

SMD Zener Diode



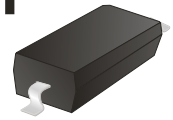
SMD Diodes Specialist

CZRW5221B-HF Thru CZRW5259B-HF

Voltage: 2.4 to 75 Volts

Power: 500 mWatts

RoHS Device



Features

Halogen free.

For surface mounted applications.

500mW Power Dissipation.

Ideally suited for automated assembly processes.

Pb free product.

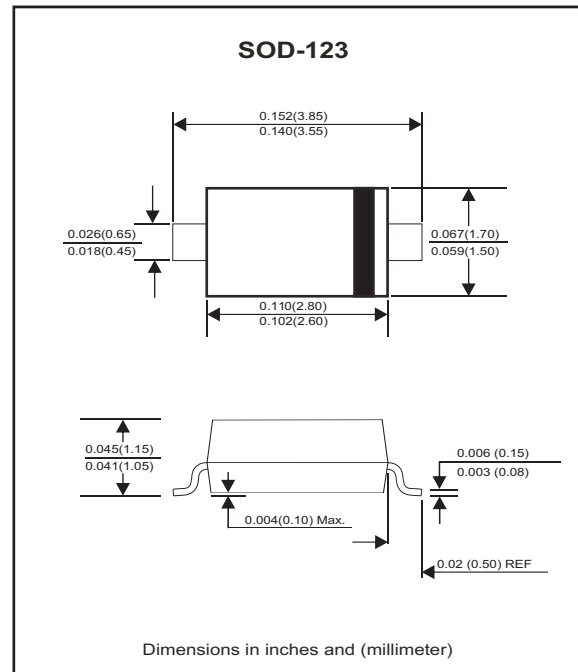
Mechanical data

Case: SOD-123, Molded plastic.

Terminals: Solder Plated, solderable per MIL-STD-750, method 2026.

Polarity: Cathode band.

Weight: 0.01 gram (approx.).



Maximum Rating AND Electrical Characteristics

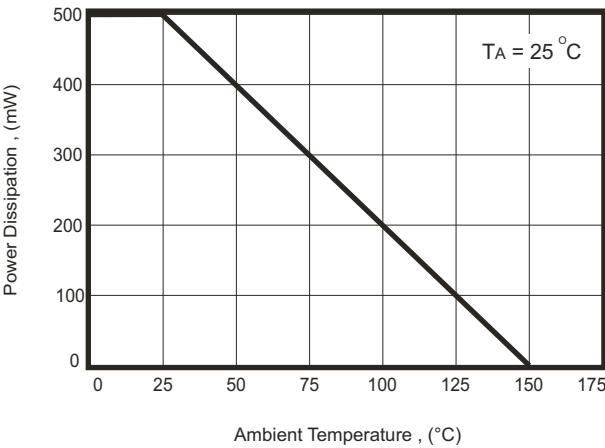
Parameter	Symbol	Value	Unit
Forward Voltage (Note 2) @ $I_F=10\text{mA}$	V_F	0.9	V
Power Dissipation (Note 1)	P_D	500	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	250	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^{\circ}\text{C}$

Notes: 1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².

2. Tested with pulses, $T_p \leq 1.0\text{ms}$

RATING AND CHARACTERISTIC CURVES (CZRW5221B-HF Thru CZRW5259B-HF)

