SURFACE MOUNT GALSS PASSIVATED ZENER DIODE

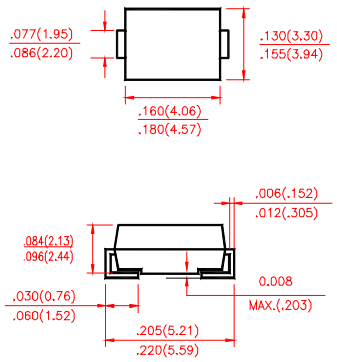
MZ1.5PB11V-34.1 THRU MZ1.5PB200V-1.9

Zener Voltage 11 to 200 Volts
Steady state Power 1.5 Watts

FEATURES

- For surface mounted applications in order to Optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Typical I_R less than 1 μ A above 11V
- High temperature soldering: 260℃/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Cass: JEDEC DO-214AA,molded plastic over passivated junction
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes positive end (cathode)
- Standard Packaging: 12mm tape (EIA-481)
- Weight: 0.003 ounces, 0.93 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25℃ ambient temperature unless otherwise specified

	Symbols	Value	Unit
DC Power Dissipation @ TL=75℃, Measure at Zero Lead Length (Note 1 Fig.1) Derate above 75℃	P_D	1.5 15	Watts mw/℃
Peak forward Surge Current 8.3ms single half sine/square wave Superimposed on rated load (JEDEC Method) (Notes 1.2)	I_{FSM}	10	Amps
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55to~+150	℃

Notes :

1. Mounted on 5.0mm^2(.013mm thick) land areas
2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

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Type	Device Marking Code	Nominal Zener Voltage Vz@Izt Volts (Note 1)	Test Current Izt mA	Max Zener Impedance (Note 2)			Max Reverse Leakage Current		Maximum DC Zener Current Izm mAdc
				Zzt@Izt Ohms	Zzk @ Ohms	Zzk @ mA	Ir @ μA	Vr @ Volts	
MZ1.0PB11V-34.1	11V-34.1	11	34.1	5.5	550	0.25	1	8.4	136
MZ1.0PB12V-31.2	12V-31.2	12	31.2	6.5	550	0.25	1	9.1	125
MZ1.0PB13V-28.8	13V-28.8	13	28.8	7	550	0.25	1	9.9	115
MZ1.0PB15V-25	15V-25	15	25	9	600	0.25	1	11.4	100
MZ1.0PB16V-23.4	16V-23.4	16	23.4	10	600	0.25	1	12.2	93
MZ1.0PB18V-20.8	18V-20.8	18	20.8	12	650	0.25	1	13.7	83
MZ1.0PB20V-18.7	20V-18.7	20	18.7	14	650	0.25	1	15.2	75
MZ1.0PB22V-17	22V-17	22	17	17.5	650	0.25	1	16.7	68
MZ1.0PB24V-15.6	24V-15.6	24	15.6	19	700	0.25	1	18.2	62
MZ1.0PB27V-13.9	27V-13.9	27	13.9	23	700	0.25	1	20.6	55
MZ1.0PB30V-12.5	30V-12.5	30	12.5	26	750	0.25	1	22.8	50
MZ1.0PB33V-11.4	33V-11.4	33	11.4	33	800	0.25	1	25.1	45
MZ1.0PB36V-10.4	36V-10.4	36	10.4	38	850	0.25	1	27.4	41
MZ1.0PB39V-9.6	39V-9.6	39	9.6	45	900	0.25	1	29.7	38
MZ1.0PB43V-8.7	43V-8.7	43	8.7	53	950	0.25	1	32.7	34
MZ1.0PB47V-8.0	47V-8.0	47	8	67	1000	0.25	1	35.8	31
MZ1.0PB51V-7.3	51V-7.3	51	7.3	70	1100	0.25	1	38.8	29
MZ1.0PB56V-6.7	56V-6.7	56	6.7	86	1300	0.25	1	42.6	26
MZ1.0PB62V-6.0	62V-6.0	62	6	100	1500	0.25	1	47.1	24
MZ1.0PB68V-5.5	68V-5.5	68	5.5	120	1700	0.25	1	51.7	22
MZ1.0PB75V-5.0	75V-5.0	75	5	140	2000	0.25	1	56	20
MZ1.0PB82V-4.6	82V-4.6	82	4.6	160	2500	0.25	1	62.2	18
MZ1.0PB91V-4.1	91V-4.1	91	4.1	200	3000	0.25	1	69.2	16
MZ1.0PB100V-3.7	100V-3.7	100	3.7	250	3100	0.25	1	76	15
MZ1.0PB110V-3.4	110V-3.4	110	3.4	300	4000	0.25	1	83.6	13
MZ1.0PB120V-3.1	120V-3.1	120	3.1	380	4500	0.25	1	91.2	12
MZ1.0PB130V-2.9	130V-2.9	130	2.9	450	5000	0.25	1	98.8	11
MZ1.0PB150V-2.5	150V-2.5	150	2.5	600	6000	0.25	1	114	10
MZ1.0PB160V-2.3	160V2.3	160	2.3	700	6500	0.25	1	121.6	9
MZ1.0PB180V-2.1	180V-2.1	180	2.1	900	7000	0.25	1	136.8	8
MZ1.0PB200V-1.9	200V-1.9	200	1.9	1200	8000	0.25	1	152	7

Notes:-

TOLERANCE AND VOLTAGE DESIGNATION Tolerance designation-The type numbers listed indicate a tolerance of ±5%

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RATING AND CHARACTERISTIC CURVES MZ1.5PB11V-34.1 THRU MZ1.5PB200V-1.9

