

# 500mW Surface Mount Zener Diodes

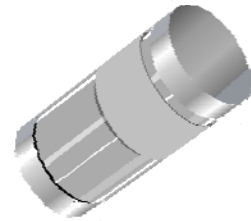
## TZM5221B - TZM5267B

**TAITRON**  
components incorporated

### 500mW Surface Mount Zener Diodes

#### Features

- Planar Die Construction
- 500mW Power Dissipation
- Very Sharp Reverse Characteristic
- Very High Stability
- Low Reverse Current Level
- Standard Zener Voltage Tolerance is  $\pm 5\%$
- Ideally Suited for Automated Assembly Processes
- RoHS Compliant



MiniMelf



#### Mechanical Data

<b>Case:</b>	Molded Glass MiniMelf
<b>Terminals:</b>	Solderable per MIL-STD-202E, Method 208
<b>Polarity:</b>	Color band denotes cathode end
<b>Weight:</b>	Approx. 0.03 grams

#### Maximum Ratings & Electrical Characteristics ( $T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	Value	Unit	Conditions
<b>P<sub>D</sub></b>	Power Dissipation at $T_a=25^{\circ}\text{C}$	500	mW	
<b>V<sub>F</sub></b>	Forward Voltage	1.1	V	$I_F=200\text{mA}$
<b>R<sub>thJA</sub></b>	Thermal Resistance Junction to Ambient	0.3	K/mW	
<b>T<sub>J</sub></b>	Junction Temperature	175	$^{\circ}\text{C}$	
<b>T<sub>STG</sub></b>	Storage Temperature Range	-65 to +175	$^{\circ}\text{C}$	

**Note:** Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

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## TZM5221B - TZM5267B

P/N	Marking Code	Normal Zener Voltage				Max. Zener impedance			Max. reverse leakage current	
		V <sub>Z</sub> @ I <sub>ZT</sub>				Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>zk</sub> @ I <sub>zk</sub>		I <sub>D</sub> @ V <sub>R</sub>	
		Nom.(V)	Min. (V)	Max. (V)	I <sub>ZT</sub> (mA)	Ω	Ω	mA	μA	V <sub>R</sub> (V)
TZM5221B	5221	2.4	2.28	2.52	20.0	30.0	1200	0.25	100	1.0
TZM5222B	5222	2.5	2.38	2.63	20.0	30.0	1200	0.25	100	1.0
TZM5223B	5223	2.7	2.57	2.84	20.0	30.0	1300	0.25	75	1.0
TZM5224B	5224	2.8	2.66	2.94	20.0	30.0	1400	0.25	75	1.0
TZM5225B	5225	3.0	2.85	3.15	20.0	29.0	1600	0.25	50	1.0
TZM5226B	5226	3.3	3.14	3.47	20.0	28.0	1600	0.25	25	1.0
TZM5227B	5227	3.6	3.42	3.78	20.0	24.0	1700	0.25	15	1.0
TZM5228B	5228	3.9	3.71	4.10	20.0	23.0	1900	0.25	10	1.0
TZM5229B	5229	4.3	4.09	4.52	20.0	22.0	2000	0.25	5.0	1.0
TZM5230B	5230	4.7	4.47	4.94	20.0	19.0	1900	0.25	5.0	2.0
TZM5231B	5231	5.1	4.85	5.36	20.0	17.0	1600	0.25	5.0	2.0
TZM5232B	5232	5.6	5.32	5.88	20.0	11.0	1600	0.25	5.0	3.0
TZM5233B	5233	6.0	5.70	6.30	20.0	7.0	1600	0.25	5.0	3.5
TZM5234B	5234	6.2	5.89	6.51	20.0	7.0	1000	0.25	5.0	4.0
TZM5235B	5235	6.8	6.46	7.14	20.0	5.0	750	0.25	3.0	5.0
TZM5236B	5236	7.5	7.13	7.88	20.0	6.0	500	0.25	3.0	6.0
TZM5237B	5237	8.2	7.79	8.61	20.0	8.0	500	0.25	3.0	6.5
TZM5238B	5238	8.7	8.27	9.14	20.0	8.0	600	0.25	3.0	6.5
TZM5239B	5239	9.1	8.65	9.56	20.0	10.0	600	0.25	3.0	7.0
TZM5240B	5240	10	9.50	10.50	20.0	17.0	600	0.25	3.0	8.0
TZM5241B	5241	11	10.45	11.55	20.0	22.0	600	0.25	2.0	8.4
TZM5242B	5242	12	11.40	12.60	20.0	30.0	600	0.25	1.0	9.1
TZM5243B	5243	13	12.35	13.65	9.5	13.0	600	0.25	0.5	9.9
TZM5244B	5244	14	13.30	14.70	9.0	15.0	600	0.25	0.1	10.0
TZM5245B	5245	15	14.25	15.75	8.5	16.0	600	0.25	0.1	11.0
TZM5246B	5246	16	15.20	16.80	7.8	17.0	600	0.25	0.1	12.0
TZM5247B	5247	17	16.15	17.85	7.4	19.0	600	0.25	0.1	13.0
TZM5248B	5248	18	17.10	18.90	7.0	21.0	600	0.25	0.1	14.0
TZM5249B	5249	19	18.05	19.95	6.6	23.0	600	0.25	0.1	14.0
TZM5250B	5250	20	19.00	21.00	6.2	25.0	600	0.25	0.1	15.0
TZM5251B	5251	22	20.90	23.10	5.6	29.0	600	0.25	0.1	17.0

