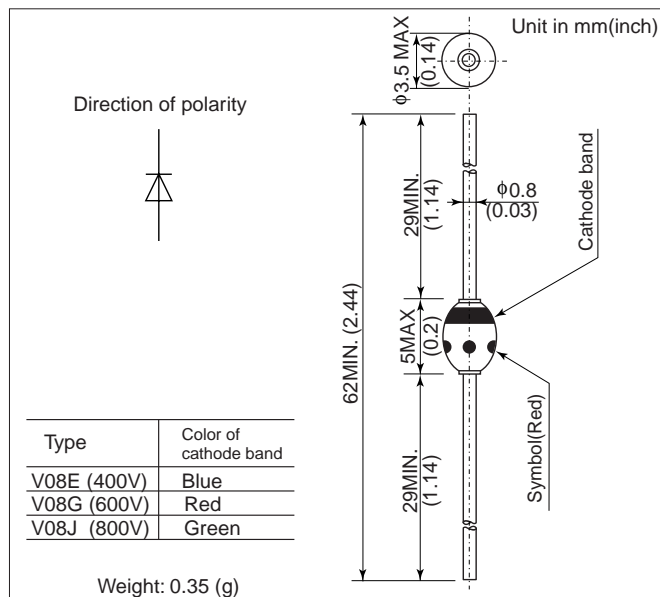


V08

FEATURES

- Transient surge voltage protection.
- Diffused-junction. Glass passivated and encapsulated.

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

Items	Type	V08E	V08G	V08J
Repetitive Peak Reverse Voltage	V_{RRM}	V	400	600
Peak Reverse Power	P_{RM}	W	40($T_j = 165^{\circ}\text{C}$, Pulse duration 1ms Non-repetitive)	
Average Forward Current	$I_{F(AV)}$	A	1.1 (Single-phase half sine wave 180° conduction $T_L=90^{\circ}\text{C}$, Lead length = 10mm)	
Surge(Non-Repetitive) Forward Current	I_{FSM}	A	35(Without PIV, 10ms conduction, $T_j = 175^{\circ}\text{C}$ start)	
I^2t Limit Value	I^2t	A^2s	4.9(Time = 2 ~ 10ms, I = RMS value)	
Operating Junction Temperature	T_j	$^{\circ}\text{C}$	-65 ~ +175	
Storage Temperature	T_{stg}	$^{\circ}\text{C}$	-65 ~ +200	

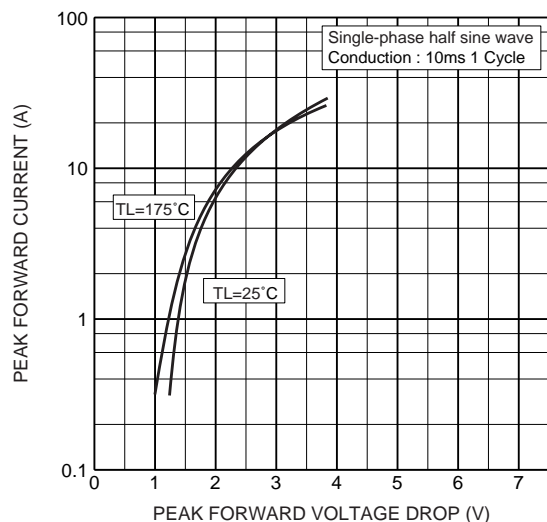
Notes (1) Lead mounting : Lead temperature 300°C max. to 3.2mm from body for 5sec. max..

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

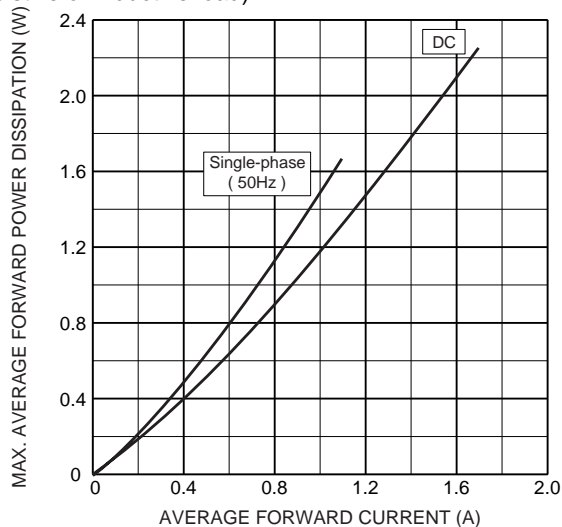
CHARACTERISTICS($T_L=25^{\circ}\text{C}$)