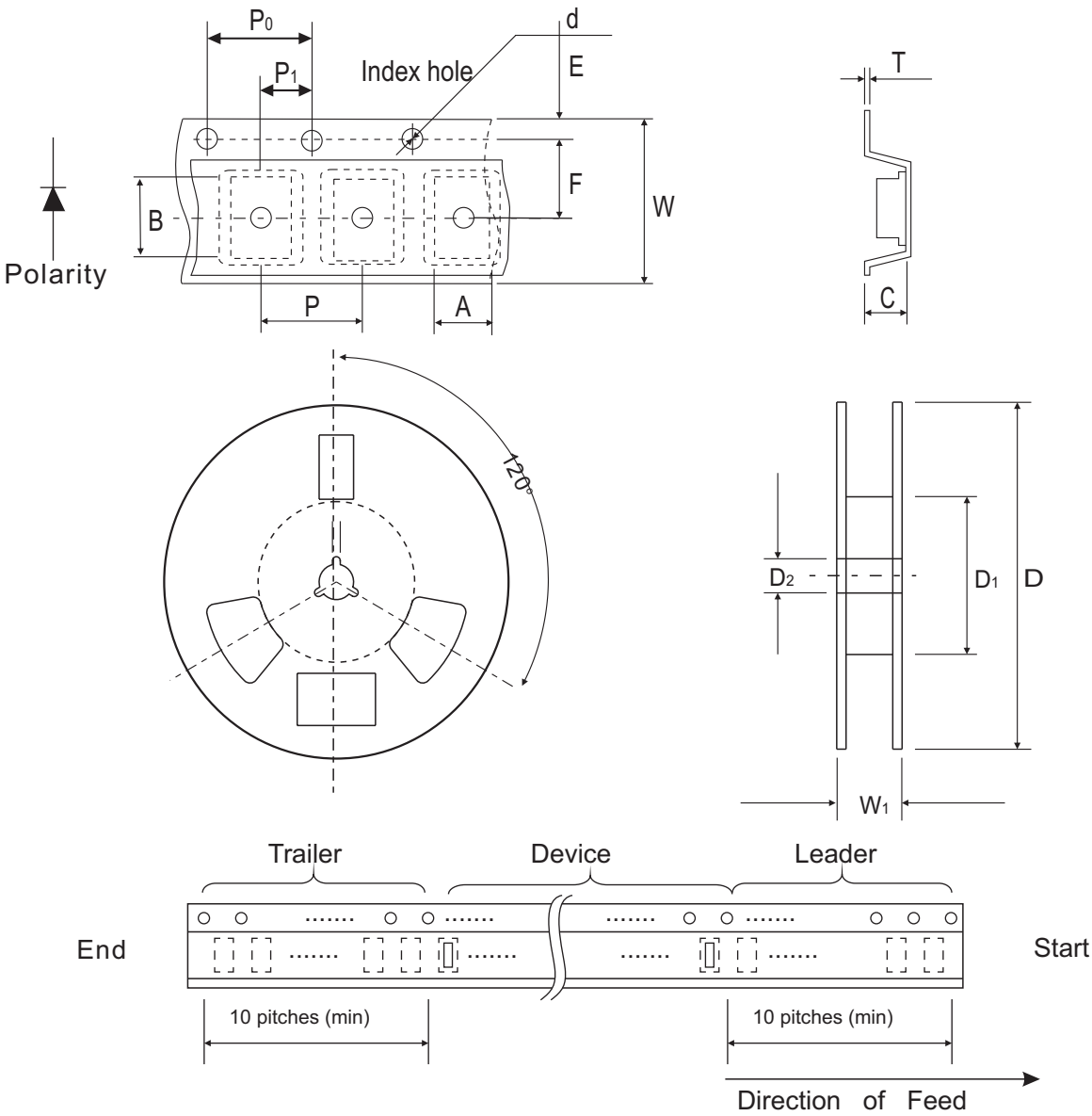
Fig.1- Power Derating Curve



Electrical Characteristics(Ta = 25°C)

