



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SURFACE MOUNT ZENER
SILICON PLANAR POWER ZENER DIODES
VOLTAGE RANGE 2.4V TO 75V

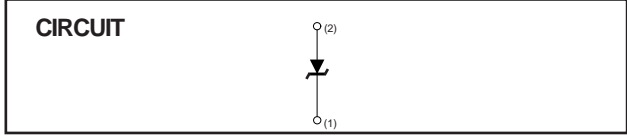
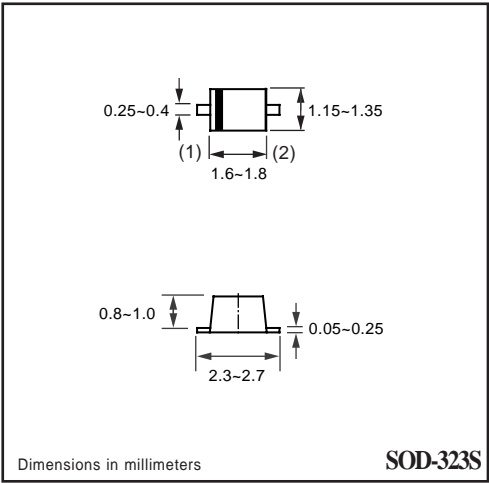
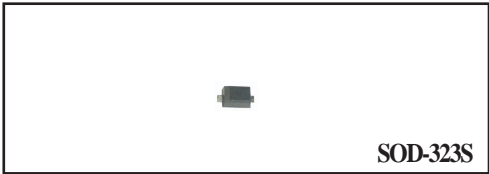
MMPZ5221BAGP
THRU
MMPZ5267BAGP

FEATURE

- * High temperature soldering type.
- * ESD rating of class 3(>16 kV) per human body model.
- * Silicon planar zener diodes.
- * Silicon-oxide passivated junction.
- * Low temperature coefficient voltage
- * 200 mW Rating on FR-4 or FR-5 Board

MECHANICAL

- * Void-free, Transfer-molded, Thermosetting plastic case
- * SOD-323S Packaging.
- * Cathode indicated by polarity band.
- * Mounting position: Any.



MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	VALUE	UNITS
Zener Current (see Table "Characteristics")	-	-	-
Max. Steady State Power Dissipation @ $T_A=25^\circ\text{C}$	P_D	200	mW
Max. Operating Temperature Range	T_J	-65 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	-	-	625	$^\circ\text{C/W}$
Max. Instantaneous Forward Voltage at $I_F=10\text{mA}$	V_F	-	-	1.0	Volts

- NOTES :
1. The JEDEC type numbers listed have a standard tolerance on the normal zener voltage of $\pm 10\%$, Suffix B= $\pm 5\%$.
 2. The zener impedance is derived from 1KHz AC voltage, which results when an AC current having an RMS value equal to 10% of DC zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK} . Zener impedance is measured at two points to insure a sharp knee on the breakdown curve to eliminate unstable units.
 3. Valid provided that electrodes at distance of 10mm from case are kept ambient temperature.
 4. Measured under thermal equilibrium and DC test conditions.
 5. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I_{ZT} , per JEDEC registration.

2011-08

ELECTRICAL CHARACTERISTICS (MMPZ5221BAGP THRU MMPZ5267BAGP)

TYPE	Zener Voltage VZ (V) @ IZT			Test current	Maximum Zener impedance			Maximum reverse leakage current	
	Min	Nom	Max		ZZT at IZT (Ω)	Zzk (Ω)	at Izk (mA)	IR (uA)	at VR (V)
	Volts	Volts	Volts	IZT(mA)					
MMPZ5221BAGP	2.28	2.4	2.52	5	100	564	1	45	1
MMPZ5223BAGP	2.57	2.7	2.84	5	100	564	1	18	1
MMPZ5225BAGP	2.85	3.0	3.15	5	100	564	1	9	1
MMPZ5226BAGP	3.14	3.3	3.47	5	95	564	1	4.5	1
MMPZ5227BAGP	3.42	3.6	3.78	5	90	564	1	4.5	1
MMPZ5228BAGP	3.71	3.9	4.10	5	90	564	1	2.7	1
MMPZ5229BAGP	4.09	4.3	4.52	5	90	564	1	2.7	1
MMPZ5230BAGP	4.47	4.7	4.94	5	80	470	1	2.7	2
MMPZ5231BAGP	4.85	5.1	5.36	5	60	451	1	1.8	2
MMPZ5232BAGP	5.32	5.6	5.88	5	40	376	1	0.9	2
MMPZ5234BAGP	5.89	6.2	6.51	5	10	141	1	2.7	4
MMPZ5235BAGP	6.46	6.8	7.14	5	15	75	1	1.8	4
MMPZ5236BAGP	7.11	7.5	7.86	5	15	75	1	0.9	5
MMPZ5237BAGP	7.79	8.2	8.61	5	15	75	1	0.63	5
MMPZ5239BAGP	8.65	9.1	9.56	5	15	94	1	0.45	6
MMPZ5240BAGP	9.50	10	10.50	5	20	141	1	0.18	7
MMPZ5241BAGP	10.45	11	11.55	5	20	141	1	0.09	8
MMPZ5242BAGP	11.40	12	12.60	5	25	141	1	0.09	8
MMPZ5243BAGP	12.35	13	13.65	5	30	160	1	0.09	8
MMPZ5245BAGP	14.25	15	15.75	5	30	188	1	0.045	10.5
MMPZ5246BAGP	15.20	16	16.80	5	40	188	1	0.045	11.2
MMPZ5248BAGP	17.10	18	18.90	5	45	212	1	0.045	12.6
MMPZ5250BAGP	19.00	20	21.00	5	55	212	1	0.045	14
MMPZ5251BAGP	20.90	22	23.10	5	55	235	1	0.045	15.4
MMPZ5252BAGP	22.80	24	25.20	5	70	235	1	0.045	16.8
MMPZ5254BAGP	25.65	27	28.35	2	80	282	0.5	0.045	18.9
MMPZ5256BAGP	28.50	30	31.50	2	80	282	0.5	0.045	21
MMPZ5257BAGP	31.35	33	34.65	2	80	306	0.5	0.045	23
MMPZ5258BAGP	34.20	36	37.80	2	90	329	0.5	0.045	25.2
MMPZ5259BAGP	37.05	39	40.95	2	130	329	0.5	0.045	27.3
MMPZ5260BAGP	40.85	43	45.15	2	150	353	0.5	0.045	30.1
MMPZ5261BAGP	44.65	47	49.35	2	170	353	0.5	0.045	33
MMPZ5262BAGP	48.45	51	53.35	2	180	376	0.5	0.045	35.7
MMPZ5263BAGP	53.20	56	58.80	2	200	400	0.5	0.045	39.2
MMPZ5265BAGP	58.90	62	65.10	2	215	423	0.5	0.045	43.4
MMPZ5266BAGP	64.60	68	71.40	2	240	447	0.5	0.045	47.6
MMPZ5267BAGP	71.25	75	78.75	2	255	470	0.5	0.045	52.5

