



Micro Commercial Components



Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

1N5221
THRU
1N5267

Features

- Wide Voltage Range Available
Glass Package
High Temp Soldering: 260°C for 10 Seconds At Terminals
Marking : Cathode band and type number
Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
Moisture Sensitivity: Level 1

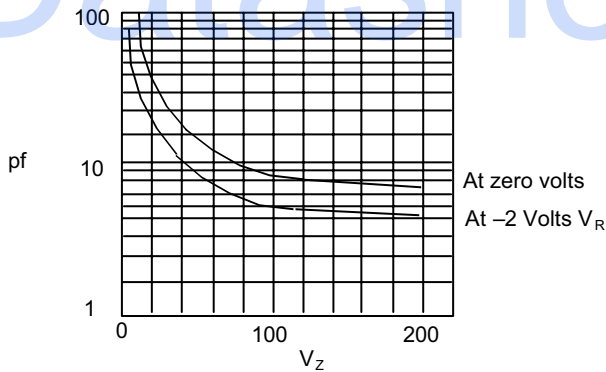
Maximum Ratings

- Operating Temperature: -55°C to +150°C
Storage Temperature: -55°C to +150°C
500 mWatt DC Power Dissipation
Power Derating: 4.0mW/°C above 50°C
Forward Voltage @ 200mA: 1.1 Volts

500 mW
Zener Diode
2.4 to 75 Volts

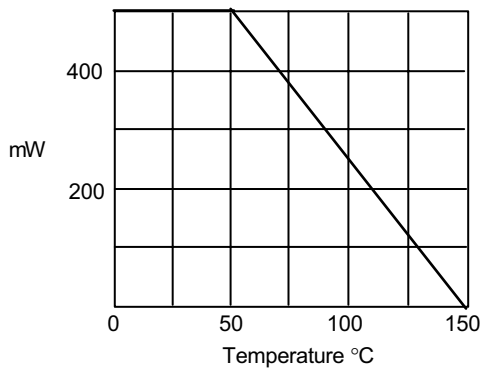
DO-35

Figure 1 - Typical Capacitance



Typical Capacitance (pf) - versus - Zener voltage (Vz)

Figure 2 - Derating Curve



Power Dissipation (mW) - Versus - Temperature °C

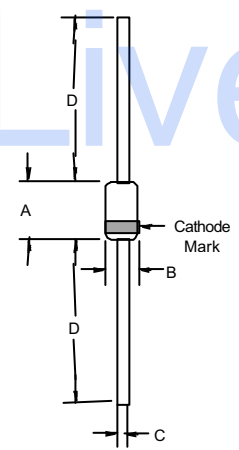


Table with 6 columns: DIM, INCHES (MIN, MAX), MM (MIN, MAX), and NOTE. Rows include dimensions A, B, C, and D.

Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.

# 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		MAXIMUM REVERSE LEAKAGE CURRENT $I_R$ @ $V_R$		MAX. ZENER VOLTAGE TEMP COEFFICIENT 'B' SUFFIX ONLY %/°C
			$Z_{ZT}$ @ $I_{ZT}$	$Z_{ZK}$ @ $I_{ZK} = 0.25mA$	$\mu A$	VOLTS	
			OHMS	OHMS			
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	$\pm 0.055$
1N5230	4.7	20	19	1900	5.0	2.0	$\pm 0.030$
1N5231	5.1	20	17	1600	5.0	2.0	$\pm 0.030$
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	56	+0.098

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

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

NOTE 3: Temperature coefficient ( $\Delta V_Z$ ). Test conditions for temperature coefficient are as follows:

- $I_{ZT} = 7.5mA$ ,  $T_1 = 25^\circ C$ ,  $T_2 = 125^\circ C$  (1N5221 thru 1N5242)
- $I_{ZT} = \text{Rated } I_{ZT}$ ,  $T_1 = 25^\circ C$ ,  $T_2 = 125^\circ C$  (1N5243 thru 1N5267)

