

Surface Mount Zener Diodes



SMD Diodes Specialist

CZRL5225-G Thru. CZRL5267-G

Voltage: 3.0 ~ 75V

Power Dissipation: 500mW

RoHS Device

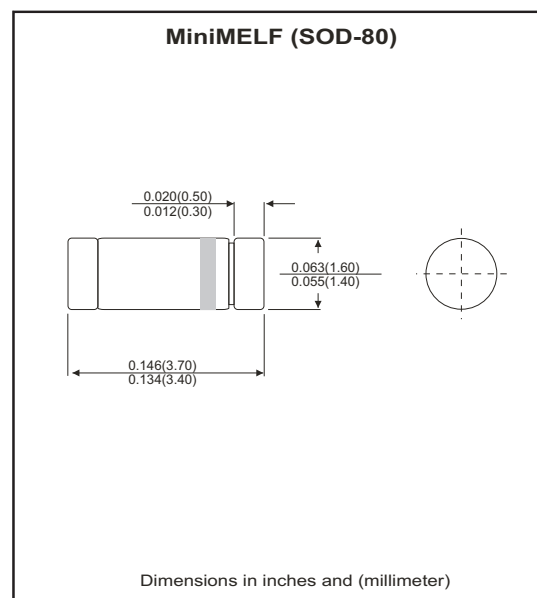


Features

- Silicon planar power Zener diodes.
- For use in stabilizing and clipping circuits with higher power rating.
- Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix.

Mechanical Data:

- Case: MiniMELF glass case (SOD-80)
- Weight: approx. 0.05g



Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Zener current (See table "Characteristics")			
Power dissipation at $T_A=25^\circ\text{C}$	P_{tot}	500 ⁽¹⁾	mW
Thermal resistance, junction to ambient air	$R_{\theta JA}$	300 ⁽¹⁾	$^\circ\text{C/W}$
Junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150	$^\circ\text{C}$

Note: Valid provided that electrodes are kept at ambient temperature.

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ELECTRICAL CHARACTERISTIC (CZRL5225-G Thru. CZRL5267-G)

Max VF=1.25V at IF=200mA, At TA=25°C unless otherwise specified.

Type NO.	Nominal Zener Voltage at IZT VZ(V) (Note 3)	Test Current IZT (mA)	Maximum Zener Impedance (Note 2)		Typical Temperature Coefficient VZ (%/°C)	Max reverse Leakage Current		Maximum Regulator Current IZM (mA) (Note 2.)
			at IZT ZZT(ohm)	at IZK=0.25mA ZZK(ohm)		IR (uA)	VR (V)	
CZRL5225B-G	3	20	29	1600	-0.075	50	1	152
CZRL5226B-G	3.3	20	28	1600	-0.07	25	1	138
CZRL5227B-G	3.6	20	24	1700	-0.065	15	1	126
CZRL5228B-G	3.9	20	23	1900	-0.06	10	1	115
CZRL5229B-G	4.3	20	22	2000	-0.055	5	1	106
CZRL5230B-G	4.7	20	19	1900	±0.030	5	2	97
CZRL5231B-G	5.1	20	17	1600	±0.030	5	2	89
CZRL5232B-G	5.6	20	11	1600	0.038	5	3	81
CZRL5233B-G	6	20	7	1600	0.038	5	3.5	76
CZRL5234B-G	6.2	20	7	1000	0.045	5	4	73
CZRL5235B-G	6.8	20	5	750	0.05	3	5	67
CZRL5236B-G	7.5	20	6	500	0.058	3	6	61
CZRL5237B-G	8.2	20	8	500	0.062	3	6.5	55
CZRL5238B-G	8.7	20	8	600	0.065	3	6.5	52
CZRL5239B-G	9.1	20	10	600	0.068	3	7	50
CZRL5240B-G	10	20	17	600	0.075	3	8	45
CZRL5241B-G	11	20	22	600	0.076	2	8.4	41
CZRL5242B-G	12	20	30	600	0.077	1	9.1	38
CZRL5243B-G	13	9.5	13	600	0.079	0.5	9.9	35
CZRL5244B-G	14	9	15	600	0.082	0.1	10	32
CZRL5245B-G	15	8.5	16	600	0.082	0.1	11	30
CZRL5246B-G	16	7.8	17	600	0.083	0.1	12	28
CZRL5247B-G	17	7.4	19	600	0.084	0.1	13	27
CZRL5248B-G	18	7	21	600	0.085	0.1	14	25
CZRL5249B-G	19	6.6	23	600	0.086	0.1	14	24
CZRL5250B-G	20	6.2	25	600	0.086	0.1	15	23
CZRL5251B-G	22	5.6	29	600	0.087	0.1	17	21
CZRL5252B-G	24	5.2	33	600	0.087	0.1	18	19.1
CZRL5253B-G	25	5	35	600	0.089	0.1	19	18.2
CZRL5254B-G	27	4.6	41	600	0.09	0.1	21	16.8
CZRL5255B-G	28	4.5	44	600	0.091	0.1	21	16.2
CZRL5256B-G	30	4.2	49	600	0.091	0.1	23	15.1
CZRL5257B-G	33	3.8	58	700	0.092	0.1	25	13.8
CZRL5258B-G	36	3.4	70	700	0.093	0.1	27	12.6
CZRL5259B-G	39	3.2	80	800	0.094	0.1	30	11.6
CZRL5260B-G	43	3	93	900	0.095	0.1	33	10.6
CZRL5261B-G	47	2.7	105	1000	0.095	0.1	36	9.7
CZRL5262B-G	51	2.5	125	1100	0.096	0.1	39	8.9
CZRL5263B-G	56	2.2	150	1300	0.096	0.1	43	--
CZRL5264B-G	60	2.1	170	1400	0.097	0.1	46	--
CZRL5265B-G	62	2	185	1400	0.097	0.1	47	--
CZRL5266B-G	68	1.8	230	1600	0.097	0.1	52	--
CZRL5267B-G	75	1.7	270	1700	0.098	0.1	56	--

