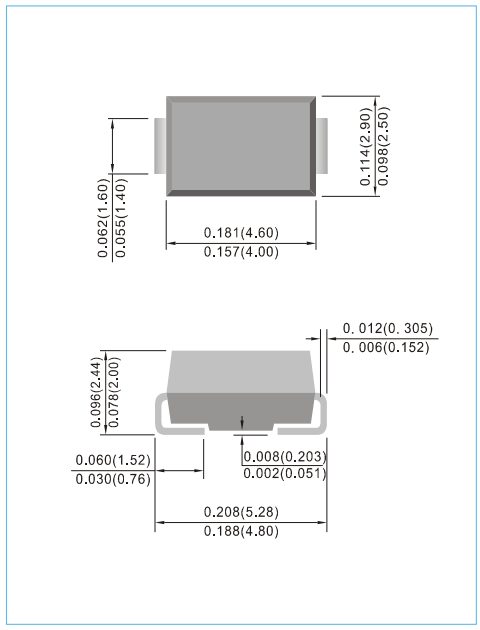
1SMA5921~1SMA5945

SURFACE MOUNT SILICON ZENER DIODE

VOLTAGE 6.8 to 68 Volt **POWER** 1.5 Watt

SMA / DO-214AC Unit : inch(mm)

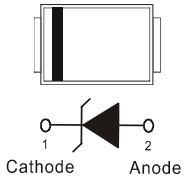


FEATURES

- For surface mounted applications in order to optimize board space
- Glass passivated junction
- Low inductance
- Typical I_R less than 1μA above 12V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: JEDEC DO-214AC, Molded plastic over passivated junction
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounces, 0.0679 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Pwak Pulse Power Dissipation on T_L=75°C (Notes A) Derate above 75°C	P_D	1.5 20	W atts mW/ °C
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (Notes B)	I_{FSM}	10	Amps
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to + 150	°C

NOTES :

A.Mounted on 5mm² (0.013mm thick) land areas.

B.Measured on 8.3ms, and single half sine-wave or equivalent square wave ,duty cycle=4 pulses per minute maximum.

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Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Max. Reverse Leakage Current		Marking Code
	V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R	V_R	
	Nom V	Min V	Max V	Ω	mA	Ω	mA	μA	V	
1SMA5921	6.8	6.46	7.14	3	55.1	200	1	5	5.2	921A
1SMA5922	7.5	7.13	7.88	3	50	400	0.5	5	6	922A
1SMA5923	8.2	7.79	8.61	4	45.7	400	0.5	5	6.5	923A
1SMA5924	9.1	8.65	9.56	4	41.2	500	0.5	5	7	924A
1SMA5925	10	9.5	10.5	5	37.5	500	0.25	5	8	925A
1SMA5926	11	10.45	11.55	6	34.1	550	0.25	1	8.4	926A
1SMA5927	12	11.4	12.6	7	31.2	550	0.25	1	9.1	927A
1SMA5928	13	12.35	13.65	7	28.8	550	0.25	1	9.9	928A
1SMA5929	15	14.25	15.75	9	25	600	0.25	1	11.4	929A
1SMA5930	16	15.2	16.8	10	23.4	600	0.25	1	12.2	930A
1SMA5931	18	17.1	18.9	12	20.8	650	0.25	1	13.7	931A
1SMA5932	20	19	21	14	18.7	650	0.25	1	15.2	932A
1SMA5933	22	20.9	23.1	18	17	650	0.25	1	16.7	933A
1SMA5934	24	22.8	25.2	19	15.6	700	0.25	1	18.2	934A
1SMA5935	27	25.65	28.35	23	13.9	700	0.25	1	20.6	935A
1SMA5936	30	28.5	31.5	26	12.5	750	0.25	1	22.8	936A
1SMA5937	33	31.35	34.65	33	11.4	800	0.25	1	25.1	937A
1SMA5938	36	34.2	37.8	38	10.4	850	0.25	1	27.4	938A
1SMA5939	39	37.05	40.95	45	9.6	900	0.25	1	29.7	939A
1SMA5940	43	40.85	45.15	53	8.7	950	0.25	1	32.7	940A
1SMA5941	47	44.65	49.35	67	8	1000	0.25	1	35.8	941A
1SMA5942	51	48.45	53.55	70	7.3	1100	0.25	1	38.8	942A
1SMA5943	56	53.2	58.8	86	6.7	1300	0.25	1	42.6	943A
1SMA5944	62	58.9	65.1	100	6	1500	0.25	1	47.1	944A
1SMA5945	68	64.6	71.4	120	5.5	1700	0.25	1	51.7	945A

