

CHIP ZENER DIODE SOD-123

Voltage : 2.4V ~ 91V

Power: 0.5Watt

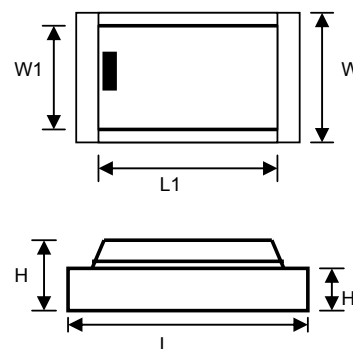


HZD5221B ~ HZD5270B

APPLICATION Voltage regulator
FEATURE High temperature soldering type. ESD rating of class 3(>18KV) per human body mode. Silicon planar zener diodes. Silicon -oxide passivated junction. Low temperature coefficient voltage. 500mW Rating on FR-4 or FR-5 Board. Withstand 275°C soldering temperature.
MECHANICAL Void-Free Transfer-molded, Thermosetting plastic case. SOD-123 Packaging Cathode indicated by polarity band. Mounting position: Any.
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS Rating at 25°C ambient temperature unless otherwise specified

DIMENSION (mm)
HZD5221B ~ HZD5270B

W:	1.60mm
W1:	1.25mm
L1:	2.85mm
H:	0.93mm
H1:	0.55mm
L:	3.60mm



CIRCUIT



MAXIMUM RATING (At Ta = 25°C unless otherwise noted)

RATING	SYMBOL	Value	UNITS
Zener Current (See Table "Characteristics")	-	-	-
Max. Steady Power Dissipation @TA=25°C	P _D	500	mW
Max. Operating Temperature Range.	T _J	-65 to +150	°C
Storage Temperature.	T _{STG}	-65 to +150	°C

Package:

Part No.	HZD5221B~HZD5270B
Reel:	4K Pcs
G.W.:	0.16 Kg / Reel
Box:	40K Pcs
Carton:	240K PCS
C/Size:	41x39x21cm
G.W.:	10Kg / Carton
Brand:	SINLOON

ELECTRICAL CHARACTERISTICS (At Ta = 25°C unless otherwise noted)

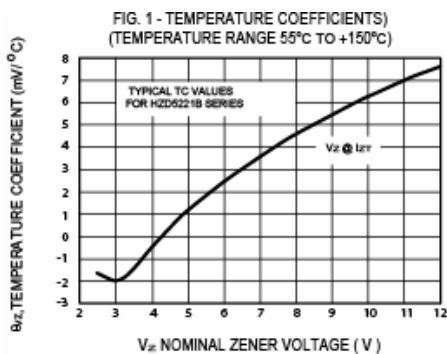
CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Thermal Resistance Junction to Ambient	RθJA	-	-	350	°C/W
Max. Instantaneous Forward Voltage at IF = 100mA	V _F	-	-	0.9	Volts

NOTES:

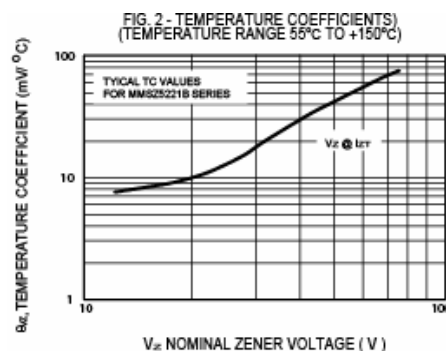
- The JEDEC type numbers listed have a standard tolerance on the nominal zener voltage of ±10%. Suffix B=±5%
- The zener impedance is derived from 1KHz AC voltage, which results when an AC current having an RMS value equal to 10% of DC zener current (I_{zt} or I_{zk}) is superimposed on T_{zr} or T_{zk},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



RATING CHARACTERISTICS CURVES



R_{ZT} TEMPERATURE COEFFICIENT (mV/°C)



R_{ZT} TEMPERATURE COEFFICIENT (mV/°C)

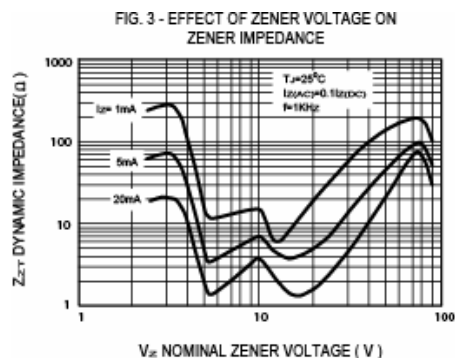
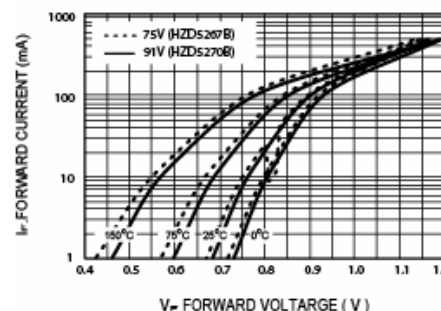


