



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
TEL: 2790-0314 FAX: 2790-0206



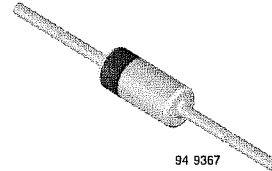
1N5221B to 1N5267B

Vishay Semiconductors

Silicon Zener Diodes

Features

- Silicon Planar Power Zener Diodes.
- Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix. Other tolerances are available upon request.
- These diodes are also available in MiniMELF case with the type designation TZM5221 ... TZM5267, SOT-23 case with the type designation MMBZ5225 ... MMBZ5267 and SOD-123 case with the types designation MMSZ5225 ... MMSZ5267



Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 130 mg

Packaging codes/options:

TAP / 10k per Ammopack (52 mm tape), 30k/box

TR / 10k per 13 " reel , 30k/box

Applications

Voltage stabilization

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Power dissipation	$T_L \leq 75\text{ }^\circ\text{C}$	P_V	500	mW
Z-current		I_Z	P_V/V_Z	mA
Junction temperature		T_j	200	$^\circ\text{C}$
Storage temperature range		T_{stg}	- 65 to + 200	$^\circ\text{C}$

Maximum Thermal Resistance

$T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction ambient	$l = 9.5\text{ mm (3/8 ")}$, $T_L = \text{constant}$	R_{thJA}	300	K/W

Electrical Characteristics

$T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 200\text{ mA}$	V_F			1.1	V



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Electrical Characteristics

1N5221B...1N5267B

Partnumber	Nominal Zener Voltage ¹⁾	Test Current	Maximum Dynamic Impedance ¹⁾	Maximum Dynamic Impedance	Typical Temperature of Coefficient	Maximum Reverse Leakage Current	
						I_R	V_R
	@ I_{ZT} , V_Z	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ $I_{ZK} = 0.25$ mA	@ I_{ZT}	μ A	V
	V	mA	Ω	Ω	α (%/K)		
1N5221B	2.4	20	30	1200	-0.085	100	1
1N5222B	2.5	20	30	1250	-0.085	100	1
1N5223B	2.7	20	30	1300	-0.080	75	1
1N5224B	2.8	20	30	1400	-0.080	75	1
1N5225B	3	20	29	1600	-0.075	50	1
1N5226B	3.3	20	28	1600	-0.070	25	1
1N5227B	3.6	20	24	1700	-0.065	15	1
1N5228B	3.9	20	23	1900	-0.060	10	1
1N5229B	4.3	20	22	2000	+0.055	5	1
1N5230B	4.7	20	19	1900	+0.030	5	2
1N5231B	5.1	20	17	1600	+0.030	5	2
1N5232B	5.6	20	11	1600	+0.038	5	3
1N5233B	6	20	7	1600	+0.038	5	3.5
1N5234B	6.2	20	7	1000	+0.045	5	4
1N5235B	6.8	20	5	750	+0.050	3	5
1N5236B	7.5	20	6	500	+0.058	3	6
1N5237B	8.2	20	8	500	+0.062	3	6.5
1N5238B	8.7	20	8	600	+0.065	3	6.5
1N5239B	9.1	20	10	600	+0.068	3	7
1N5240B	10	20	17	600	+0.075	3	8
1N5241B	11	20	22	600	+0.076	2	8.4
1N5242B	12	20	30	600	+0.077	1	9.1
1N5243B	13	9.5	13	600	+0.079	0.5	9.9
1N5244B	14	9	15	600	+0.082	0.1	10
1N5245B	15	8.5	16	600	+0.082	0.1	11
1N5246B	16	7.8	17	600	+0.083	0.1	12
1N5247B	17	7.4	19	600	+0.084	0.1	13
1N5248B	18	7	21	600	+0.085	0.1	14
1N5249B	19	6.6	23	600	+0.086	0.1	14
1N5250B	20	6.2	25	600	+0.086	0.1	15
1N5251B	22	5.6	29	600	+0.087	0.1	17
1N5252B	24	5.2	33	600	+0.088	0.1	18
1N5253B	25	5	35	600	+0.089	0.1	19
1N5254B	27	4.6	41	600	+0.090	0.1	21
1N5255B	28	4.5	44	600	+0.091	0.1	21
1N5256B	30	4.2	49	600	+0.091	0.1	23
1N5257B	33	3.8	58	700	+0.092	0.1	25
1N5258B	36	3.4	70	700	+0.093	0.1	27
1N5259B	39	3.2	80	800	+0.094	0.1	30
1N5260B	43	3	93	900	+0.095	0.1	33
1N5261B	47	2.7	105	1000	+0.095	0.1	36
1N5262B	51	2.5	125	1100	+0.096	0.1	39
1N5263B	56	2.2	150	1300	+0.096	0.1	43
1N5264B	60	2.1	170	1400	+0.097	0.1	46