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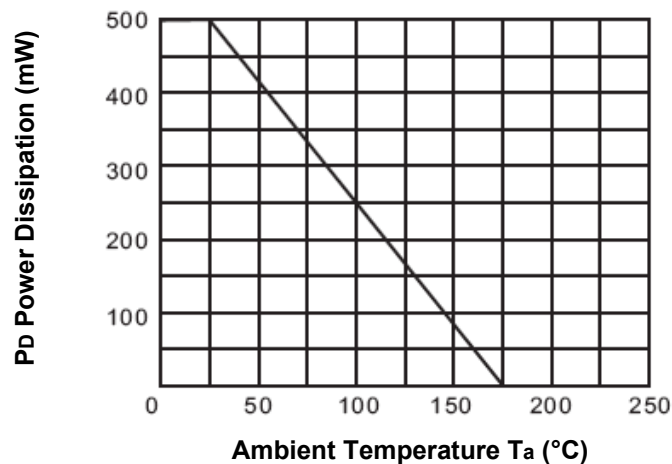
## TZM5221B - TZM5267B

P/N	Marking Code	Normal Zener Voltage				Max. Zener impedance			Max. reverse leakage current	
		VZ @ IZT				ZZT @ IZT	Zzk @ Izk		ID @ VR	
		Nom.(V)	Min. (V)	Max. (V)	IZT (mA)	$\Omega$	$\Omega$	mA	$\mu$ A	VR (V)
TZM5252B	5252	24	22.80	25.20	5.2	33.0	600	0.25	0.1	18.0
TZM5253B	5253	25	23.75	26.25	5.0	35.0	600	0.25	0.1	19.0
TZM5254B	5254	27	25.65	28.35	4.6	41.0	600	0.25	0.1	21.0
TZM5255B	5255	28	26.60	29.40	4.5	44.0	600	0.25	0.1	21.0
TZM5256B	5256	30	28.50	31.50	4.2	49.0	600	0.25	0.1	23.0
TZM5257B	5257	33	31.35	34.65	3.8	58.0	700	0.25	0.1	25.0
TZM5258B	5258	36	34.20	37.80	3.4	70.0	700	0.25	0.1	27.0
TZM5259B	5259	39	37.05	40.95	3.2	80.0	800	0.25	0.1	30.0
TZM5260B	5260	43	40.85	45.15	3.0	93.0	900	0.25	0.1	33.0
TZM5261B	5261	47	44.65	49.35	2.7	105.0	1000	0.25	0.1	36.0
TZM5262B	5262	51	48.45	53.55	2.5	125.0	1100	0.25	0.1	39.0
TZM5263B	5263	56	53.20	58.80	2.2	150.0	1300	0.25	0.1	43.0
TZM5264B	5264	60	57.00	63.00	2.1	170.0	1400	0.25	0.1	46.0
TZM5265B	5265	62	58.90	65.10	2.0	185.0	1400	0.25	0.1	47.0
TZM5266B	5266	68	64.60	71.40	1.8	230.0	1600	0.25	0.1	52.0
TZM5267B	5267	75	71.25	78.75	1.7	270.0	1700	0.25	0.1	56.0