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

### 1N5221 thru 1N5267

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

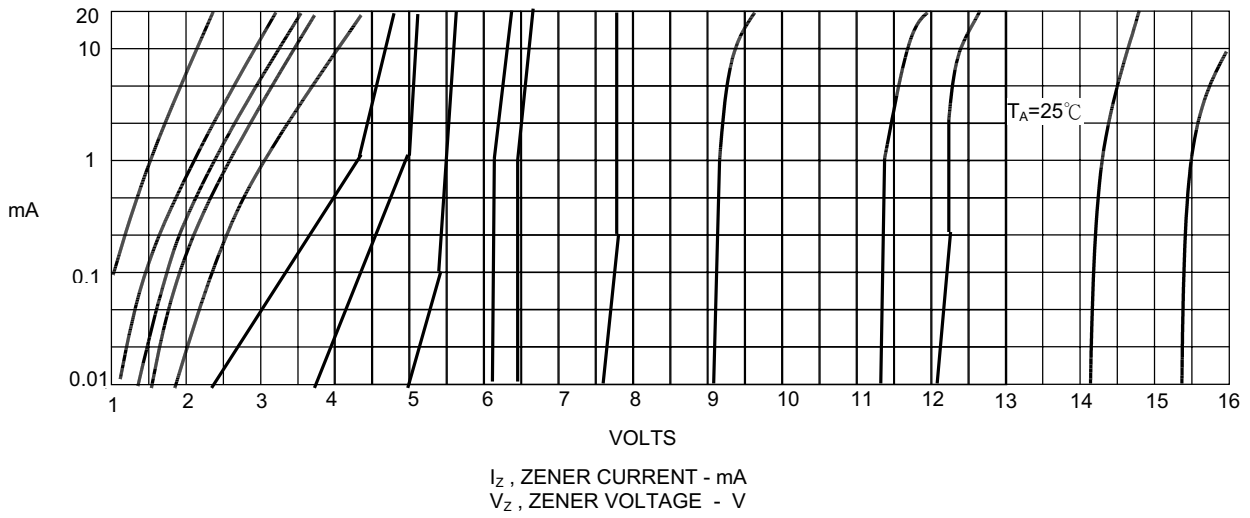
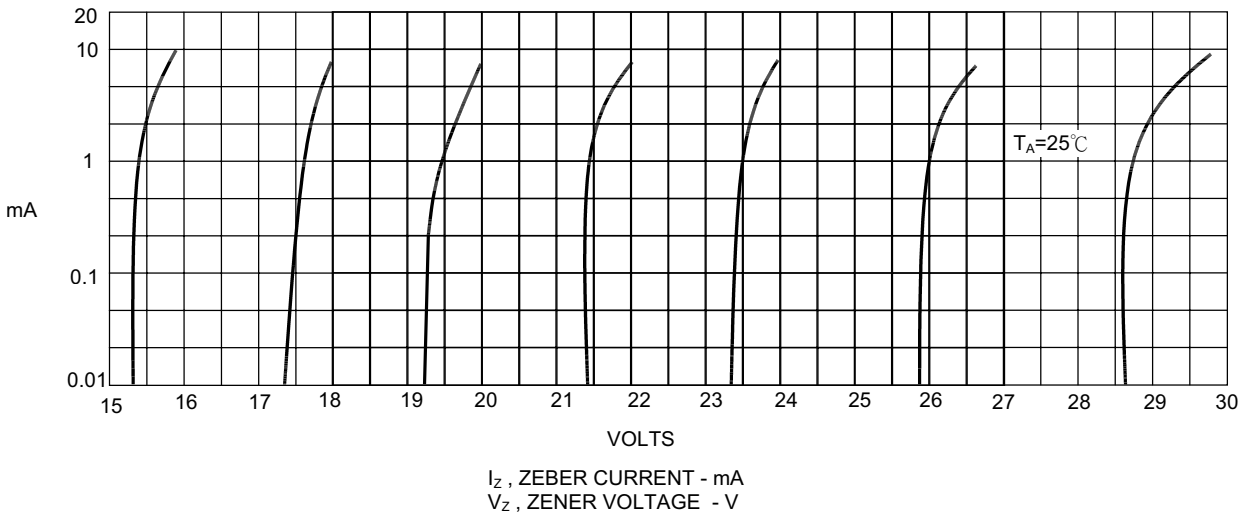


