

Zener Diodes

U1ZB3.3 - U1ZB390

Features

- Silicon planar power ,zener diodes
- For use in stabilizing and clipping circuits with high
- Standard zener voltage tolerance is $\pm 10\%$.
- RoHS compliant with Halogen-free

HF



Mechanical Data

- Case: SMA molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202,Method 208
- Polarity: Color band denotes cathode end

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Power dissipation at $T_A = 25^\circ\text{C}$	P_{tot}	1.0	W
Junction temperature	T_J	-40 ~ +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-40 ~ +150	$^\circ\text{C}$

Note^{*1}: Valid provided that leads at a distance of 10 mm from case are kept at ambient temperature.

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U1ZB3.3 - U1ZB390

Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Type	Marking Code	Nominal Zener Voltage					Temperature Coefficient of Zener Voltage αV_Z mV/°C	Forward Voltage		Reverse Current		
		Zener Voltage V_Z V			Zener Impedance Z_{ZT} Ω	Measurement Current I_{ZT} mA		V_F V	Measurement Current I_F A	I_R μA	Measurement Voltage V_R V	
		Min	Typ	Max	Max.			Max		Max		
U1ZB3.3	ZB3.3	3.0	3.3	3.6	60	10	-	-	1.2	0.2	10	1.0
U1ZB3.6	ZB3.6	3.3	3.6	3.9	60	10	-	-	1.2	0.2	10	1.0
U1ZB3.9	ZB3.9	3.5	3.9	4.3	60	10	-	-	1.2	0.2	10	1.0
U1ZB4.7	ZB4.7	4.3	4.7	5.2	60	10	-	-	1.2	0.2	10	1.0
U1ZB5.1	ZB5.1	4.6	5.1	5.6	60	10	-	-	1.2	0.2	10	1.5
U1ZB5.6	ZB5.6	5.1	5.6	6.2	60	10	-	-	1.2	0.2	10	2.5
U1ZB6.2	ZB6.2	5.6	6.2	6.9	60	10	-	-	1.2	0.2	10	3.0
U1ZB6.8	ZB6.8	6.2	6.8	7.4	60	10	3.0	4.0	1.2	0.2	10	3.0
U1ZB7.5	ZB7.5	6.8	7.5	8.3	30	10	4.0	5.0	1.2	0.2	10	4.5
U1ZB8.2	ZB8.2	7.4	8.2	9.1	30	10	4.0	6.0	1.2	0.2	10	4.9
U1ZB9.1	ZB9.1	8.2	9.1	10.1	30	10	5.0	8.0	1.2	0.2	10	5.5
U1ZB10	ZB10	9.0	10	11.0	30	10	6.0	9.0	1.2	0.2	10	6.0
U1ZB11	ZB11	9.9	11	12.1	30	10	7.0	11	1.2	0.2	10	7.0
U1ZB12	ZB12	10.8	12	13.2	30	10	8.0	13	1.2	0.2	10	8.0
U1ZB13	ZB13	11.7	13	14.3	30	10	9.0	14	1.2	0.2	10	9.0
U1ZB15	ZB15	13.5	15	16.5	30	10	11	17	1.2	0.2	10	10
U1ZB16	ZB16	14.4	16	17.6	30	10	12	19	1.2	0.2	10	11
U1ZB18	ZB18	16.2	18	19.8	30	10	14	23	1.2	0.2	10	13
U1ZB20	ZB20	18.0	20	22.0	30	10	16	26	1.2	0.2	10	14
U1ZB22	ZB22	19.8	22	24.2	30	10	18	28	1.2	0.2	10	16
U1ZB24	ZB24	21.6	24	26.4	30	10	20	32	1.2	0.2	10	17
U1ZB27	ZB27	24.3	27	29.7	30	10	23	36	1.2	0.2	10	19
U1ZB30	ZB30	27.0	30	33.0	30	10	25	40	1.2	0.2	10	21
U1ZB33	ZB33	29.7	33	36.3	30	10	26	41	1.2	0.2	10	26.4
U1ZB36	ZB36	32.4	36	39.6	30	9.0	28	45	1.2	0.2	10	28.8
U1ZB37	ZB37	33.3	37	40.7	30	8.0	29	46	1.2	0.2	10	29.6
U1ZB39	ZB39	35.1	39	42.9	30	8.0	30	49	1.2	0.2	10	31.2
U1ZB43	ZB43	38.7	43	47.3	40	7.0	33	53	1.2	0.2	10	34.4
U1ZB47	ZB47	42.3	47	51.7	65	6.0	38	60	1.2	0.2	10	37.6
U1ZB51	ZB51	45.9	51	56.1	65	6.0	43	68	1.2	0.2	10	40.8
U1ZB56	ZB56	50.4	56	61.6	65	6.0	-	-	1.2	0.2	10	44.8
U1ZB68	ZB68	61.2	68	74.8	120	4.0	57	90	1.2	0.2	10	54.4
U1ZB75	ZB75	67.5	75	82.5	150	4.0	66	104	1.2	0.2	10	60
U1ZB82	ZB82	73.8	82	90.2	170	3.0	71	113	1.2	0.2	10	65.4