FIG.1- STEADY STATE POWER DERATING

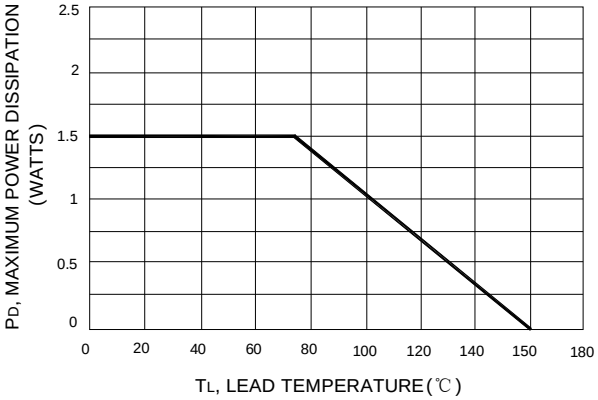

FIG.2- ZENER VOLTAGE-TO 12 VOLTS

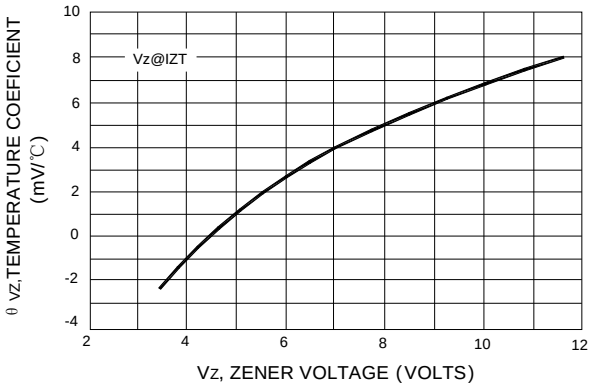

FIG.3- ZENER VOLTAGE-14 TO 200 VOLTS

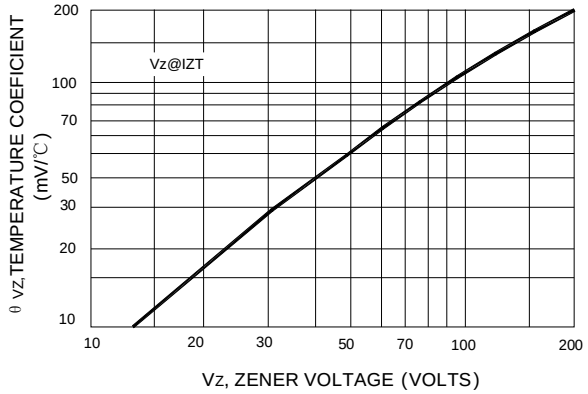

FIG.4- EFFECT OF ZENER CURRENT

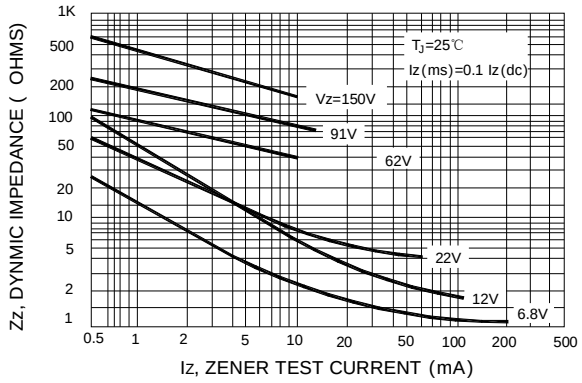

FIG.5- EFFECT OF ZENER VOLTAGE

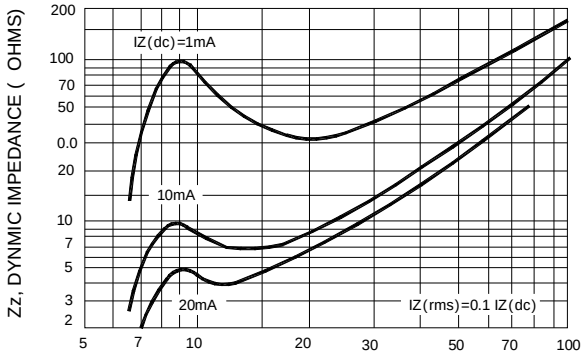

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FIG.6- Maximum Surge Power

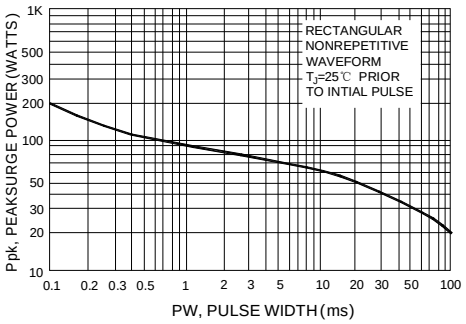
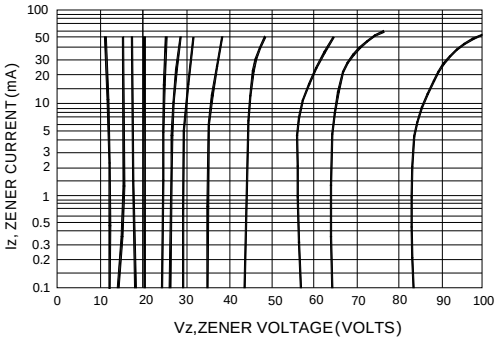


FIG.7- Vz=12 thru 82 Volts



NOTE 6. ZENER VOLTAGE (V_Z) MEASUREMENT
Nominal zener voltage is measured with the device function in thermal equilibrium with ambient temperature at 25℃

NOTE 7. ZENER IMPEDANCE (Zz) DERIVATION
Zzt anc 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