FIG. 4 - TYPICAL FORWARD VOLTAGE



CHIP ZENER DIODE SOD-123

RATING CHARACTERISTICS CUVES

FIG. 5 - STEADY STATE POWER DERATING

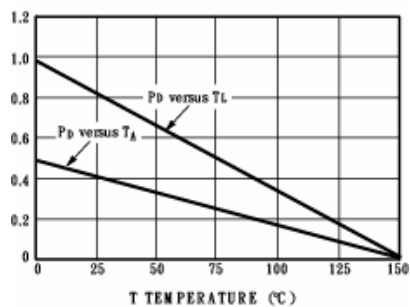


FIG. 7 - TYPICAL CAPACITANCE

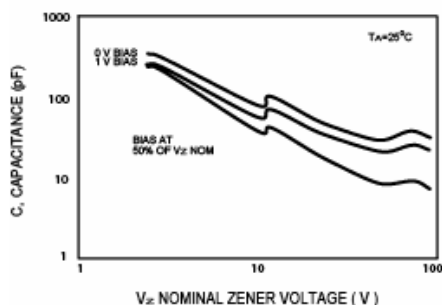


FIG. 9 - ZENER VOLTAGE VERSUS ZENER CURRENT (Vz UP TO 12V)

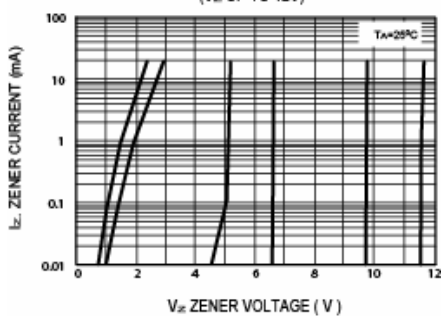


FIG. 6 - MAXIMUM NONREPETITIVE SURGE POWER

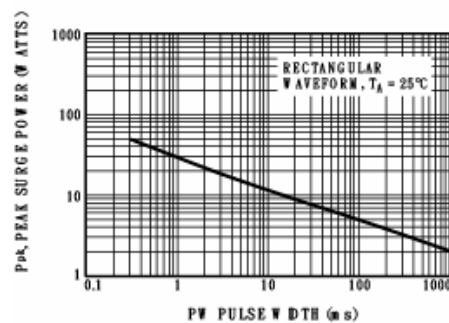


FIG. 8 - TYPICAL LEAKAGE CURRENT

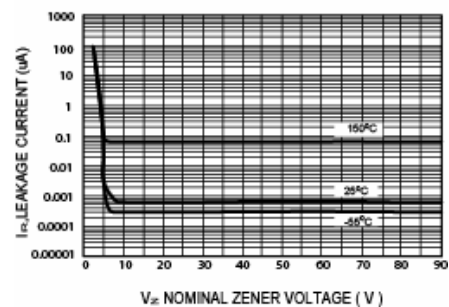
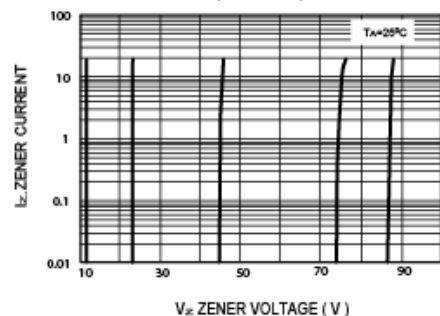


FIG. 10 - ZENER VOLTAGE VERSUS ZENER CURRENT (12V TO 91V)