Zener Diodes

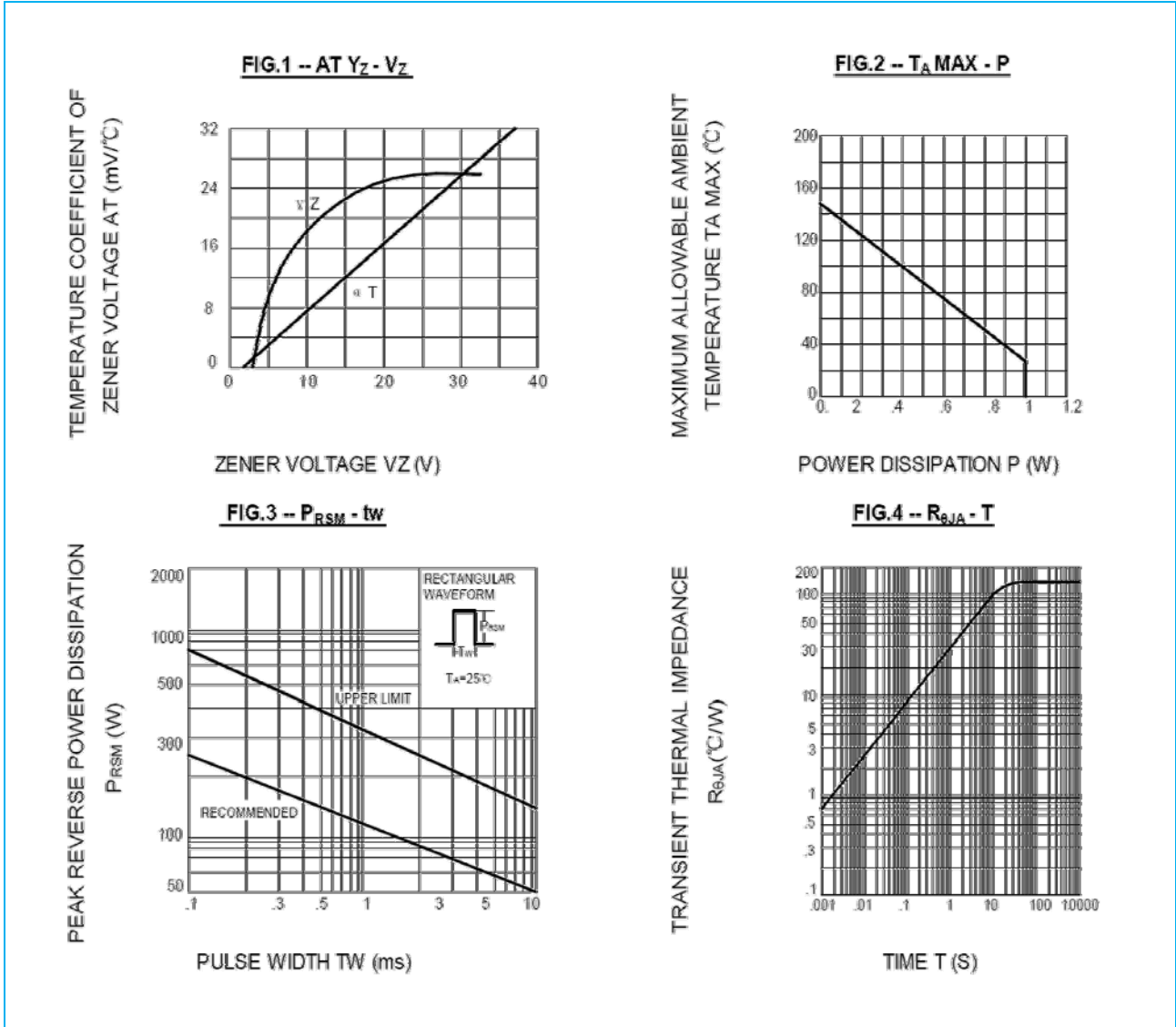
U1ZB3.3 - U1ZB390

Type	Marking Code	Nominal Zener Voltage					Temperature		Forward Voltage		Reverse Current	
		Zener Voltage V_z V			Zener Impedance Z_{ZT} Ω	Measurement Current I_{ZT} mA	Coefficient of Zener Voltage αV_z mV/°C		V_F V	Measurement Current I_F A	I_R μA	Measurement Voltage V_R V
		Min	Typ	Max.	Max		Typ	Max	Max.		Max	
U1ZB100	100	90	100	110	300	3.0	87	138	1.2	0.2	10	80
U1ZB110	110	99	110	121	300	3.0	96	152	1.2	0.2	10	88
U1ZB120	120	108	120	132	450	2.0	105	166	1.2	0.2	10	96
U1ZB130	130	117	130	143	450	2.0	113	180	1.2	0.2	10	104
U1ZB150	150	135	150	165	450	2.0	136	212	1.2	0.2	10	120
U1ZB180	180	162	180	198	500	1.5	161	255	1.2	0.2	10	144
U1ZB200	200	180	200	220		0.5	170	269				160
U1ZB200-Y	200Y	190	200	210			170	269				160
U1ZB200-Z	200Z	200	210	220			178	286				168
U1ZB220	220	198	220	242	5000	0.5	200	309	1.2	0.2	10	176
U1ZB220-Y	220Y	210	220	230			200	309				176
U1ZB220-Z	220Z	220	230	240			207	320				184
U1ZB240	240	216	240	264	5000	0.5	215	325	1.2	0.2	10	192
U1ZB240-Y	240Y	230	240	250			215	325				216
