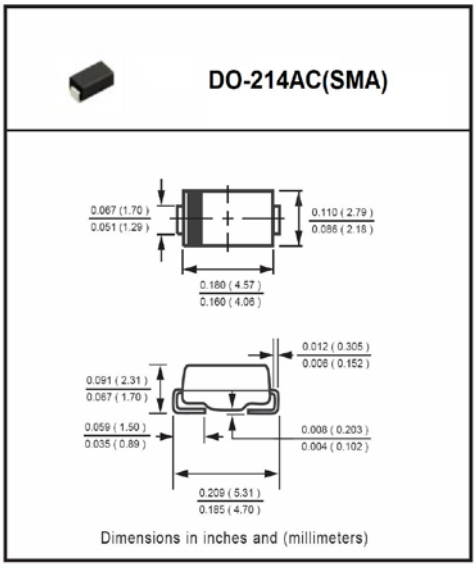
稳压电压3.3--68 V

功率1.5 W

Surface Mount Zener Rectifiers

Reverse Voltage 3.3 to 68 V

Power 1.5 W



Features

- Plastic package has Underwriters Laboratory Flammability Classification 94 V-0
- For surface mounted applications
- Low Zener impedance
- Low regulation factor
- High temperature soldering guaranteed: 260 °C/10 seconds at terminal
- Lead and body according with RoHS standard
- Standard voltage tolerance is 10 %, Suffix A ± 5 %

Mechanical Data

- Case: Molded plastic body
- Terminals: Solder plated
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Absolute Maximum Ratings T_{amb} = 25 °C, unless otherwise specified

Parameter	Test Conditions	Symbol	Value	Unit
Power dissipation (Note 1)	T_L=75℃	P_D	1.5	W
Power dissipation (Note 2)	T_A=75℃		0.5	W

Thermal Characteristics T_{amb} = 25 °C, unless otherwise specified

Parameter	SYMBOL	LIMIT	Unit
Typical thermal resistance junction-to-lead (Note 1)	RθJL	50	°C/W
Typical thermal resistance junction-to-ambient (Note 2)	RθJA	250	°C/W

Maximum Thermal Resistance T_{amb} = 25 °C, unless otherwise specified

Parameter	Test Conditions	Symbol	Value	Unit
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	–65...+150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. 1 in square copper pad, FR−4 board.
2. FR−4 Board, using minimum recommended footprint.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 1.5 V Max. @ I_F = 200 mA for all types)