RATING CHARACTERISTIC CURVES (MMPZ5221BAGP THRU MMPZ5267BAGP)

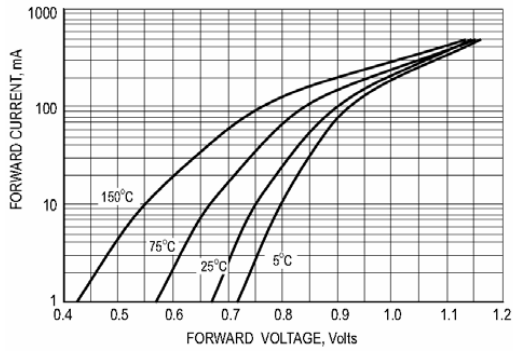


Fig.1 TYPICAL FORWARD VOLTAGE

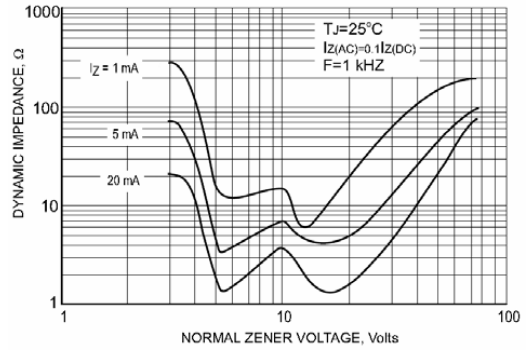


Fig.2 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

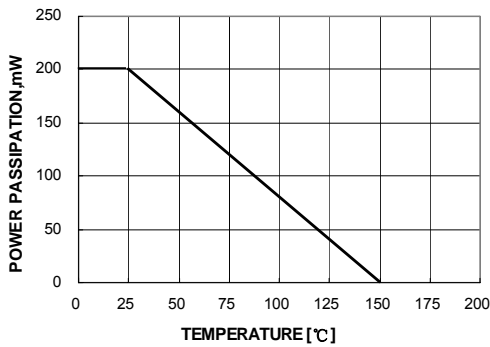


Fig.3 POWER DISSIPATION VS. AMBIENT TEMP.

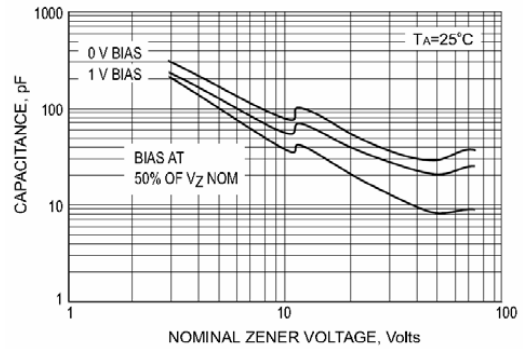


Fig.4 TYPICAL CAPACITANCE

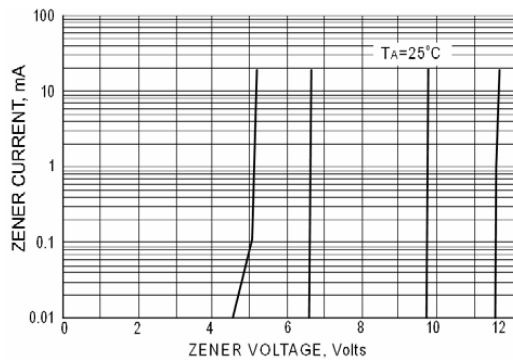


Fig.5 ZENER BREAKDOWN CHARACTERISTICS

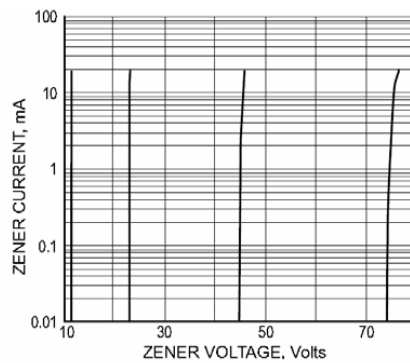


Fig.6 ZENER BREAKDOWN CHARACTERISTICS