

These Zener diodes are suitable for use in automated surface-mount manufacturing environments. They can be supplied in voltages between 2.0 and 43 V.

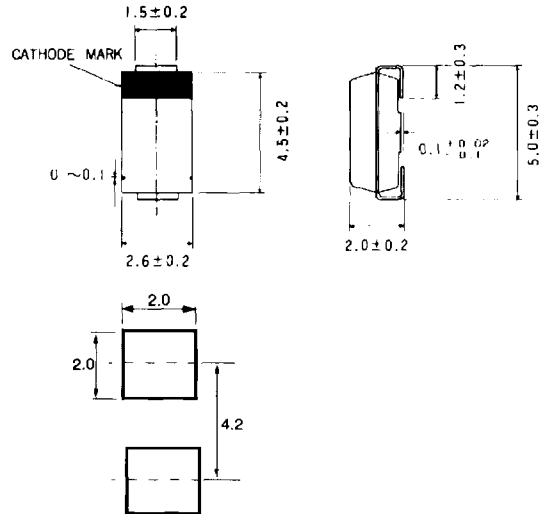
Features

- available in PMDS (PSM) package
- part marking shown in table

Applications

- voltage regulator
- surge voltage suppression

Dimensions (Units : mm)



Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit	Conditions
Power dissipation	P_d	1000	mW	Consider the density of the other power components also.
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	$-40 \sim +150$	$^\circ\text{C}$	

Electrical characteristics (unless otherwise noted, $T_a = 25^\circ\text{C}$) (Sheet 1 of 2)

Part no.	Marking	Zener voltage subdivision ¹				Operating resistance ²		Reverse current	
		Class ³	V_Z (V)		I_Z (mA)	Z_Z (Ω) Max	I_Z (mA)	I_R (μA) Max	V_R (V)
			Min	Max					
PTZ 2.0	2.0A	A	1.880	2.120	40	25	40	200	0.5
	2.0B	B	2.000	2.240					
PTZ 2.2	2.2A	A	2.080	2.330	40	20	40	200	0.7
	2.2B	B	2.200	2.450					
PTZ 2.4	2.4A	A	2.280	2.560	40	15	40	200	1.0
	2.4B	B	2.400	2.700					
PTZ 2.7	2.7A	A	2.500	2.900	40	15	40	200	1.0
	2.7B	B	2.700	3.100					
PTZ 3.0	3.0A	A	2.800	3.200	40	15	40	100	1.0
	3.0B	B	3.000	3.400					
PTZ 3.3	3.3A	A	3.100	3.500	40	15	40	80	1.0
	3.3B	B	3.300	3.700					
PTZ 3.6	3.6A	A	3.400	3.800	40	15	40	60	1.0
	3.6B	B	3.600	4.000					
PTZ 3.9	3.9A	A	3.700	4.100	40	15	40	40	1.0
	3.9B	B	3.900	4.400					
PTZ 4.3	4.3A	A	4.000	4.500	40	15	40	20	1.0
	4.3B	B	4.300	4.800					
PTZ 4.7	4.7A	A	4.400	4.900	40	10	40	20	1.0
	4.7B	B	4.700	5.200					
PTZ 5.1	5.1A	A	4.800	5.400	40	8	40	20	1.5
	5.1B	B	5.100	5.700					
PTZ 5.6	5.6A	A	5.300	6.000	40	8	40	20	1.5
	5.6B	B	5.600	6.300					
PTZ 6.2	6.2A	A	5.800	6.600	40	6	40	20	3.0
	6.2B	B	6.200	7.000					
PTZ 6.8	6.8A	A	6.400	7.200	40	6	40	20	3.5
	6.8B	B	6.800	7.700					
PTZ 7.5	7.5A	A	7.000	7.900	40	4	40	20	4.0
	7.5B	B	7.500	8.400					
PTZ 8.2	8.2A	A	7.700	8.700	40	4	40	20	5.0
	8.2B	B	8.200	9.300					
PTZ 9.1	9.1A	A	8.500	9.600	40	6	40	20	6.0
	9.1B	B	9.100	10.200					

PTZ series Zener diodes

Electrical characteristics (unless otherwise noted, $T_a = 25^\circ\text{C}$) (Sheet 2 of 2)