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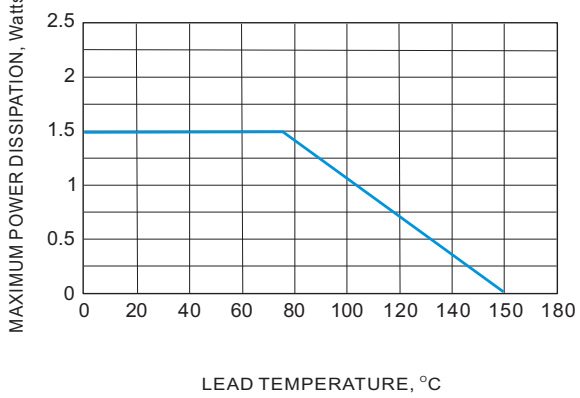


Fig.1 Steady State Power Derating

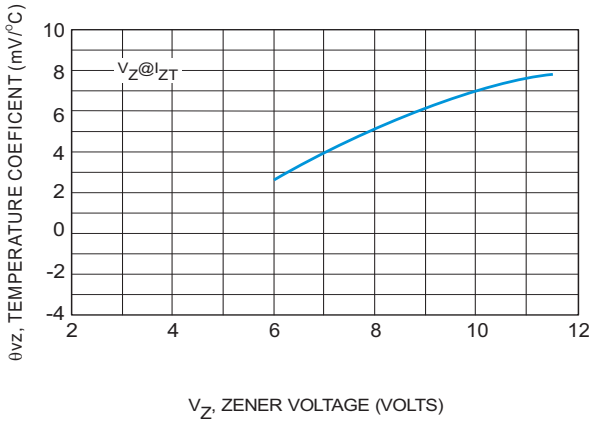


Fig.2 Zener Voltage - to 12 volts

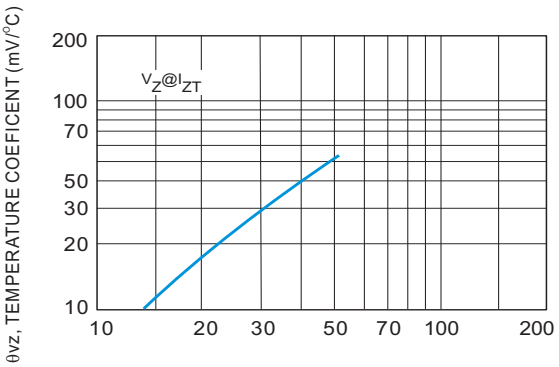


Fig.3 Zener Voltage - 14 to 200 Volts

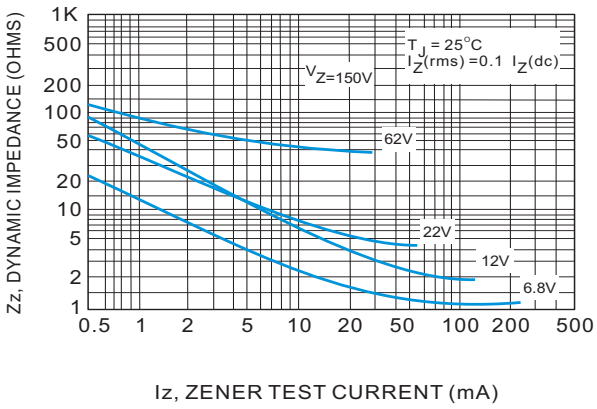


Fig.4 Effect of Zener Current

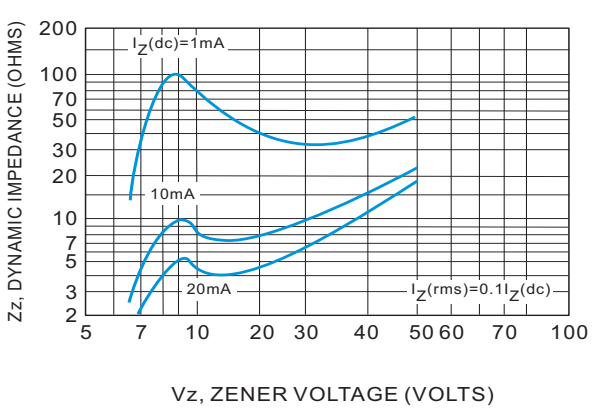


Fig.5 Effect of Zener Voltage

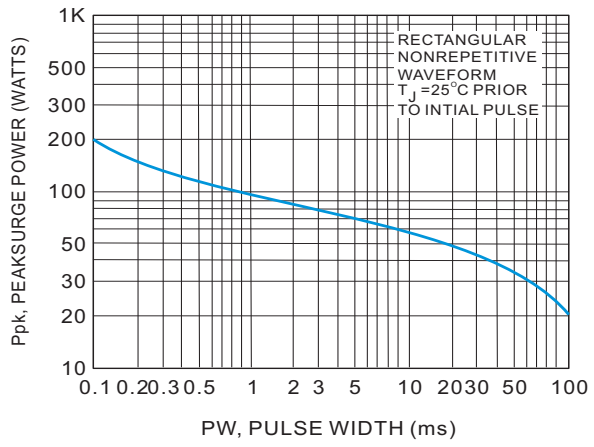


Fig.6 Maximum Surge Power

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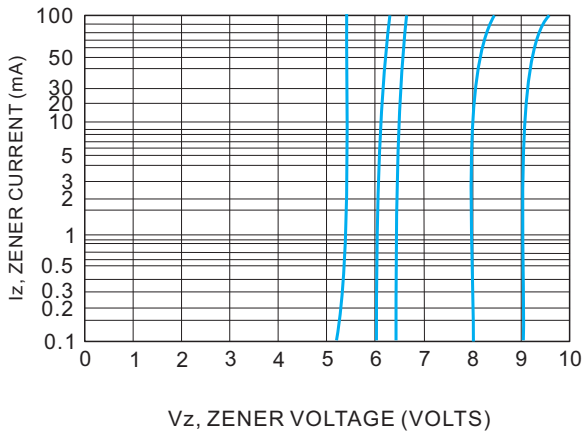


Fig.7 Vz = 6.8 thru 10 Volts

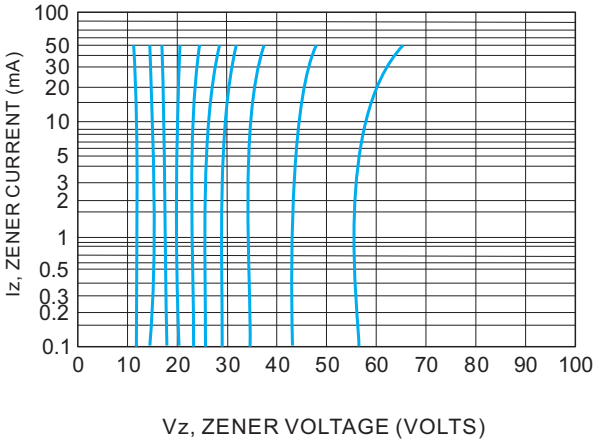