Items	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Peak Reverse Current	I_{RRM}	μA	—	0.6	10	All class, Rated V_{RRM}
Peak Forward Voltage	V_{FM}	V	—	—	1.4	$I_{FM}=1.1A_p$, Single-phase half sine wave 1 cycle
Reverse Recovery Time	t_{rr}	μs	—	3.0	—	$I_F=2\text{mA}$, $V_R=-15\text{V}$
Avalanche Voltage	V_{AVL}	V	V_{RRM}	—	1600	$I_{RM}=1.0\text{mA}$, Single-phase half sine wave 1 pps, Time $\leq 5\text{s}$
Steady State Thermal Impedance	$R_{th(j-a)}$	$^{\circ}\text{C/W}$	—	—	80	Lead length = 10 mm
	$R_{th(j-l)}$				50	

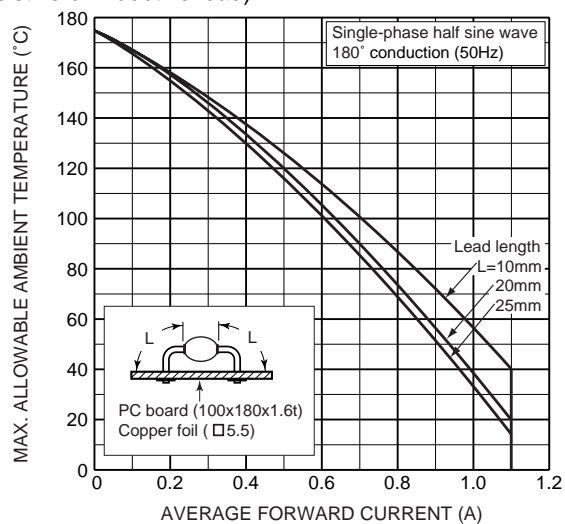
Forward characteristics



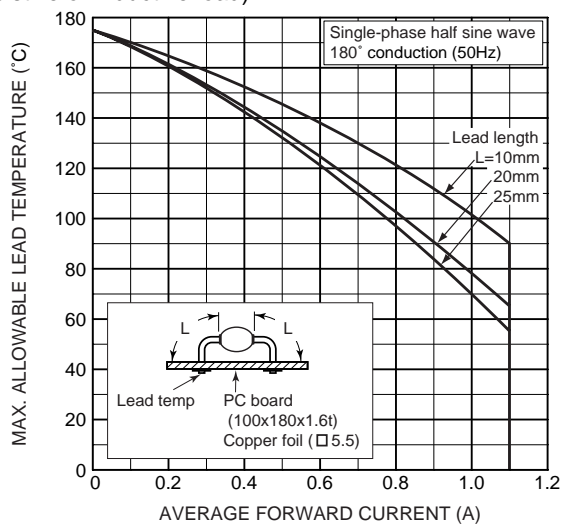
Max. average forward power dissipation
(Resistive or inductive load)



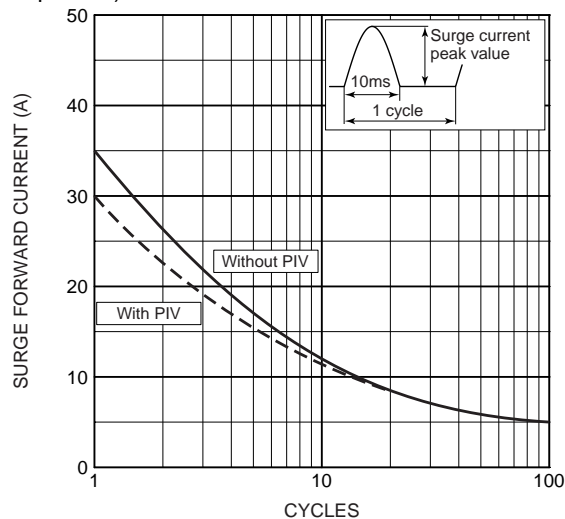
Max. allowable ambient temperature
(Resistive or inductive load)



