

DATA SHEET

1SMB5926~1SMB5939

GLASS PASSIVATED JUNCTION SILICON ZENER DIODES

VOLTAGE	11 to 39 Volts	POWER	1.5 Watts
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SMB/DO-214AA	Unit: inch (mm)
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FEATURES

- Low profile package
- Built-in strain relief
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Both normal and Pb free product are available :
Normal : 80~95% Sn, 5~20% Pb
Pb free: 99% Sn above can meet Rohs environment substance directive request

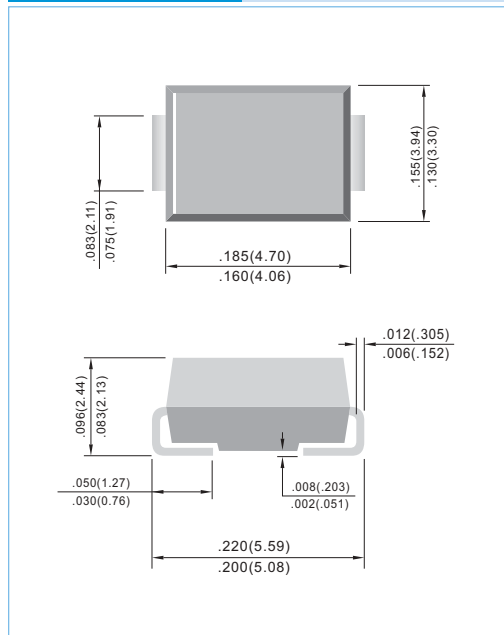
MECHANICAL DATA

Case: JEDEC DO-214AA, Molded plastic over passivated junction
Terminals: Solder plated, solderable per MIL-STD-202G, Method 208

Polarity: Indicated by cathode band

Standard packaging: 12mm tape (EIA-481)

Weight: 0.003 ounce, 0.093 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Sym bol	Value	Units
DC Power Dissipation on TA=75 °C Measure at Zero Lead Length Derate above 75°C (NOTE 1)	P _D	1.5	Watts
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

NOTES:

1. Mounted on 5.0mm² (.013mm thick) land areas.



Part Number	Marking Code	V _Z @ I _{ZT}			Maximum Zener Impedance				Maximum Leakage Current		Package
					Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R		
		Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
1.5 Watt ZENER DIODES											
1SMB5926	926B	11.0	10.5	11.6	5.5	34.1	550	0.25	1.0	8.4	SMB
1SMB5927	927B	12.0	11.4	12.6	6.5	31.2	550	0.25	1.0	9.1	SMB
1SMB5928	928B	13.0	12.4	13.7	7.0	28.8	550	0.25	1.0	9.9	SMB
1SMB5929	929B	15.0	14.3	15.8	9.0	25.0	600	0.25	1.0	11.4	SMB
1SMB5930	930B	16.0	15.2	16.8	10.0	23.4	600	0.25	1.0	12.2	SMB
1SMB5931	931B	18.0	17.1	18.9	12.0	20.8	650	0.25	1.0	13.7	SMB
1SMB5932	932B	20.0	19.0	21.0	14.0	18.7	650	0.25	1.0	15.2	SMB
1SMB5933	933B	22.0	20.9	23.1	17.5	17.0	650	0.25	1.0	16.7	SMB
1SMB5934	934B	24.0	22.8	25.2	19.0	15.6	700	0.25	1.0	18.2	SMB
1SMB5935	935B	27.0	25.7	28.4	23.0	13.9	700	0.25	1.0	20.6	SMB
1SMB5936	936B	30.0	28.5	31.5	26.0	12.5	750	0.25	1.0	22.8	SMB
1SMB5937	937B	33.0	31.4	34.7	33.0	11.4	800	0.25	1.0	25.1	SMB
1SMB5938	938B	36.0	34.2	37.8	38.0	10.4	850	0.25	1.0	27.4	SMB
1SMB5939	939B	39.0	37.1	41.0	45.0	9.6	900	0.25	1.0	29.7	SMB