Figure 2  
Zener Voltage versus Zener Current –  $V_z = 15$  thru 30 Volts



# 1N5221 thru 1N5267

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

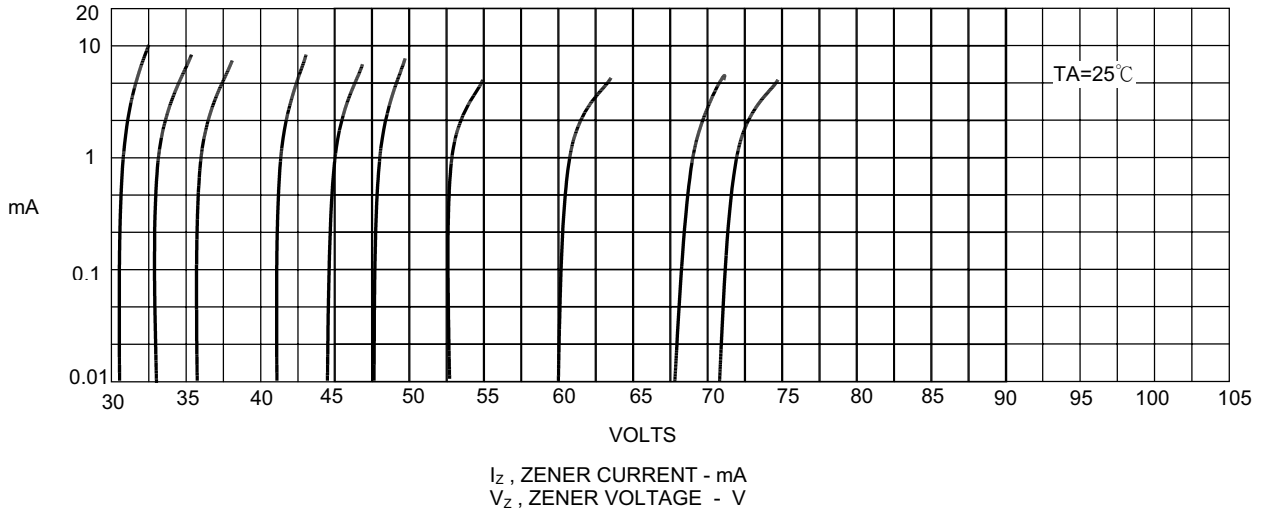
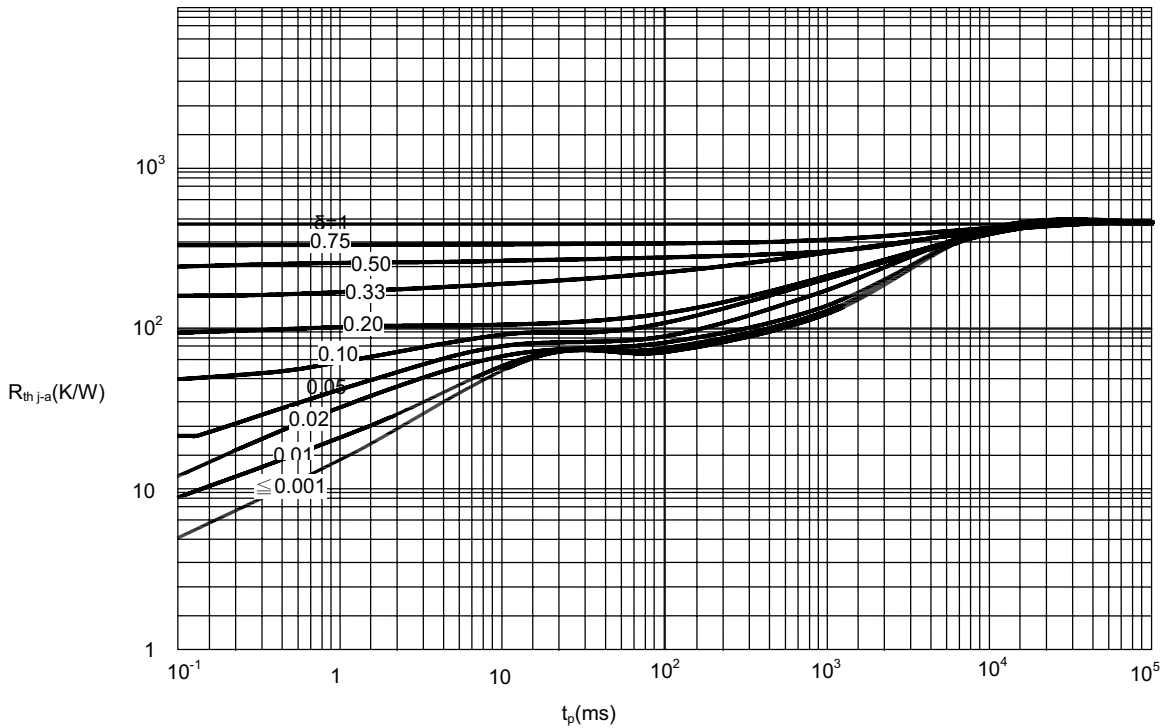


Figure 4  
Thermal resistance from junction to ambient as a function of pulse duration





Micro Commercial Components

### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel
Part Number-AP	Ammo Packing: 5Kpcs/Ammo Box
Part Number-BP	Bulk: 100Kpcs/Carton

**\*\*\*IMPORTANT NOTICE\*\*\***

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.