Micro Commercial Components

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1N5221 THRU 1N5267

500 mW Zener Diode 2.4 to 75 Volts

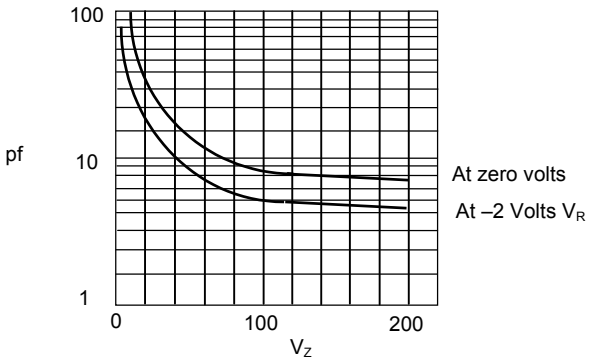
Features

- Wide Voltage Range Available
- Glass Package
- High Temp Soldering: 260°C for 10 seconds at terminals
- Marking : Cathode band and type number

Maximum Ratings

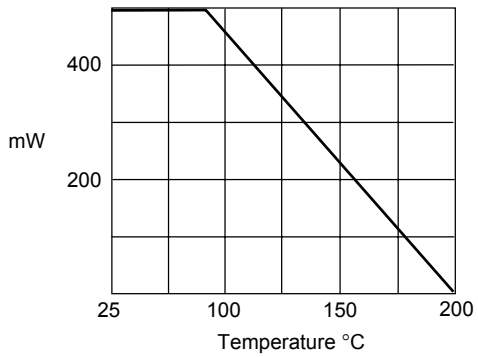
- Operating Temperature: -65°C to +200°C
- Storage Temperature: -65°C to +200°C
- 500 mWatt DC Power Dissipation
- Power Derating: 4.0mW/°C above 50°C
- Forward Voltage @ 200mA: 1.1 Volts

Figure 1 - Typical Capacitance



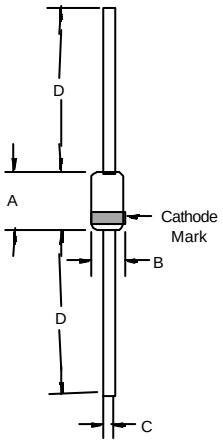
Typical Capacitance (pf) – *versus* – Zener voltage (V_Z)

