

Surface Mount Zener Diodes

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CZRW5221 - CZRW5259

Voltage: 2.4 - 39 Volts
Power: 500mW

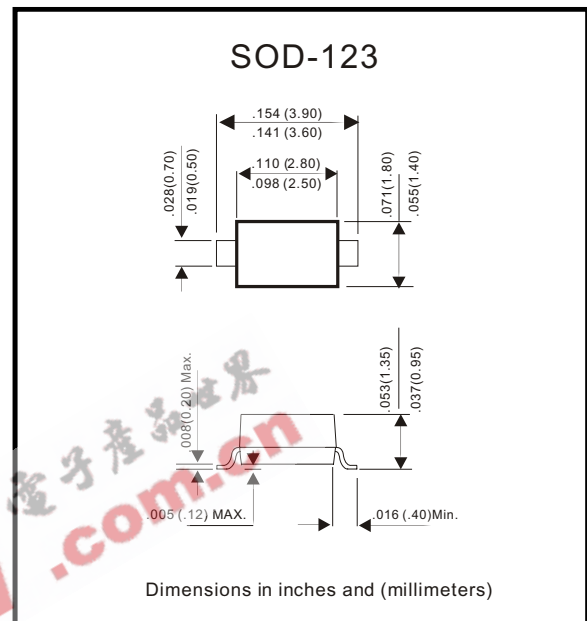


FEATURES

Planar Die constructions
500mW Power Dissipation
Zener Voltages from 2.4V - 39V
Ideally Suited for Automated Assembly Processes

MECHANICAL DATA

Case: SOD-123, Molded Plastic
Terminals: Solderable per MIL-STD-202, Method 208
Polarity: See Diagram Below
Approx. Weight: 0.008 grams
Mounting Position: Any



Maximum Ratings and Electrical Characteristics

Parameter	Symbol	Value	Units
Power Dissipation (Note A) at 75°C	PD	500	mW
Peak Forward Surge Current Surge, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) (Note B)	IFSM	4	A
Operating Junction and Storage Temperature Range	TJ	-55 to +150	°C

NOTES:

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

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

Maximum Ratings and Electrical Characteristics

(TA=25 unless otherwise noted) VF=1.2V, IF=100mA for all types

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Max Zener Current
	V _Z @ I _{ZT}			Z _{VT} @ I _{ZT}		Z _{VK} @ I _{ZK}		I _R @ V _R		I _{ZM} @ T _A
	Nom. V	Min. V	Max. V	Ohm	mA	Ohm	mA	nA	V	mA
500 mWatts Zener Diodes										
CZRW5221	2.4	2.28	2.52	30	20	1200	0.25	100	1	188
CZRW5222	2.5	2.38	2.63	30	20	1250	0.25	100	1	180
CZRW5223	2.7	2.57	2.84	30	20	1300	0.25	75	1	167
CZRW5225	3	2.85	3.15	30	20	1600	0.25	50	1	150
CZRW5226	3.3	3.14	3.47	28	20	1600	0.25	25	1	138
CZRW5227	3.6	3.42	3.78	24	20	1700	0.25	15	1	126
CZRW5228	3.9	3.71	4.1	23	20	1900	0.25	10	1	115
CZRW5229	4.3	4.09	4.52	22	20	2000	0.25	5	1	106
CZRW5230	4.7	4.47	4.94	19	20	1900	0.25	5	2	97
CZRW5231	5.1	4.85	5.36	17	20	1600	0.25	5	2	89
CZRW5232	5.6	5.32	5.88	11	20	1600	0.25	5	3	81
CZRW5234	6.2	5.89	6.51	7	20	1000	0.25	5	4	73
CZRW5235	6.8	6.46	7.14	5	20	750	0.25	3	5	67
CZRW5236	7.5	7.13	7.88	6	20	500	0.25	3	6	61
CZRW5237	8.2	7.79	8.61	8	20	500	0.25	3	6	55
CZRW5239	9.1	8.65	9.56	10	20	600	0.25	3	6.5	50
CZRW5240	10	9.5	10.5	17	20	600	0.25	3	8	45
CZRW5241	11	10.45	11.55	22	20	600	0.25	3	8.4	41
CZRW5242	12	11.4	12.6	30	20	600	0.25	2	9.1	38
CZRW5243	13	12.35	13.65	13	9.5	600	0.25	1	9.9	35
CZRW5245	15	14.25	15.75	16	8.5	600	0.25	0.5	11	30
CZRW5246	16	15.2	16.8	17	7.8	600	0.25	0.1	12	28
CZRW5248	18	17.1	18.9	21	7	600	0.25	0.1	14	25
CZRW5250	20	19	21	25	6.2	600	0.25	0.1	15	23
CZRW5251	22	20.9	23.1	29	5.6	600	0.25	0.1	17	21
CZRW5252	24	22.8	25.2	33	5.2	600	0.25	0.1	18	19.1
CZRW5254	27	25.65	28.35	41	5	600	0.25	0.1	21	16.8
CZRW5255	28	26.6	29.4	44	4.5	600	0.25	0.1	21	16.2
CZRW5256	30	28.5	31.5	49	4.2	600	0.25	0.1	23	15.1
CZRW5257	33	31.35	34.65	58	3.8	700	0.25	0.1	25	13.8
CZRW5258	36	34.2	37.8	70	3.4	700	0.25	0.1	27	12.6
CZRW5259	39	37.05	40.95	80	3.2	800	0.25	0.1	30	11.6

NOTE:

- Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- Specials Available Include:
 - Nominal zener voltages between the voltages shown and tighter voltage tolerances.
 - Matched sets.
- Zener Voltage (V_Z) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at 30°C, from the diode body.
- Zener Impedance (Z_Z) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.
- Surge Current (I_R) Non-Repetitive. 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; however, actual device capability is as described in Figure 5.

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