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Partnumber	Nominal Zener Voltage ¹⁾ @ I_{ZT} , V_Z	Test Current I_{ZT}	Maximum Dynamic Impedance ¹⁾ Z_{ZT} @ I_{ZT}	Maximum Dynamic Impedance Z_{ZK} @ $I_{ZK} = 0.25$ mA	Typical Temperature of Coefficient @ I_{ZT}	Maximum Reverse Leakage Current	
						I_R	V_R
	V	mA	Ω	Ω	α (%/K)	μA	V
1N5265B	62	2	185	1400	+0.097	0.1	47
1N5266B	68	1.8	230	1600	+0.097	0.1	52
1N5267B	75	1.7	270	1700	+0.098	0.1	56

¹⁾ Based on dc-measurement at thermal equilibrium; lead length = 9.5 (3/8 "); thermal resistance of heat sink = 30 K/W

Typical Characteristics ($T_{amb} = 25^\circ C$ unless otherwise specified)

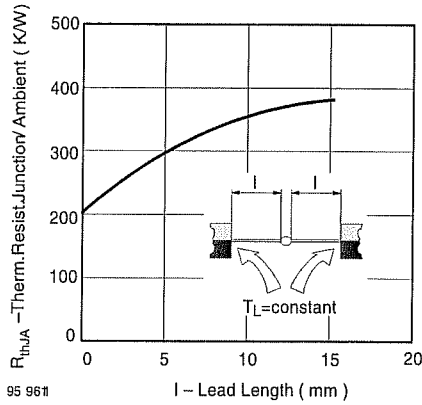


Figure 1. Thermal Resistance vs. Lead Length

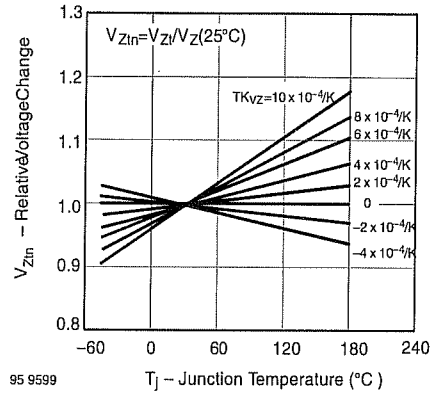


Figure 3. Typical Change of Working Voltage vs. Junction Temperature

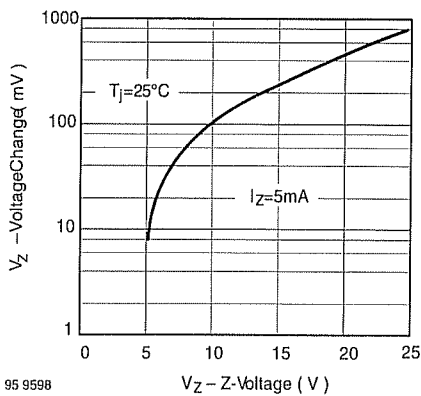


Figure 2. Typical Change of Working Voltage under Operating Conditions at $T_{amb} = 25^\circ C$

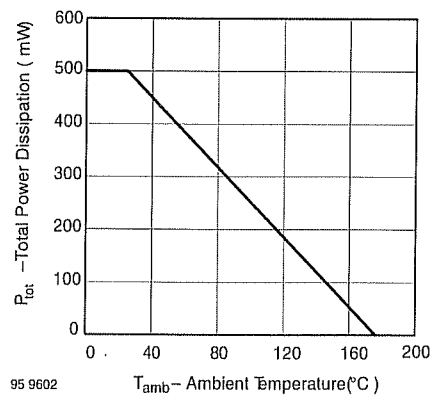


Figure 4. Total Power Dissipation vs. Ambient Temperature



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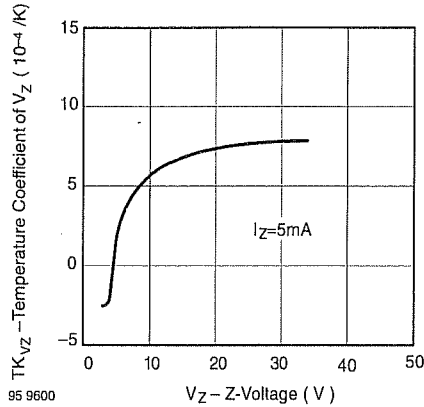