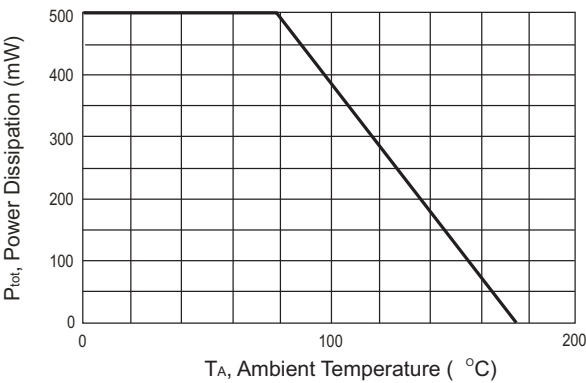
Notes:

- (1) The Zener impedance is derived from the 1KHZ AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (IZ or IZK) is superimposed on IZT or IZK. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.
- (2) Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature.
- (3) Tested under thermal equilibrium and DC test conditions.

REV:B

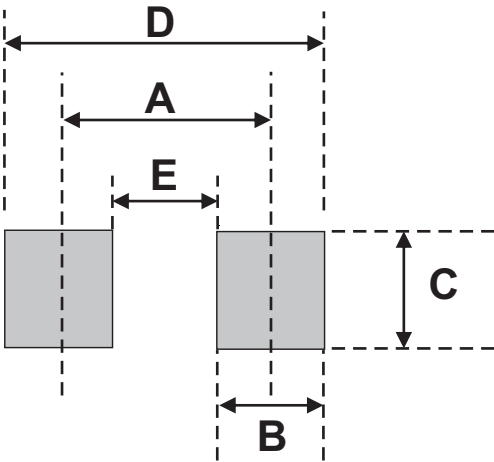
RATING AND CHARACTERISTIC CURVES (CZRL5225-G Thru. CZRL5267-G)

