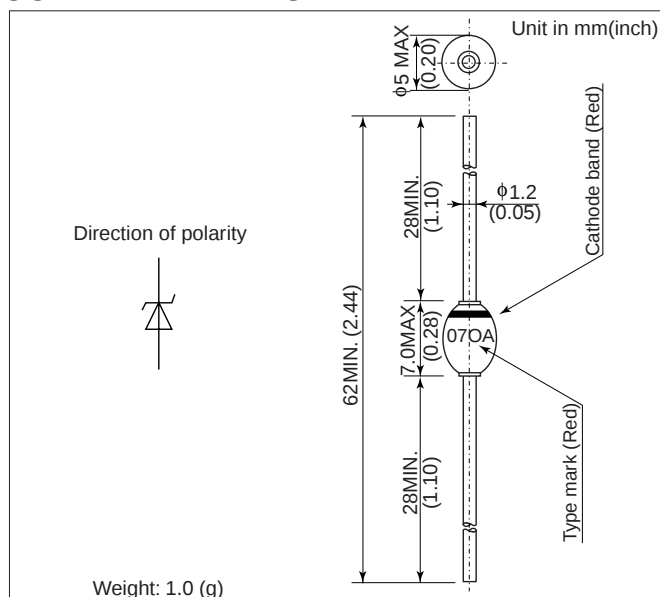


FEATURES

- For stabilized power supply.
- Diffused-junction. Glass passivated and encapsulated.

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

Items	Symbols	Units	Ratings
Permissible Power Dissipation	P	W	2.5
Operating Junction Temperature	T_j	$^{\circ}\text{C}$	-40 ~ +165
Storage Temperature	T_{stg}	$^{\circ}\text{C}$	-40 ~ +165
Maximum Permissible Current	I_{ZM}	mA	Refer to characteristics column
Non-Repetitive Peak Reverse One-Cycle Dissipation	P_{RSM}	Wp	160

Notes (1) Lead mounting : Lead temperature 280 $^{\circ}\text{C}$ max. to 3.2mm from body for 5sec. max..

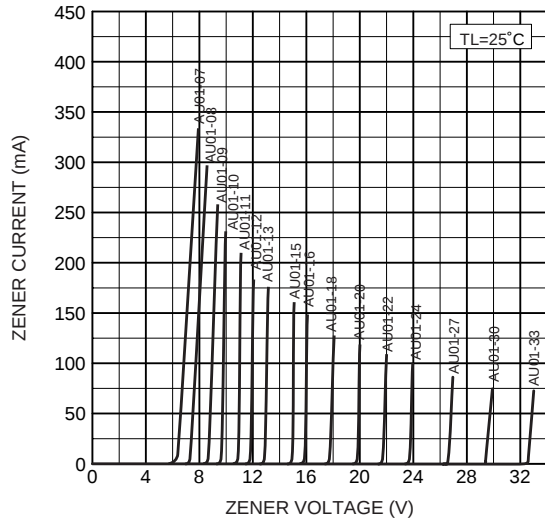
(2) Mechanical strength : Bending 90 $^{\circ}$ ×2 cycles or 180 $^{\circ}$ ×1 cycle, Tensile 3kg, Twist 90 $^{\circ}$ ×1 cycle.

CHARACTERISTICS($T_L=25^{\circ}\text{C}$)