**Note:** Marking code is available in 2008.

## Characteristics Curves

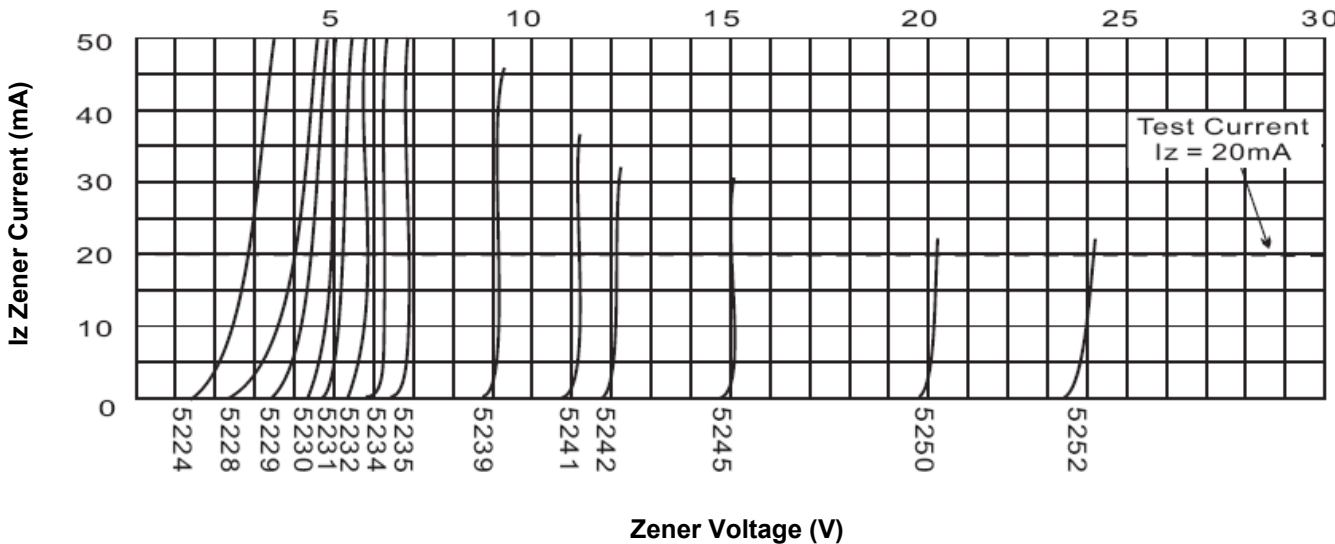
Fig.1 Power Derating Curve



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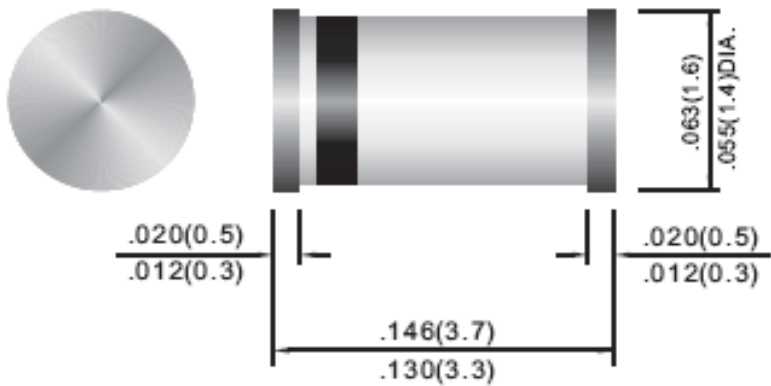
## TZM5221B - TZM5267B

Fig.2 Breakdown Characteristics



### Dimensions in inches (mm)

#### MiniMelf



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