Part no.	Marking	Zener voltage subdivision ¹				Operating resistance ²		Reverse current	
		Class ³	V_Z (V)		I_Z (mA)	Z_Z (Ω) Max	I_Z (mA)	I_R (μA) Max	V_R (V)
			Min	Max					
PTZ 10	10A	A	9.400	10.600	40	6	40	10	7.0
	10B	B	10.000	11.200					
PTZ 11	11A	A	10.400	11.600	20	8	20	10	8.0
	11B	B	11.000	12.300					
PTZ 12	12A	A	11.400	12.600	20	8	20	10	9.0
	12B	B	12.000	13.500					
PTZ 13	13A	A	12.400	14.100	20	10	20	10	10.0
	13B	B	13.300	15.000					
PTZ 15	15A	A	13.800	15.600	20	10	20	10	11.0
	15B	B	14.700	16.500					
PTZ 16	16A	A	15.300	17.100	20	12	20	10	12.0
	16B	B	16.200	18.300					
PTZ 18	18A	A	16.800	19.100	20	12	20	10	13.0
	18B	B	18.000	20.300					
PTZ 20	20A	A	18.800	21.200	20	14	20	10	15.0
	20B	B	20.000	22.400					
PTZ 22	22A	A	20.800	23.300	10	14	10	10	17.0
	22B	B	22.000	24.500					
PTZ 24	24A	A	22.800	25.600	10	16	10	10	19.0
	24B	B	24.000	27.600					
PTZ 27	27A	A	25.100	28.900	10	16	10	10	21.0
	27B	B	27.000	30.800					
PTZ 30	30A	A	28.000	32.000	10	18	10	10	23.0
	30B	B	30.000	34.000					
PTZ 33	33A	A	31.000	35.000	10	18	10	10	25.0
	33B	B	33.000	37.000					
PTZ 36	36A	A	34.000	38.000	10	20	10	10	27.0
	36B	B	36.000	40.000					
PTZ 39	39A	A	37.000	41.000	10	50	10	10	30.0
PTZ 43	43A	A	40.000	46.000	10	50	10	5	33.0

¹ The Zener voltage subdivision (V_Z) is measured 40 ms after the diode is powered up.

² The operating resistance (Z_Z and Z_{ZK}) is measured by superimposing a minute alternating current in the regulated current (I_Z).

³ When ordering, please specify class A or B.

Electrical characteristic curves

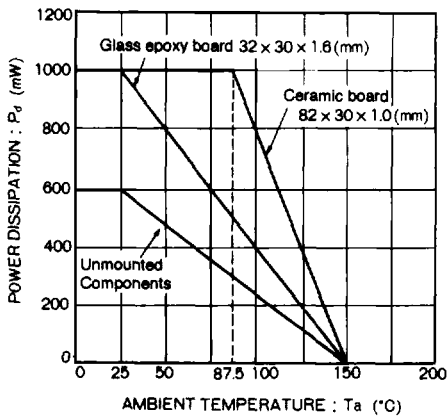


Figure 1

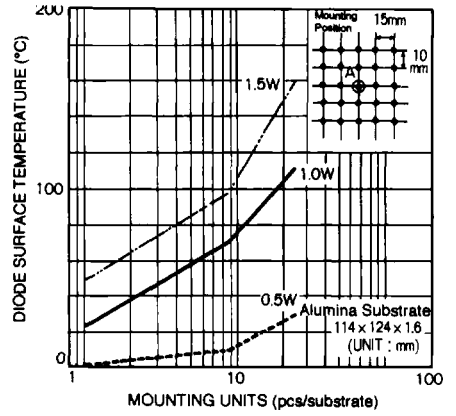


Figure 2

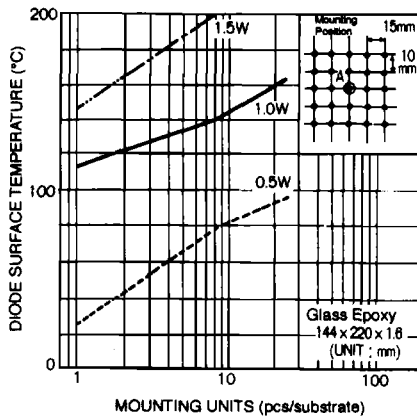


Figure 3