Figure 2 - Derating Curve



Power Dissipation (mW) - *Versus* - Temperature °C

DO-35



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

1N5221 thru 1N5267

ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	NOMINAL ZENER VOLTAGE V_Z @ I_{ZT} VOLTS	TEST CURRENT I_{ZT} mA	MAXIMUM ZENER IMPEDANCE 'B' SUFFIX ONLY Z_{ZT} @ I_{ZT} OHMS	Z_{ZK} @I_{ZK} = 0.25mA OHMS	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_R µA	VOLTS	MAX. ZENER VOLTAGE TEMP COEFFICIENT 'B' SUFFIX ONLY % / °C
1N5221	2.4	20	30	1200	100	1.0	-0.085
1N5222	2.5	20	30	1250	100	1.0	-0.085
1N5223	2.7	20	30	1300	75	1.0	-0.080
1N5224	2.8	20	30	1400	75	1.0	-0.080
1N5225	3.0	20	29	1600	50	1.0	-0.075
1N5226	3.3	20	28	1600	25	1.0	-0.070
1N5227	3.6	20	24	1700	15	1.0	-0.065
1N5228	3.9	20	23	1900	10	1.0	-0.060
1N5229	4.3	20	22	2000	5.0	1.0	±0.055
1N5230	4.7	20	19	1900	5.0	2.0	±0.030
1N5231	5.1	20	17	1600	5.0	2.0	±0.030
1N5232	5.6	20	11	1600	5.0	3.0	+0.038
1N5233	6.0	20	7.0	1600	5.0	3.5	+0.038
1N5234	6.2	20	7.0	1000	5.0	4.0	+0.045
1N5235	6.8	20	5.0	750	3.0	5.0	+0.050
1N5236	7.5	20	6.0	500	3.0	6.0	+0.058
1N5237	8.2	20	8.0	500	3.0	6.5	+0.062
1N5238	8.7	20	8.0	600	3.0	6.5	+0.065
1N5239	9.1	20	10	600	3.0	7.0	+0.068
1N5240	10	20	17	600	3.0	8.0	+0.075
1N5241	11	20	22	600	2.0	8.4	+0.076
1N5242	12	20	30	600	1.0	9.1	+0.077
1N5243	13	9.5	13	600	0.5	9.9	+0.079
1N5244	14	9.0	15	600	0.1	10	+0.082
1N5245	15	8.5	16	600	0.1	11	+0.082
1N5246	16	7.8	17	600	0.1	12	+0.083
1N5247	17	7.4	19	600	0.1	13	+0.084
1N5248	18	7.0	21	600	0.1	14	+0.085
1N5249	19	6.6	23	600	0.1	14	+0.086
1N5250	20	6.2	25	600	0.1	15	+0.086
1N5251	22	5.6	29	600	0.1	17	+0.087
1N5252	24	5.2	33	600	0.1	18	+0.088
1N5253	25	5.0	35	600	0.1	19	+0.089
1N5254	27	4.6	41	600	0.1	21	+0.090
1N5255	28	4.5	44	600	0.1	21	+0.091
1N5256	30	4.2	49	600	0.1	23	+0.091
1N5257	33	3.8	58	700	0.1	25	+0.092
1N5258	36	3.4	70	700	0.1	27	+0.093
1N5259	39	3.2	80	800	0.1	30	+0.094
1N5260	43	3.0	93	900	0.1	33	+0.095
1N5261	47	2.7	105	1000	0.1	36	+0.095
1N5262	51	2.5	125	1100	0.1	39	+0.096
1N5263	56	2.2	150	1300	0.1	43	+0.096
1N5264	60	2.1	170	1400	0.1	46	+0.097
1N5265	62	2.0	185	1400	0.1	47	+0.097
1N5266	68	1.8	230	1600	0.1	52	+0.097
1N5267	75	1.7	270	1700	0.1	58	+0.098

NOTE 1: Table as shown lists type numbers, which indicate a tolerance of ±20% with guaranteed limits on only Vz, I_R, and V_F. Devices with guaranteed limits on all six parameters are indicated by suffix "A" for ±10%, "B" for ±5%, "C" for ±2%, and "D" for ±1% tolerance

NOTE 2: The electrical characteristics are measured after allowing the device to stabilize for 20 seconds.

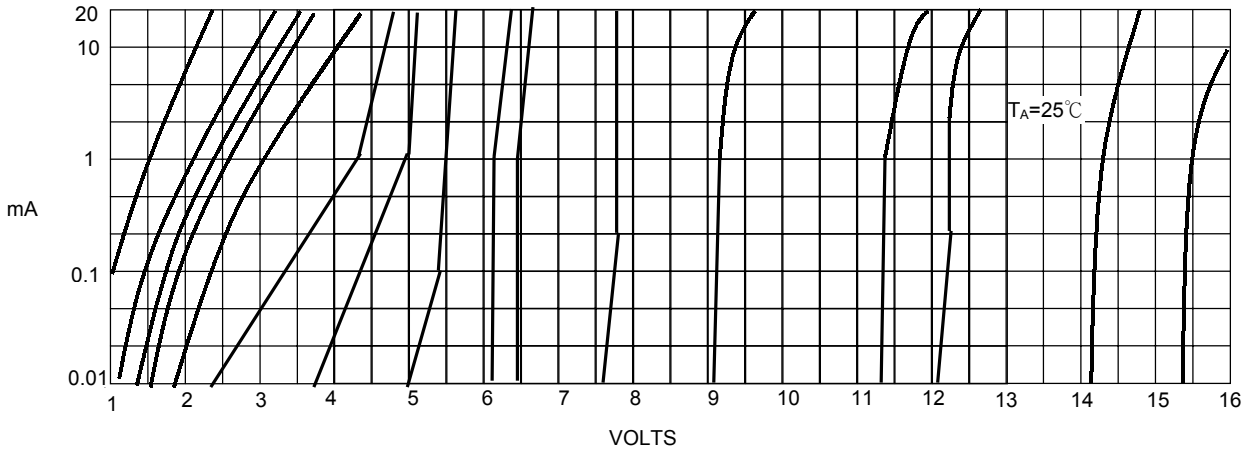
NOTE 3: Temperature coefficient ($á_{VZ}$). Test conditions for temperature coefficient are as follows:

a. I_{ZT} = 7.5mA, T_1 = 25°C T_2 = 125°C (1N5221 thru 1N5242)

b. I_{ZT} = Rated I_{ZT}, T_1 = 25°C, T_2 = 125°C (1N5243 thru 1N5267)

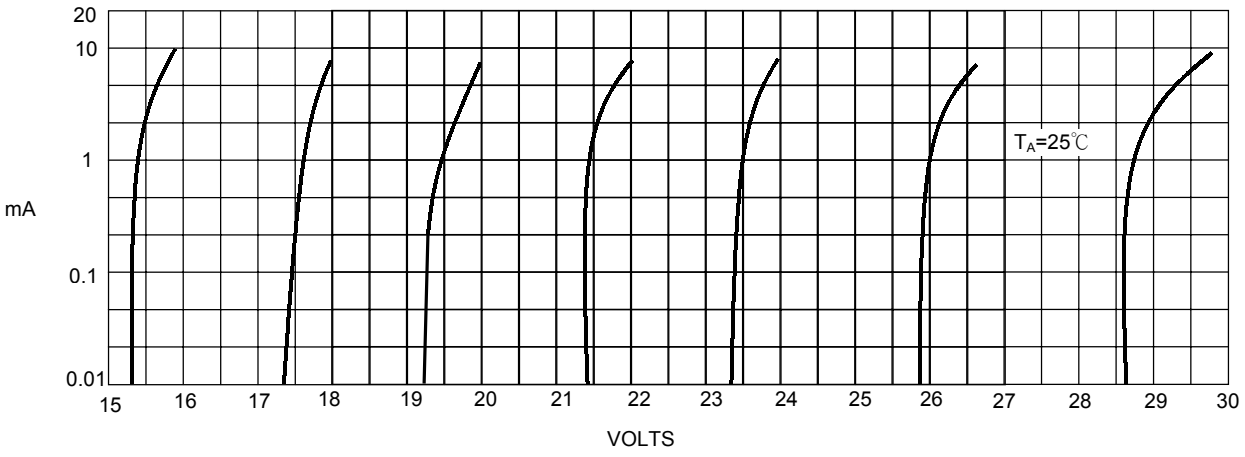
Device to be temperature stabilized with current applied prior to reading breakdown voltage at the specified ambient temperature.

Figure 1
Zener Voltage versus Zener Current – V_z =1 thru 16 Volts



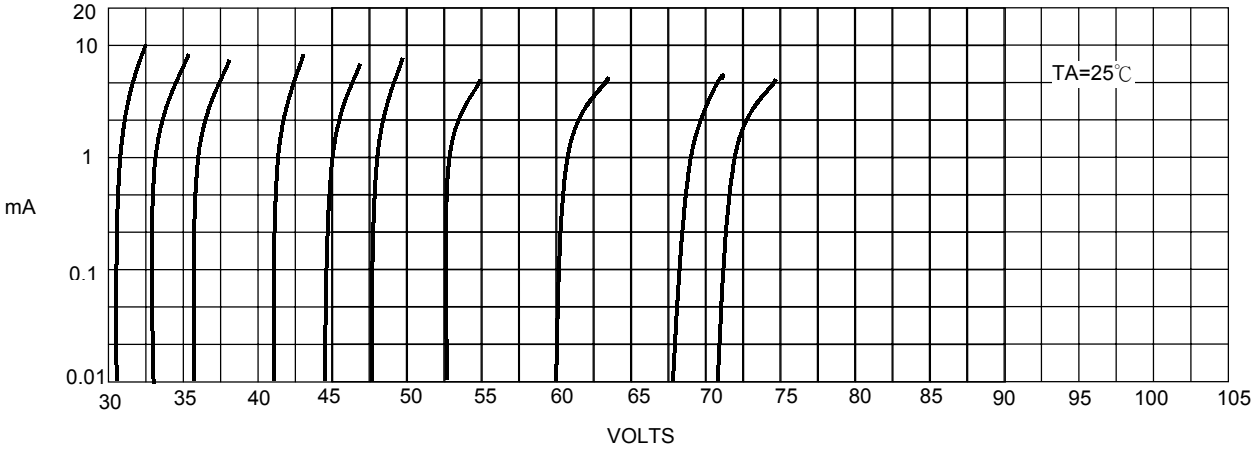
I_Z , ZENER CURRENT - mA
V_Z , ZENER VOLTAGE - V