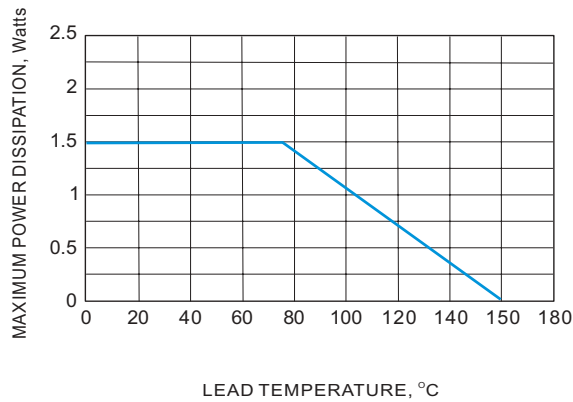


Fig.1 Steady State Power Derating

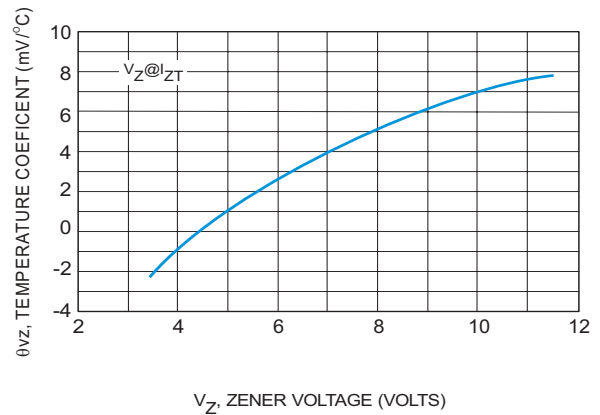


Fig.2 Temperature coefficient v.s. zener voltage, Vz(V)

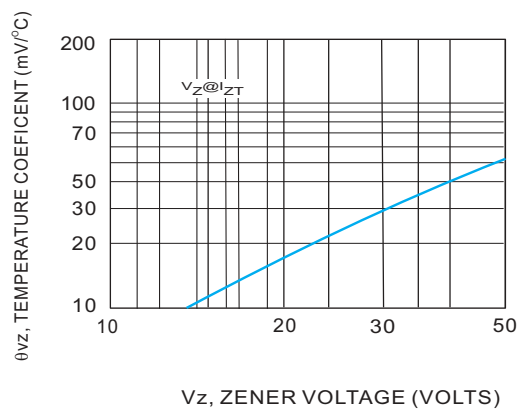


Fig.3 Temperature coefficient v.s. zener voltage, Vz(V)

