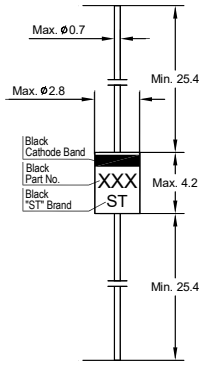
1N4727...1N4761

Silicon Planar Power Zener Diodes

For use in stabilizing and clipping circuits with high power rating. Standard zener voltage tolerance is ±10%. Add suffix "A" for ±5% tolerance and suffix "B" for ±2% tolerance. Other tolerances are available upon request.



Glass Case DO-41
Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	1	W
Junction Temperature	T_j	200	°C
Storage Temperature Range	T_{stg}	- 65 to + 200	°C

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air [1)]	$R_{\theta JA}$	175	°C/W

[1)] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

Dated: 31/03/2022 Rev:01

Characteristics at T_a = 25 °C (V_F max : 1.2 V at I_F = 200 mA)

Type	Zener Voltage [3]		Dynamic Resistance [1]			Reverse Current		Maximum Surge Current [4]	Maximum Regulator Current [2]
	V_{Znom}	at I_{ZT}	Z_{ZT}	Z_{ZK}	at I_{ZK}	I_R	at V_R	at T_a = 25 °C	
	(V)	(mA)	Max. (Ω)	Max. (Ω)	(mA)	Max. (µA)	(V)	I_{ZSM} (mA)	I_{ZM} (mA)
1N4727	3	83	10	400	1	150	1	1375	275
1N4728	3.3	76	10	400	1	150	1	1375	275
1N4729	3.6	69	10	400	1	100	1	1260	252
1N4730	3.9	64	9	400	1	100	1	1190	234
1N4731	4.3	58	9	400	1	50	1	1070	217
1N4732	4.7	53	8	500	1	10	1	970	193
1N4733	5.1	49	7	550	1	10	1	890	178
1N4734	5.6	45	5	600	1	10	2	810	162
1N4735	6.2	41	2	700	1	10	3	730	146
1N4736	6.8	37	3.5	700	1	10	4	660	133
1N4737	7.5	34	4	700	0.5	10	5	605	121
1N4738	8.2	31	4.5	700	0.5	10	6	550	110
1N4739	9.1	28	5	700	0.5	10	7	500	100
1N4740	10	25	7	700	0.25	10	7.6	454	91
1N4741	11	23	8	700	0.25	5	8.4	414	83
1N4742	12	21	9	700	0.25	5	9.1	380	76
1N4743	13	19	10	700	0.25	5	9.9	344	69
1N4744	15	17	14	700	0.25	5	11.4	304	61
1N4745	16	15.5	16	700	0.25	5	12.2	285	57
1N4746	18	14	20	750	0.25	5	13.7	250	50
1N4747	20	12.5	22	750	0.25	5	15.2	225	45
1N4748	22	11.5	23	750	0.25	5	16.7	205	41
1N4749	24	10.5	25	750	0.25	5	18.2	190	38
1N4750	27	9.5	35	750	0.25	5	20.6	170	34
1N4751	30	8.5	40	1000	0.25	5	22.8	150	30
1N4752	33	7.5	45	1000	0.25	5	25.1	135	27
1N4753	36	7	50	1000	0.25	5	27.4	125	25
1N4754	39	6.5	60	1000	0.25	5	29.7	115	23
1N4755	43	6	70	1500	0.25	5	32.7	110	22
1N4756	47	5.5	80	1500	0.25	5	35.8	95	19
1N4757	51	5	95	1500	0.25	5	38.8	90	18
1N4758	56	4.5	110	2000	0.25	5	42.6	80	16
1N4759	62	4	125	2000	0.25	5	47.1	70	14
1N4760	68	3.7	150	2000	0.25	5	51.7	65	13
1N4761	75	3.3	175	2000	0.25	5	56	60	12

[1] The dynamic resistance is derived from the 60 Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener Current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Dynamic resistance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

[2] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

[3] Tested with pulses tp = 20 ms.

[4] 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}.