CHIP ZENER DIODE SOD-123

RATING CHARACTERISTIC CURVES - HZD5221B ~ HZD5270B

TYPE	Zener Diode Vz(V) @Izt			Test Current Izt (mA)	Maximum Zener Impedance			Maximum Reverse Leakage Current		Type Temp. coefficient at Ta=25°C $\theta_{Vz}(\%/^{\circ}\text{C})$	Max. Regulator Current Ta=50°C Izm (mA)
	Min	Nom	Max		Zzt at Izt (Ω)	Zzk (Ω)	At Izk (mA)	I _R (uA)	at V _R (V)		
	Voltage	Voltage	Voltage								
HZD5221B	2.280	2.4	2.520	20	30	1200	0.25	100	1.0	-0.085	190.0
HZD5222B	2.375	2.5	2.625	20	30	1250	0.25	100	1.0	-0.085	182.0
HZD5223B	2.565	2.7	2.835	20	30	1300	0.25	75	1.0	-0.080	168.0
HZD5224B	2.660	2.8	2.940	20	30	1400	0.25	75	1.0	-0.080	162.0
HZD5225B	2.850	3.0	3.150	20	29	1600	0.25	50	1.0	-0.075	152.0
HZD5226B	3.135	3.3	3.456	20	28	1600	0.25	25	1.0	-0.070	138.0
HZD5227B	3.420	3.6	3.780	20	24	1700	0.25	15	1.0	-0.065	126.0
HZD5228B	3.705	3.9	4.095	20	23	1900	0.25	10	1.0	-0.060	115.0
HZD5229B	4.085	4.3	4.515	20	22	2000	0.25	5	1.0	-0.055	106.0
HZD5230B	4.465	4.7	4.935	20	19	1900	0.25	5	2.0	+0.03	97.0
HZD5231B	4.845	5.1	5.355	20	17	1600	0.25	5	2.0	+0.03	89.0
HZD5232B	5.320	5.6	5.880	20	11	1600	0.25	5	3.0	+0.038	81.0
HZD5233B	5.700	6.0	6.300	20	7	1600	0.25	5	3.5	+0.038	76.0
HZD5234B	5.890	6.2	6.510	20	7	1000	0.25	5	4.0	+0.045	73.0
HZD5235B	6.460	6.8	7.140	20	5	750	0.25	3	5.0	+0.050	67.0
HZD5236B	7.125	7.5	7.875	20	6	500	0.25	3	6.0	+0.058	61.0
HZD5237B	7.790	8.2	8.160	20	8	500	0.25	3	6.5	+0.062	55.0
HZD5238B	8.265	8.7	9.135	20	8	600	0.25	3	6.5	+0.065	52.0
HZD5239B	8.645	9.1	9.555	20	10	600	0.25	3	7.0	+0.068	50.0
HZD5240B	9.500	10	10.50	20	17	600	0.25	3	8.0	+0.075	45.0
HZD5241B	10.45	11	11.55	20	22	600	0.25	2	8.4	+0.076	41.0
HZD5242B	11.40	12	12.60	20	30	600	0.25	1	9.1	+0.077	38.0
HZD5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9	+0.079	35.0
HZD5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10	+0.082	32.0
HZD5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11	+0.082	30.0
HZD5246B	15.20	16	16.80	7.8	17	600	0.25	0.1	12	+0.083	28.0
HZD5247B	16.15	17	17.85	7.4	19	600	0.25	0.1	13	+0.084	27.0
HZD5248B	17.10	18	18.90	7.0	21	600	0.25	0.1	14	+0.085	25.0
HZD5249B	18.05	19	19.95	6.6	23	600	0.25	0.1	15	+0.086	24.0
HZD5250B	19.00	20	21.00	6.2	25	600	0.25	0.1	16	+0.086	23.0
HZD5251B	20.90	22	23.10	5.6	29	600	0.25	0.1	17	+0.087	21.0
HZD5252B	22.80	24	25.20	5.2	33	600	0.25	0.1	18	+0.088	19.1
HZD5253B	23.75	25	26.25	5.0	35	600	0.25	0.1	19	+0.089	18.2
HZD5254B	25.65	27	28.35	4.6	41	600	0.25	0.1	21	+0.090	16.8
HZD5255B	26.60	28	29.40	4.5	44	600	0.25	0.1	21	+0.091	16.2
HZD5256B	28.50	30	31.50	4.2	49	600	0.25	0.1	23	+0.091	15.1
HZD5257B	31.35	33	34.65	3.8	58	700	0.25	0.1	25	+0.092	13.8
HZD5258B	34.20	36	37.80	3.4	70	700	0.25	0.1	27	+0.093	13.8
HZD5259B	37.05	39	40.95	3.2	80	800	0.25	0.1	30	+0.094	12.6
HZD5260B	40.85	43	45.15	3.0	93	900	0.25	0.1	33	+0.095	11.6
HZD5261B	44.65	47	49.35	2.7	105	1000	0.25	0.1	36	+0.095	10.6
HZD5262B	48.45	51	53.55	2.5	125	1100	0.25	0.1	39	+0.096	9.7
HZD5263B	53.20	56	58.80	2.2	150	1300	0.25	0.1	43	+0.096	8.9
HZD5264B	57.00	60	65.10	2.1	170	1400	0.25	0.1	36	+0.097	11.6
HZD5265B	58.90	62	65.10	2.0	185	1400	0.25	0.1	47	+0.097	-
HZD5266B	64.40	68	71.40	1.8	230	1600	0.25	0.1	52	+0.097	-
HZD5267B	71.25	75	78.75	1.7	270	1700	0.25	0.1	56	+0.098	-
HZD5268B	77.90	82	86.10	1.5	330	2000	0.25	0.1	62	+0.098	-
HZD5269B	82.65	87	91.35	1.4	370	2200	0.25	0.1	68	+0.098	-
HZD5270B	86.45	91	95.00	1.4	400	2300	0.25	0.1	69	+0.098	-