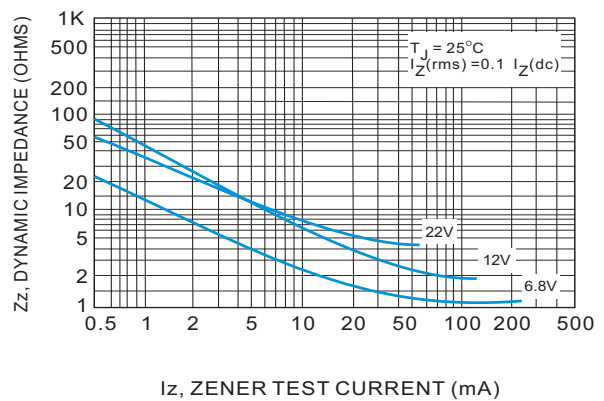


Fig.4 Zener impedance v.s. zener current

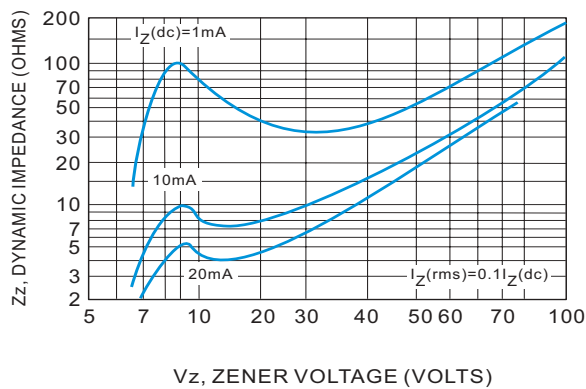


Fig.5 Zener impedance v.s. zener voltage

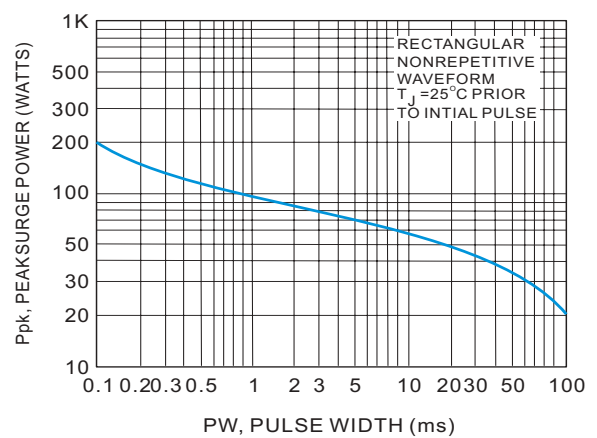
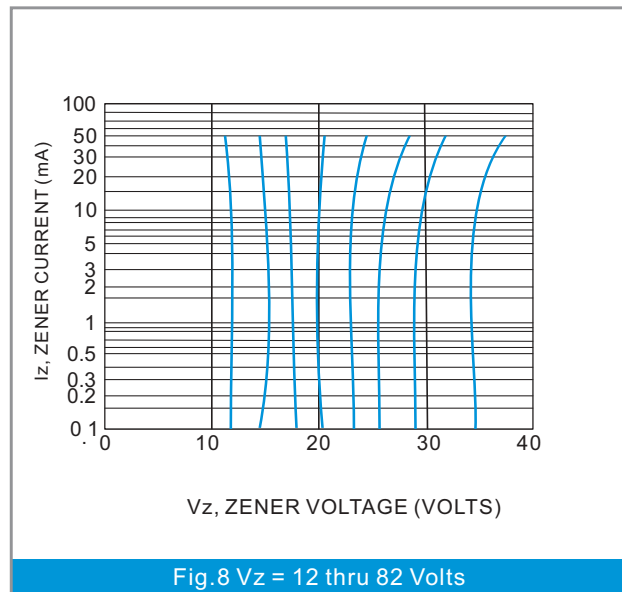
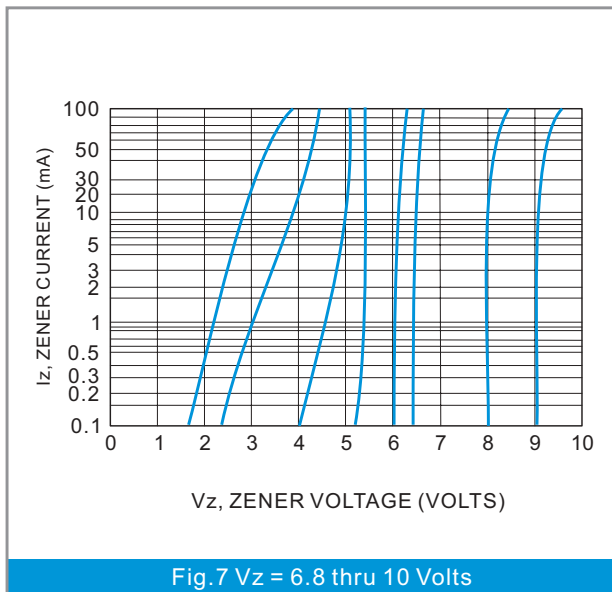


Fig.6 Maximum Surge Power



NOTE 3. ZENER VOLTAGE (V_z) MEASUREMENT

Nominal zener voltage is measured with the device function in thermal equilibrium with ambient temperature at 25°C

NOTE 4. ZENER IMPEDANCE (Z_z) DERIVATION

Z_{zt} and Z_{zk} are measured by dividing the ac voltage drop across the device by the accurent applied. The specified limits are for $I_z(ac) = 0.1 I_z, (dc)$ with the ac frequency = 60Hz