Device* (Note 3)	**Device Marking**	**Zener Voltage** (Note 4)				**Zener Impedance**			**Leakage Current**		
		V_Z (Volts)			**@ I_{ZT}**	**Z_{ZT} @ I_{ZT}**	**Z_{ZK} @ I_{ZK}**		**I_R @ V_R**		**I_{ZM}**
		Min	**Nom**	**Max**	**mA**	g	g	**mA**	**µA**	**Volts**	**mA(dc)**
1SMA5913B	813B	3.13	3.3	3.47	113.6	10	500	1.0	50	1.0	455
1SMA5914B	814B	3.42	3.6	3.78	104.2	9.0	500	1.0	35.5	1.0	417
1SMA5915B	815B	3.70	3.9	4.10	96.1	7.5	500	1.0	12.5	1.0	385
1SMA5916B	816B	4.08	4.3	4.52	87.2	6.0	500	1.0	2.5	1.0	349
1SMA5918B	817B	4.46	4.7	4.94	79.8	5.0	500	1.0	2.5	1.5	319
1SMA5918B	818B	4.84	5.1	5.36	73.5	4.0	350	1.0	2.5	2.0	294
1SMA5919B	819B	5.32	5.6	5.88	66.9	2.0	250	1.0	2.5	3.0	268
1SMA5920B	820B	5.89	6.2	6.51	60.5	2.0	200	1.0	2.5	4.0	242
1SMA5921B	821B	6.46	6.8	7.14	55.1	2.5	200	1.0	2.5	5.2	221
1SMA5922B	822B	7.12	7.5	7.88	50	3.0	400	0.5	2.5	6.0	200
1SMA5923B	823B	7.79	8.2	8.61	45.7	3.5	400	0.5	2.5	6.5	183
1SMA5924B	824B	8.64	9.1	9.56	41.2	4.0	500	0.5	2.5	7.0	165
1SMA5925B	825B	9.5	10	10.5	37.5	4.5	500	0.25	2.5	8.0	150
1SMA5926B	826B	10.45	11	11.55	34.1	5.5	550	0.25	0.5	8.4	136
1SMA5927B	827B	11.4	12	12.6	31.2	6.5	550	0.25	0.5	9.1	125
1SMA5928B	828B	12.35	13	13.65	28.8	7.0	550	0.25	0.5	9.9	115
1SMA5929B	829B	14.25	15	15.75	25	9.0	600	0.25	0.5	11.4	100
1SMA5930B	830B	15.2	16	16.8	23.4	10	600	0.25	0.5	12.2	94
1SMA5931B	831B	17.1	18	18.9	20.8	12	650	0.25	0.5	13.7	83
1SMA5932B	832B	19	20	21	18.7	14	650	0.25	0.5	15.2	75
1SMA5933B	833B	20.9	22	23.1	17	17.5	650	0.25	0.5	16.7	68
1SMA5934B	834B	22.8	24	25.2	15.6	19	700	0.25	0.5	18.2	63
1SMA5935B	835B	25.65	27	28.35	13.9	23	700	0.25	0.5	20.6	56
1SMA5936B	836B	28.5	30	31.5	12.5	26	750	0.25	0.5	22.8	50
1SMA5937B	837B	31.35	33	34.65	11.4	33	800	0.25	0.5	25.1	45
1SMA5938B	838B	34.2	36	37.8	10.4	38	850	0.25	0.5	27.4	42
1SMA5939B	839B	37.05	39	40.95	9.6	45	900	0.25	0.5	29.7	38
1SMA5940B	840B	40.85	43	45.15	8.7	53	950	0.25	0.5	32.7	35
1SMA5941B	841B	44.65	47	49.35	8.0	67	1000	0.25	0.5	35.8	32
1SMA5942B	842B	48.45	51	53.55	7.3	70	1100	0.25	0.5	38.8	29
1SMA5943B	843B	53.2	56	58.8	6.7	86	1300	0.25	0.5	42.6	27
1SMA5944B	844B	58.9	62	65.1	6.0	100	1500	0.25	0.5	47.1	24
1SMA5945B	845B	64.6	68	71.4	5.5	120	1700	0.25	0.5	51.7	22

Note: 3. Tolerance and Voltage Regulation Designation – The type number listed indicates a tolerance of ±5%.
4. V_Z limits are to be guaranteed at thermal equilibrium.

RATING AND TYPICAL CHARACTERISTIC CURVES (T_A = 25°C)