CHIP ZENER DIODE SOD-123

Voltage : 2.4V - 91V

Power: 0.5Watt



HZD5221B - HZD5270B

OUTLINE DIMENSION

Item	SOD - 123		
L	3.6	mm	
W	1.6	mm	
T	0.55	mm	
D	0.45	mm	

DEVICE MARKING

Device has been marked indelibly and legibly as follow

Direction indicated Code Number

Cathode Z45 Anode

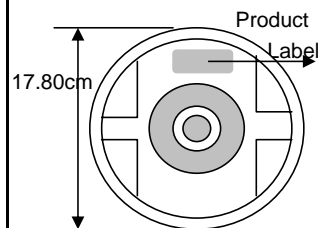
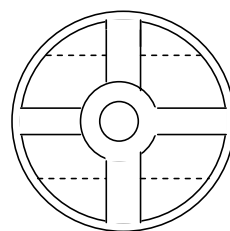
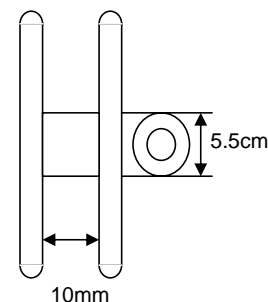
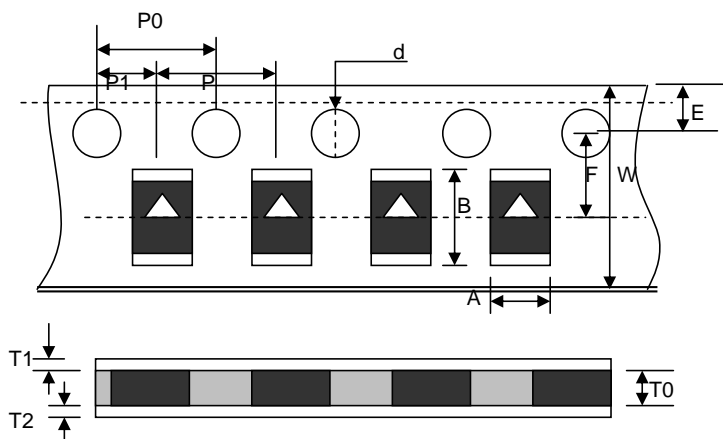
Terminals Body

MOUNTING PAD

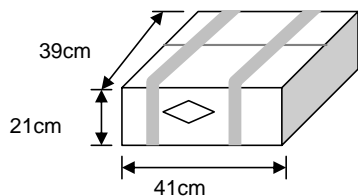
Layout Size	A	B	C	D	Remark
0805	1.20	1.20	3.30	0.90	Desing
Micro Melf	0.90	1.40	2.80	1.00	Suggestion
SOD-123	1.35	0.65	3.75	1.05	0805 Size
1206	1.20	1.70	4.10	1.70	Desing
Mini Melf	1.35	1.70	4.80	2.10	Suggestion
SOD-123	1.20	0.70	4.90	2.50	1206 Size

REEL TAPING SPECIFICATIONS

Item	Symbol	Size SPECIFICATIONS (mm)			
		0603	0805	1026	SOD-123
Carrier width	A	1.10±0.05	1.65±0.10	2.00±0.10	2.00±0.10
Carrier length	B	2.00±0.05	2.40±0.10	3.60±0.10	3.80±0.10
Sprocket hole	d	1.50±0.15	1.50±0.15	1.50±0.15	1.50±0.15
Project hole position	E	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10
Punch hole position	F	3.50±0.50	3.50±0.50	3.50±0.50	3.50±0.50
Punch hole pitch	P	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10
Sprocket hole pitch	Po	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10
Embossment centre	P1	2.00±0.05	2.00±0.05	2.00±0.05	2.00±0.05
Base tape width	W	8.00±0.20	8.00±0.20	8.00±0.20	8.00±0.20
Top / Bottom seat tape width	W1	5.25±0.05	5.25±0.05	5.25±0.05	5.25±0.05
Base tape thickness	T0	0.95±0.02	0.95±0.02	0.95±0.02	1.05±0.02
Top seat tape thickness	T1	0.054±0.005	0.054±0.005	0.054±0.005	0.054±0.005
Bottom seat tape thickness	T2	0.042±0.005	0.042±0.005	0.042±0.005	0.042±0.005



Paekage Quantity:



Carton:
Size: 41x39x21cm
Quantity: 240K Pcs
In Box: 40K PCS
G.W: 10Kgs