Fig.8 Vz = 12 thru 82 Volts

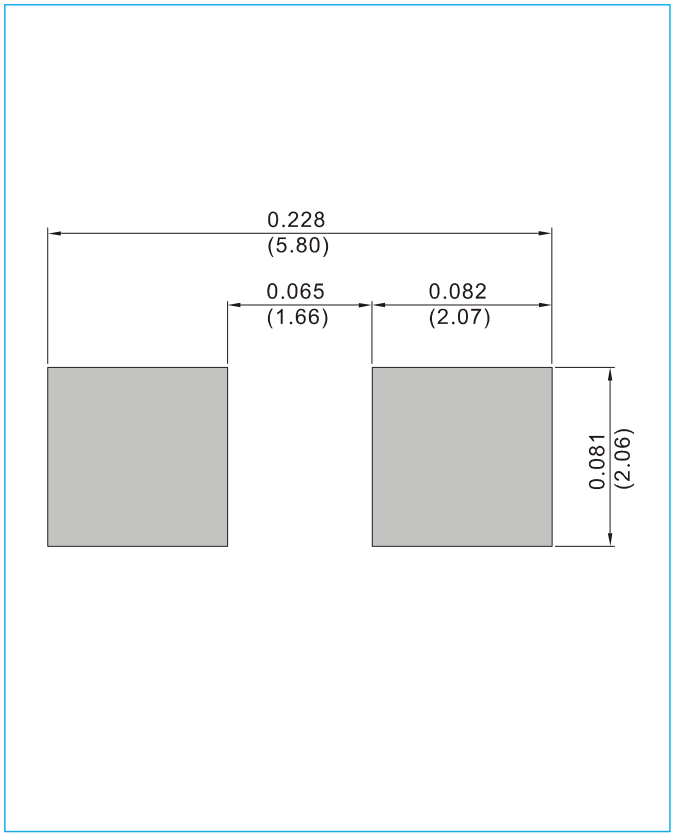
NOTE 3. ZENER VOLTAGE (Vz) MEASUREMENT
Nominal zener voltage is measured with the device function in thermal equilibrium with ambient temperature at 25°C

NOTE 4. ZENER IMPEDANCE (Zz) DERIVATION
Zzt and Zzk are measured by dividing the ac voltage drop across the device by the accurrent applied. The specified limits are for Iz(ac) = 0.1 Iz, (dc) with the ac freqency = 60Hz

1SMA5921~1SMA5945

MOUNTING PAD LAYOUT

SMA / DO-214AC Unit：inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 7.5K per 13" plastic Reel

  T/R - 1.8K per 7" plastic Reel

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