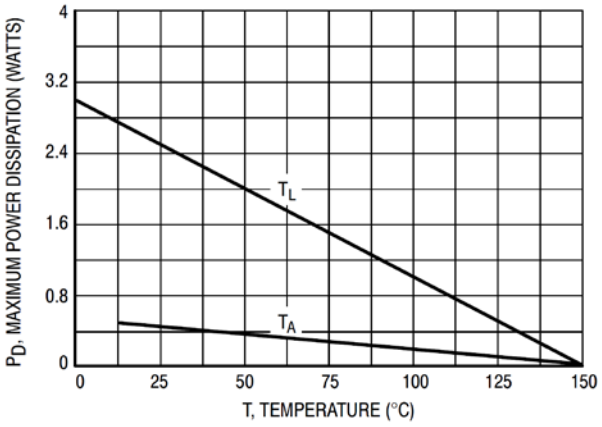


Figure 1. Steady State Power Derating

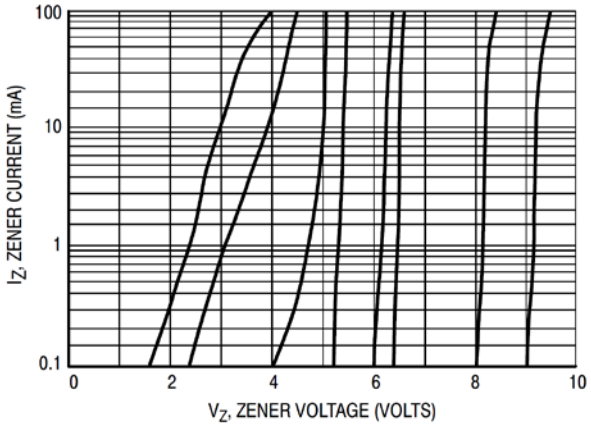


Figure 2. V_Z – 3.3 thru 10 Volts

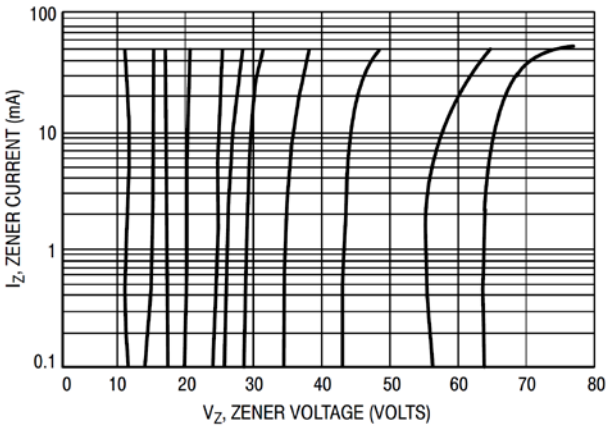


Figure 3. V_Z = 12 thru 68 Volts

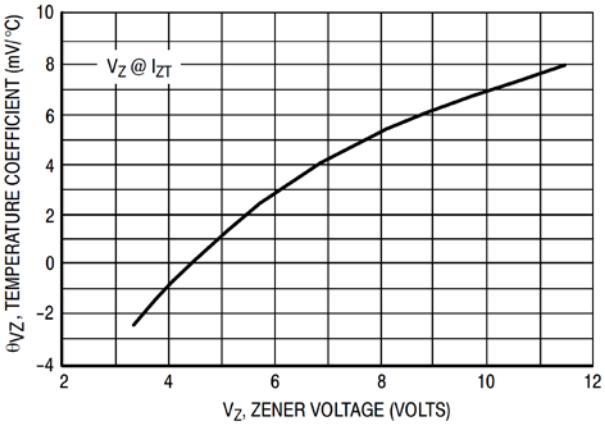


Figure 4. Zener Voltage – 3.3 to 12 Volts

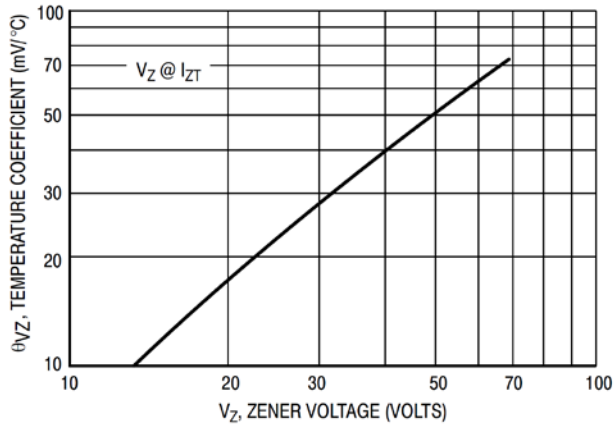


Figure 5. Zener Voltage – 12 to 68 Volts

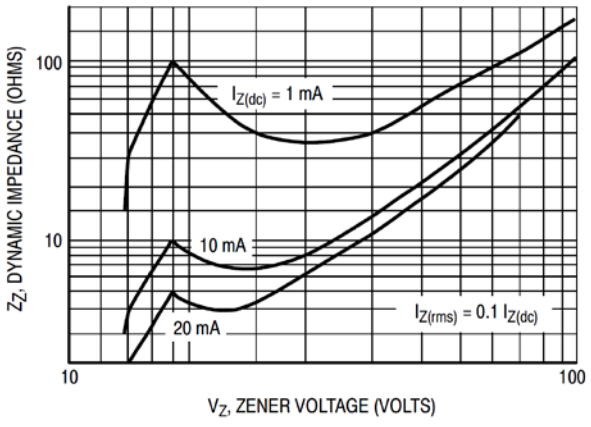


Figure 6. Effect of Zener Voltage