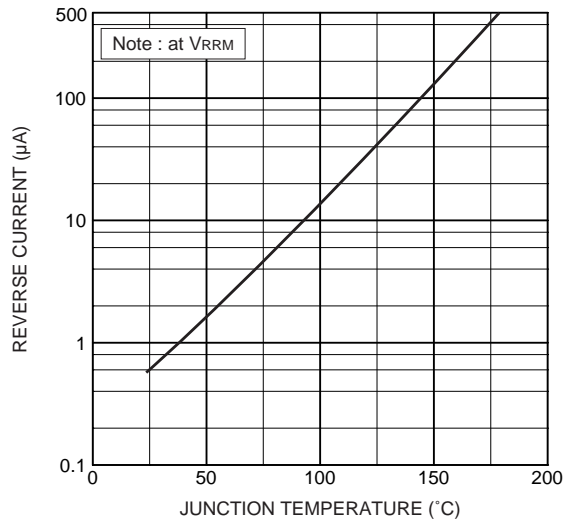
Max. allowable lead temperature
(Resistive or inductive load)



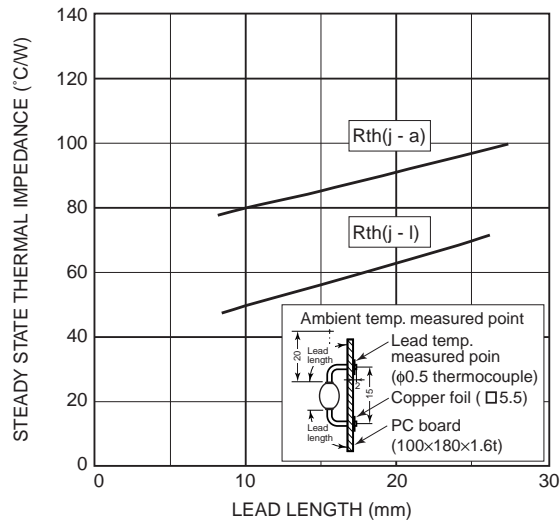
Surge forward current characteristic
(Non-repetitive)



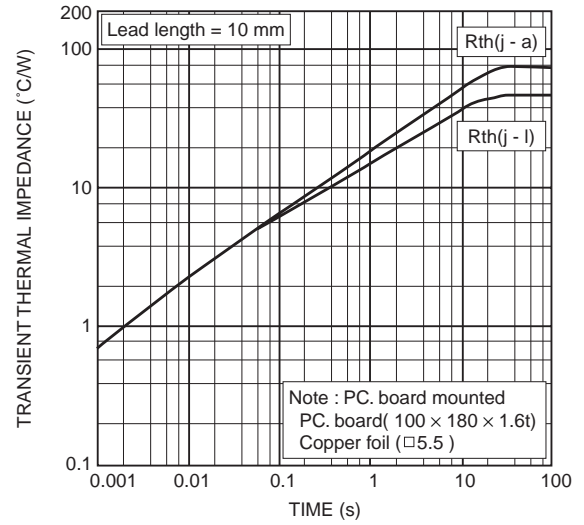
Typ. Reverse current vs. junction temperature



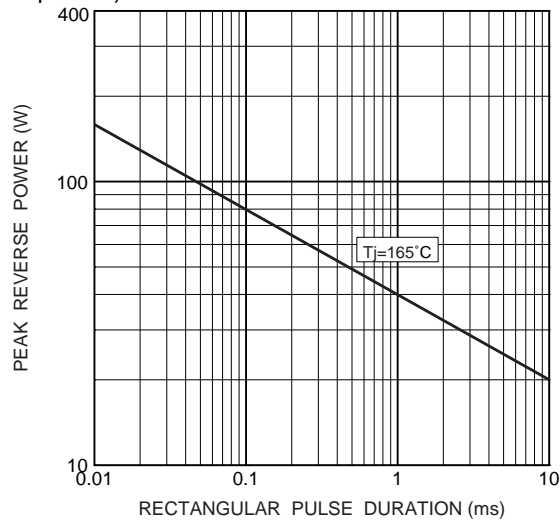
Steady-state thermal impedance



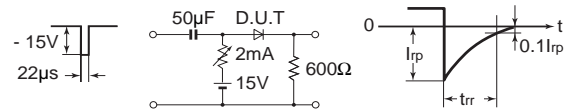
Transient thermal impedance



Typical reverse power characteristic (Non-repetitive)



Reverse recovery time (t_{rr}) test circuit



HITACHI POWER SEMICONDUCTORS

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