Part Number	Zener Voltage			Operating resistance		Rising operating resistance		Reverse current		Marking Code
	V _Z (V)@I _{ZT}			Z _{ZT} (Ohm)		Z _{ZK} (Ohm)		I _R (uA)		
	Min	Nom	Max	Max	I _{ZT} (mA)	Max	I _{ZK} (mA)	Max	V _R (V)	
CZRW5221B-HF	2.28	2.4	2.52	30	20	1200	0.25	100	1.0	.C1
CZRW5223B-HF	2.57	2.7	2.84	30	20	1300	0.25	75	1.0	.C3
CZRW5225B-HF	2.85	3.0	3.15	30	20	1600	0.25	50	1.0	.C5
CZRW5226B-HF	3.14	3.3	3.47	28	20	1600	0.25	25	1.0	.G1
CZRW5227B-HF	3.42	3.6	3.78	24	20	1700	0.25	15	1.0	.G2
CZRW5228B-HF	3.71	3.9	4.10	23	20	1900	0.25	10	1.0	.G3
CZRW5229B-HF	4.09	4.3	4.52	22	20	2000	0.25	5	1.0	.G4
CZRW5230B-HF	4.47	4.7	4.94	19	20	1900	0.25	5	2.0	.G5
CZRW5231B-HF	4.85	5.1	5.36	17	20	1600	0.25	5	2.0	.E1
CZRW5232B-HF	5.32	5.6	5.88	11	20	1600	0.25	5	3.0	.E2
CZRW5233B-HF	5.70	6.0	6.30	7	20	1600	0.25	5	3.5	.E3
CZRW5234B-HF	5.89	6.2	6.51	7	20	1000	0.25	5	4.0	.E4
CZRW5235B-HF	6.46	6.8	7.14	5	20	750	0.25	3	5.0	.E5
CZRW5236B-HF	7.13	7.5	7.88	6	20	500	0.25	3	6.0	.F1
CZRW5237B-HF	7.79	8.2	8.61	8	20	500	0.25	3	6.5	.F2
CZRW5238B-HF	8.27	8.7	9.14	8	20	600	0.25	3	6.5	.F3
CZRW5239B-HF	8.65	9.1	9.56	10	20	600	0.25	3	7.0	.F4
CZRW5240B-HF	9.50	10	10.50	17	20	600	0.25	3	8.0	.F5
CZRW5241B-HF	10.45	11	11.55	22	20	600	0.25	2	8.4	.H1
CZRW5242B-HF	11.40	12	12.60	30	20	600	0.25	1	9.1	.H2
CZRW5243B-HF	12.35	13	13.65	13	9.5	600	0.25	0.5	9.9	.H3
CZRW5244B-HF	13.30	14	14.70	15	9.0	600	0.25	0.1	10	.H4
CZRW5245B-HF	14.25	15	15.75	16	8.5	600	0.25	0.1	11	.H5
CZRW5246B-HF	15.20	16	16.80	17	7.8	600	0.25	0.1	12	.J1
CZRW5247B-HF	16.15	17	17.85	19	7.4	600	0.25	0.1	13	.J2
CZRW5248B-HF	17.10	18	18.90	21	7.0	600	0.25	0.1	14	.J3
CZRW5250B-HF	19.00	20	21.00	25	6.2	600	0.25	0.1	15	.J5
CZRW5251B-HF	20.90	22	23.10	29	5.6	600	0.25	0.1	17	.K1
CZRW5252B-HF	22.80	24	25.20	33	5.2	600	0.25	0.1	18	.K2
CZRW5254B-HF	25.65	27	28.35	41	5.0	600	0.25	0.1	21	.K4
CZRW5255B-HF	26.60	28	29.40	44	4.5	600	0.25	0.1	21	.K5
CZRW5256B-HF	28.50	30	31.50	49	4.2	600	0.25	0.1	23	.M1
CZRW5257B-HF	31.35	33	34.65	58	3.8	700	0.25	0.1	25	.M2
CZRW5258B-HF	34.20	36	37.80	70	3.4	700	0.25	0.1	27	.M3
CZRW5259B-HF	37.05	39	40.95	80	3.2	800	0.25	0.1	30	.M4

Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.10	178 ± 1.00	54.40 ± 0.40	13.0 ± 0.20
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 ± 0.004	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

SOD-123	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.374 ± 0.039

Marking Code

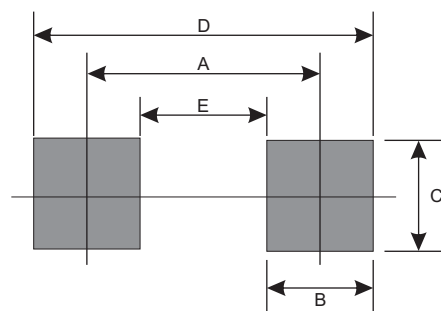
Part Number	Marking Code
CZRW5221B ~ 5259B-HF	XX



Product type marking code (see page.2)

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.35	0.132
B	0.80	0.031
C	1.00	0.039
D	4.15	0.163
E	2.55	0.100



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SOD-123	3000	7