Figure 2
Zener Voltage versus Zener Current – V_z =15 thru 30 Volts



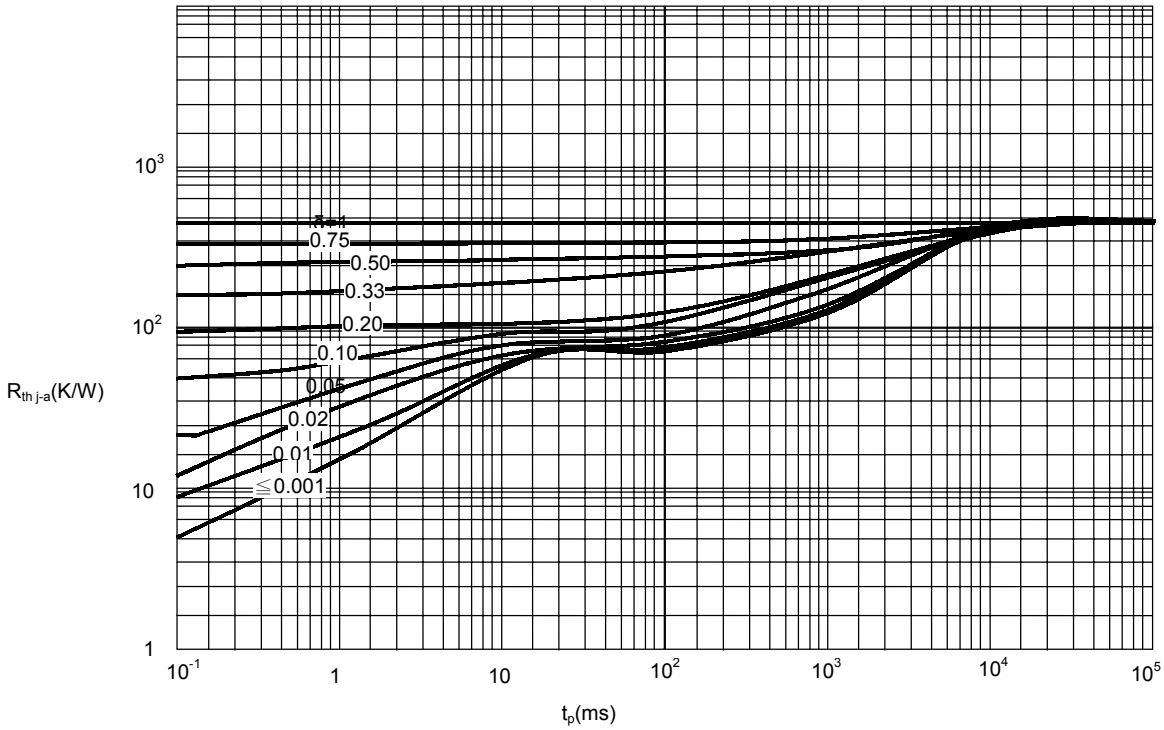
I_Z , ZEBER CURRENT - mA
V_Z , ZENER VOLTAGE - V

Figure 3
Zener Voltage versus Zener Current – V_z =30 thru 75 Volts



I_Z , ZENER CURRENT - mA
V_Z , ZENER VOLTAGE - V

Figure4
Thermal resistance from junction to ambient as a function of pulse duration



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