Fig.1 Admissible power dissipation vs. ambient temperature



Suggested PAD Layout

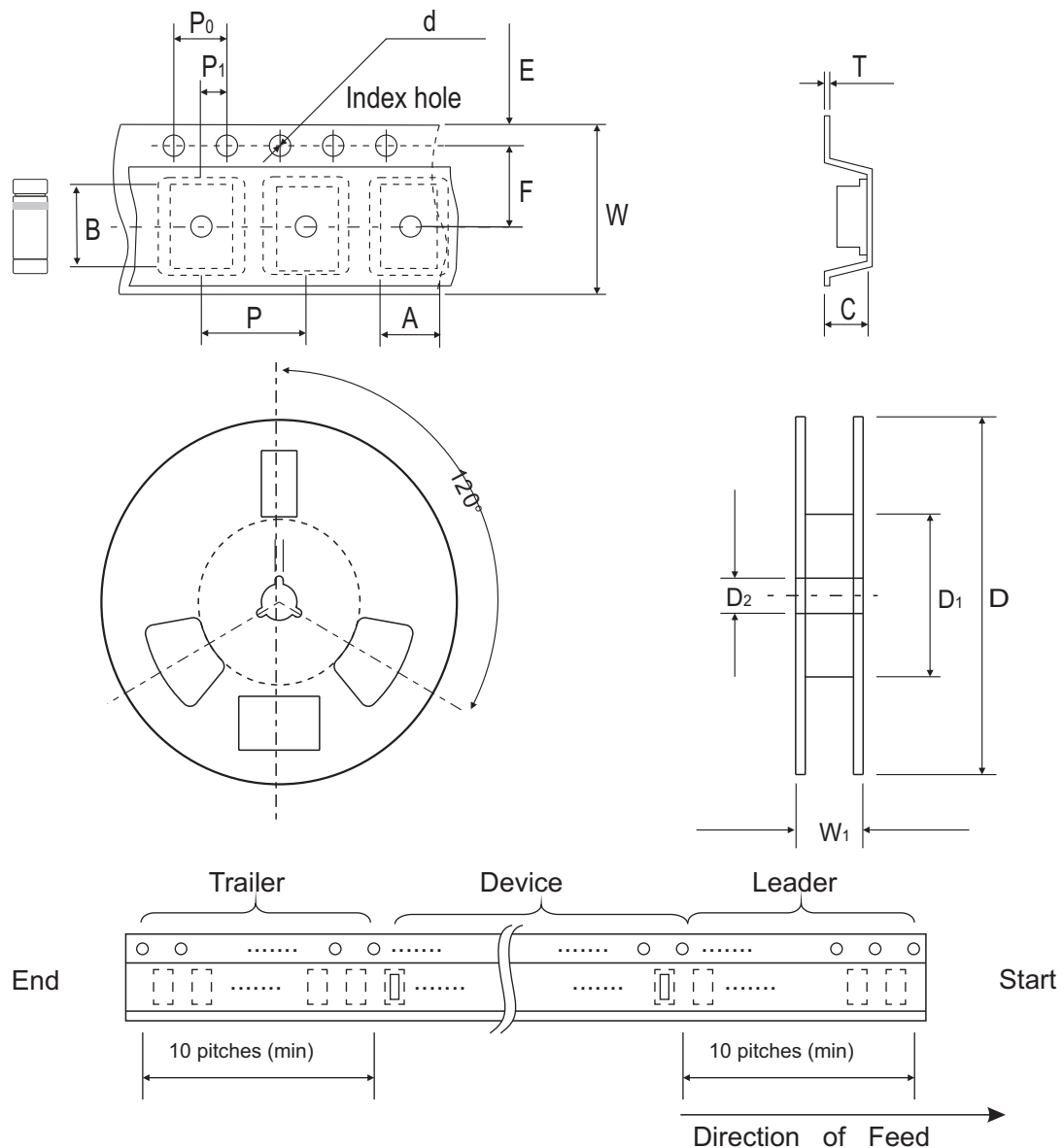
SIZE	Mini-MELF (SOD-80)	
	(mm)	(inch)
A	3.40	0.134
B	1.30	0.051
C	1.70	0.067
D	5.10	0.201
E	1.70	0.067



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
Mini-MELF (SOD-80)	2500	7

Reel Taping Specification



	SYMBOL	A	B	C	d	D	D ₁	D ₂
Mini-MELF (SOD-80)	(mm)	2.0 (max)	3.9 (max)	2.0 (max)	1.55 ± 0.10	178 ± 1.00	50.0 MIN.	13.0 ± 0.20
	(inch)	0.078(max)	0.153 (max)	0.078 (max)	0.061 ± 0.004	7.00 ± 0.039	1.969 MIN.	0.512 ± 0.008

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	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
Mini-MELF (SOD-80)	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 ± 0.30	14.4 MAX.
	(inch)	0.689 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.314 ± 0.012	0.567 MAX