Dated: 31/03/2022 Rev:01

Electrical Characteristics Curves

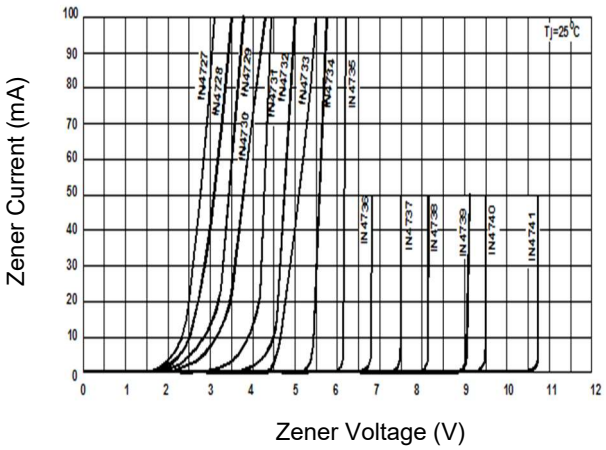


Fig 1. Zener Characteristics Curve

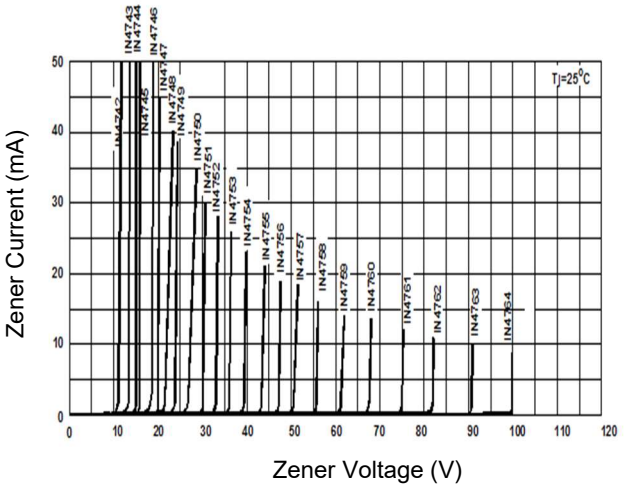


Fig 2. Zener Characteristics Curve

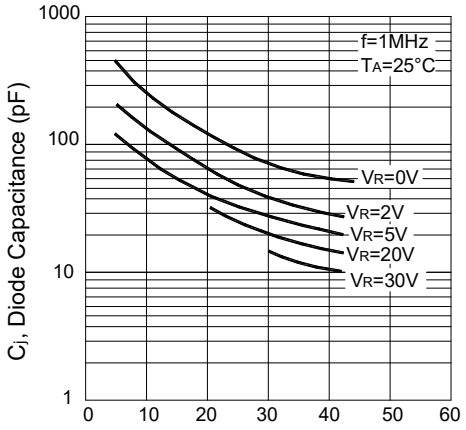


Fig. 3 Junction Capacitance vs Zener Voltage

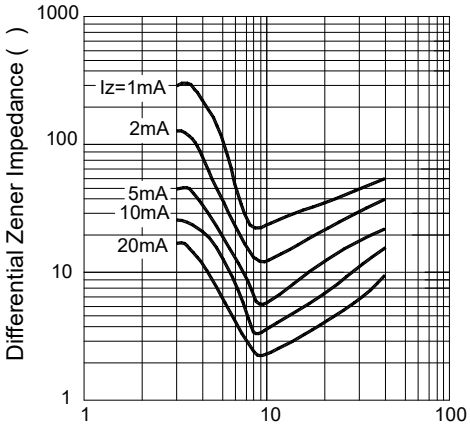


Fig. 4 Typical Zener Impedance vs. Zener Voltage

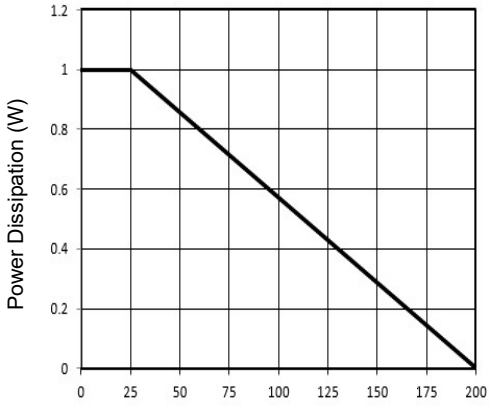


Fig 5. Power Derating Curve

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

ST:

MMBD7000 MMBT8050D(1.5A)-Y1 MMBT8550D MM1Z24B 1N4448W CS0J471M-CRE77 ZMM6V2PF-M
1N4148W 1N4148WT 1SS181 MM3Z5V6 MMBT4403 BZX84C6V8 MM1Z24 1N4148WS-BL BC857A
ES1M MM1Z43 MMBD4148SE(A7) ZMM8V2PF MM1Z51 MM1Z18 MM5Z12 MMBT8050C
MMBT9014C(J6) ZM4733APF CS1E471M-CRG10 CS1H101M-CRF10 MM1Z3B3 MM3Z12