U1ZB240-Z	240Z	240	250	260			225	338				225
U1ZB270	270	243	270	297	5000	0.5	243	385	1.2	0.2	10	216
U1ZB270-X	270X	250	260	270			221	350				234
U1ZB270-Y	270Y	260	270	280			228	362				243
U1ZB270-Z	270Z	270	280	290			236	374				252
U1ZB300	300	270	300	330	5000	0.5	270	428	1.2	0.2	10	240
U1ZB300-X	300X	280	290	300			244	388				261
U1ZB300-Y	300Y	290	300	310			253	402				270
U1ZB300-Z	300Z	300	310	320			261	415				279
U1ZB330	330	297	330	363	5000	0.5	296	470	1.2	0.2	10	264
U1ZB330-X	330X	310	320	330			270	428				288
U1ZB330-Y	330Y	320	330	340			278	441				297
U1ZB330-Z	330Z	330	340	350			287	455				306
U1ZB390	390	351	390	429	10000	0.5	350	555	1.2	0.2	10	312

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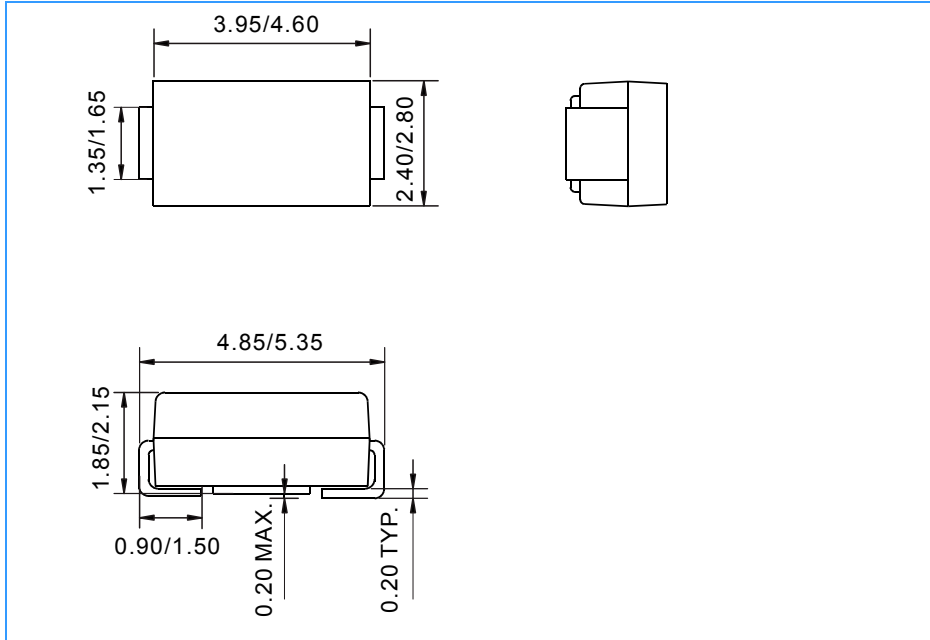
Ratings and Characteristic Curves (@ $T_A=25^\circ\text{C}$ unless otherwise noted)



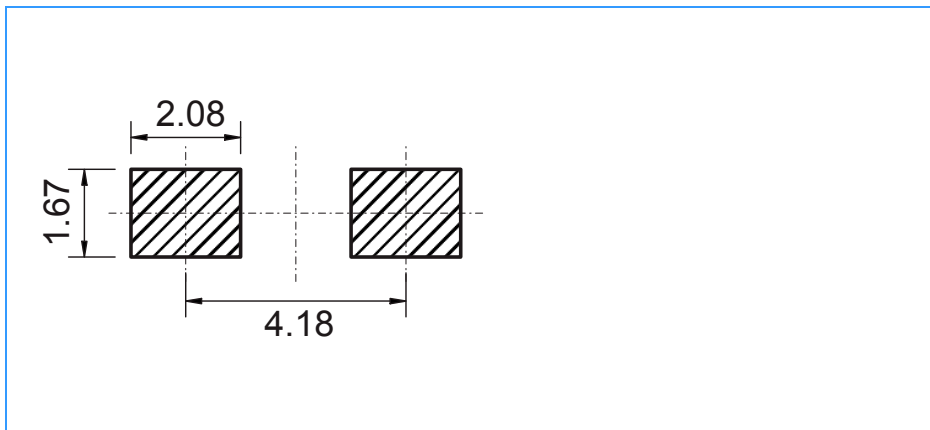
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Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Package	Shipping Quantity
U1ZB3.3 - U1ZB390	SMA	5000 / Tape & Reel