Figure 5. Temperature Coefficient of Vz vs. Z-Voltage

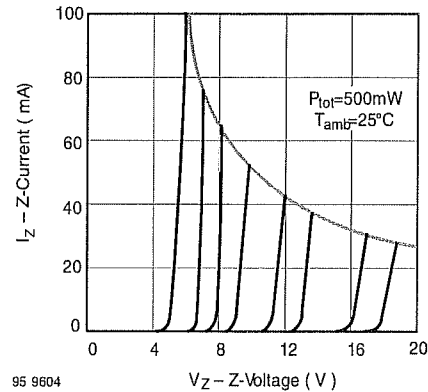


Figure 8. Z-Current vs. Z-Voltage

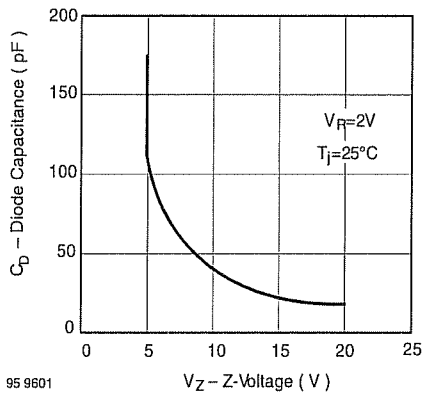


Figure 6. Diode Capacitance vs. Z-Voltage

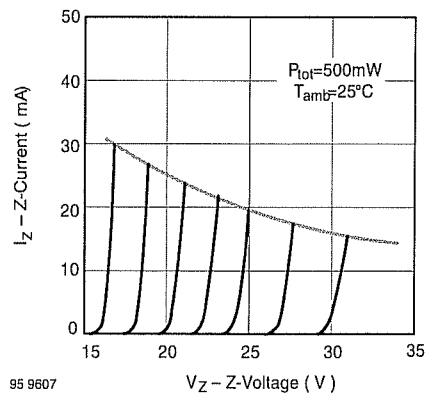


Figure 9. Z-Current vs. Z-Voltage

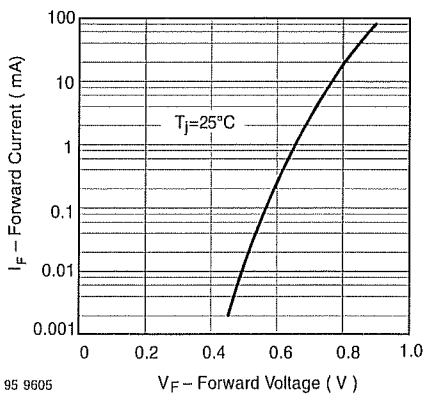


Figure 7. Forward Current vs. Forward Voltage

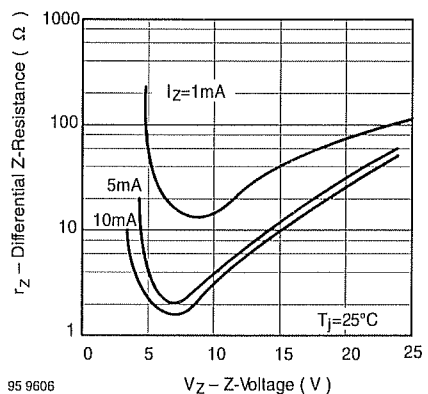


Figure 10. Differential Z-Resistance vs. Z-Voltage



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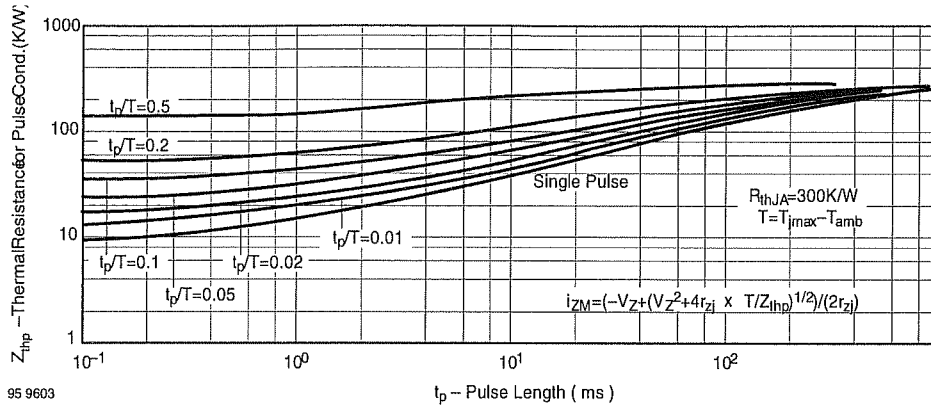


Figure 11. Thermal Response

Package Dimensions in mm



technical drawings according to DIN specifications

94 9366

Standard Glass Case
54 A 2 DIN 41880
JEDEC DO 35
Weight max. 0.3g