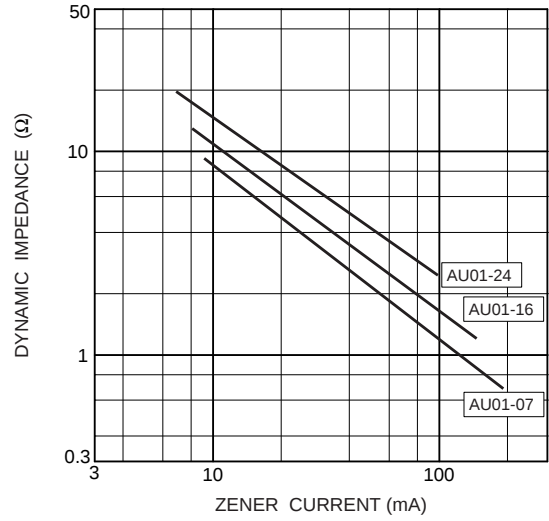
Type	Characteristics				Maximum Permissible Current (TL=85°C) (L=10mm) I _{ZM} (mA)	Typical Zener Voltage Temperature Coefficient γ _Z (%/°C)
	Zener Voltage V _Z (V)		Maximum Dynamic Impedance Z _Z (ohm)	Test Current I _Z (mA)		
	Minimum	Maximum				
AU01-07	6.2	7.9	7	65	335	0.035
AU01-08	7.7	8.7	3	65	300	0.052
AU01-09	8.5	9.6	3	65	260	0.062
AU01-10	9.4	10.6	5	65	235	0.067
AU01-11	10.4	11.6	5	65	210	0.070
AU01-12	11.4	12.7	8	65	185	0.074
AU01-13	12.4	14.1	8	65	175	0.076
AU01-15	13.5	15.6	12	40	162	0.080
AU01-16	15.3	17.1	12	40	150	0.082
AU01-18	16.8	19.1	15	40	130	0.084
AU01-20	18.8	21.2	15	40	120	0.086
AU01-22	20.8	23.3	15	40	107	0.087
AU01-24	22.7	25.6	15	25	100	0.089
AU01-27	25.1	28.9	15	25	87	0.090
AU01-30	28.0	32.0	15	25	80	0.091
AU01-33	31.0	35.0	15	25	75	0.092

AU01

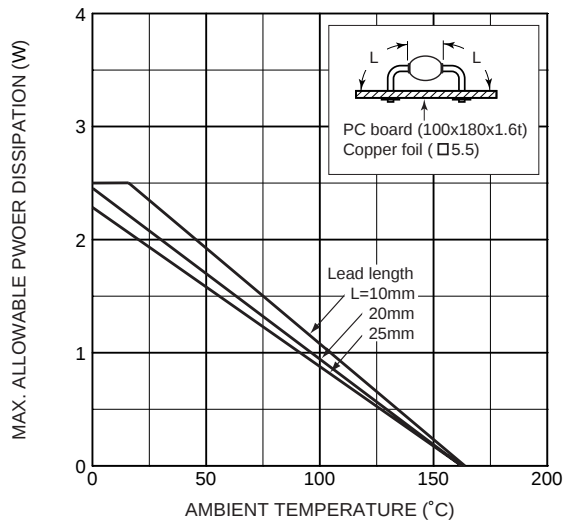
Typical zener characteristics



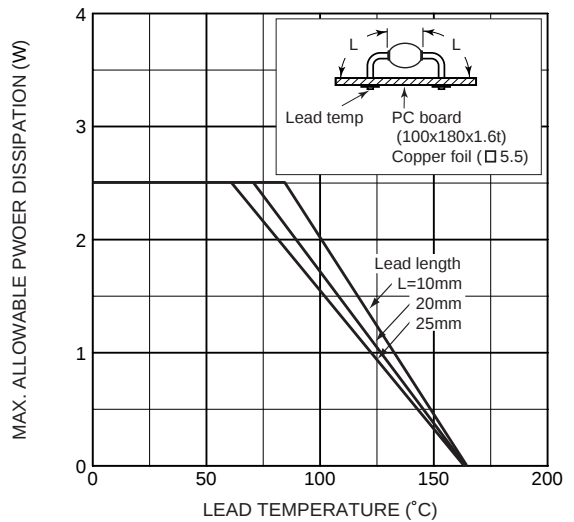
Typical dynamic impedance vs. zener current



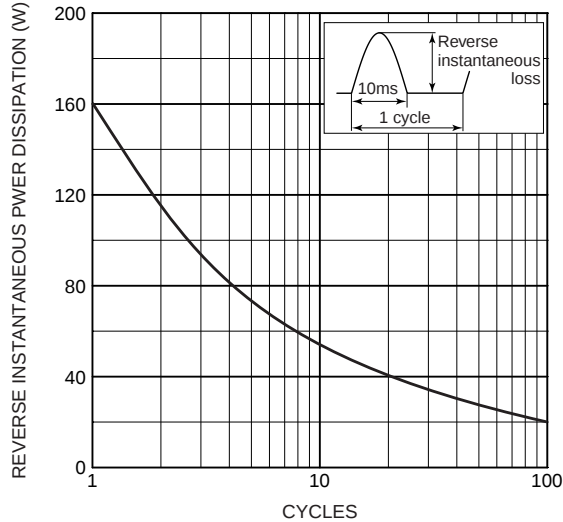
Max. allowable power dissipation vs. ambient temperature



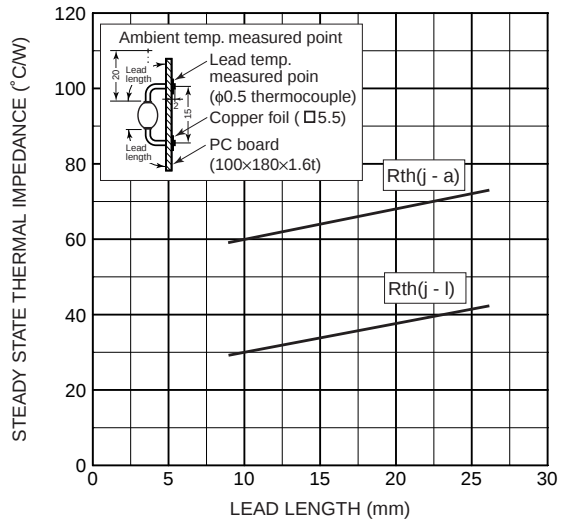
Max. allowable power dissipation vs. lead temperature



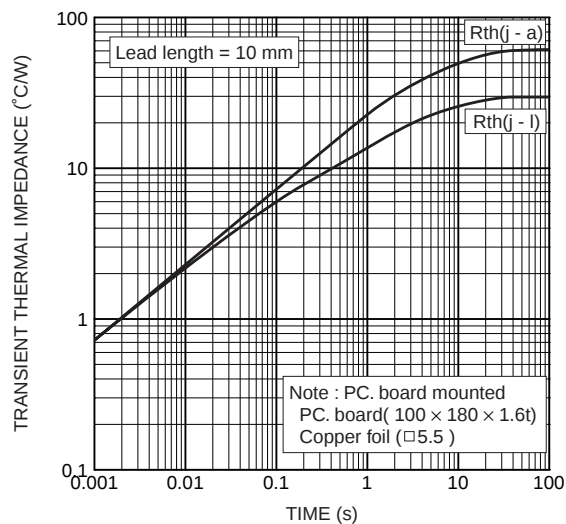
Reverse power characteristic
(Non-repetitive)



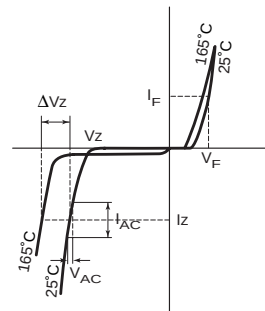
Steady state thermal impedance



Transient thermal impedance



Definition of zener characteristics



ΔV_Z : Zener voltage change

V_Z : Zener voltage (Test current I_Z)

I_Z : Test current

Z_Z : Dynamic impedance = V_{AC} / I_{AC}

I_F : Forward current

V_F : Forward voltage drop

γ_Z : Zener voltage average temperature coefficients

$$= \frac{\Delta V_Z}{V_Z} \times \frac{1}{(165-25)} \times 100$$

HITACHI POWER SEMICONDUCTORS

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