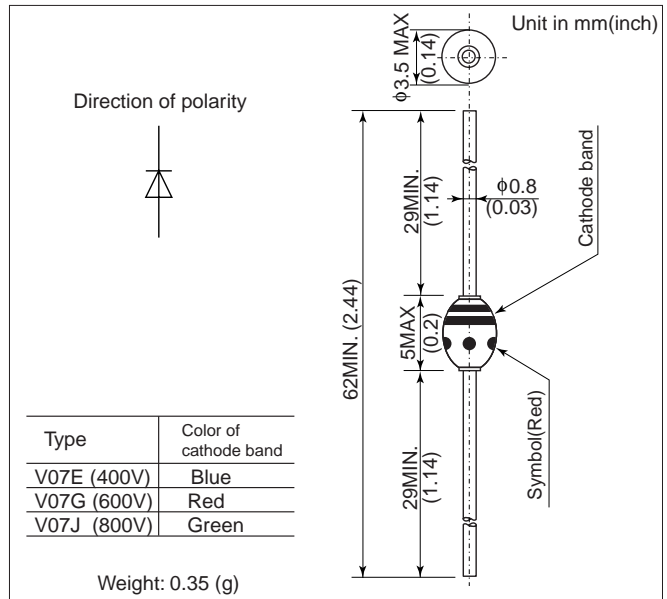


# V07

## FEATURES

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

## OUTLINE DRAWING



## ABSOLUTE MAXIMUM RATINGS

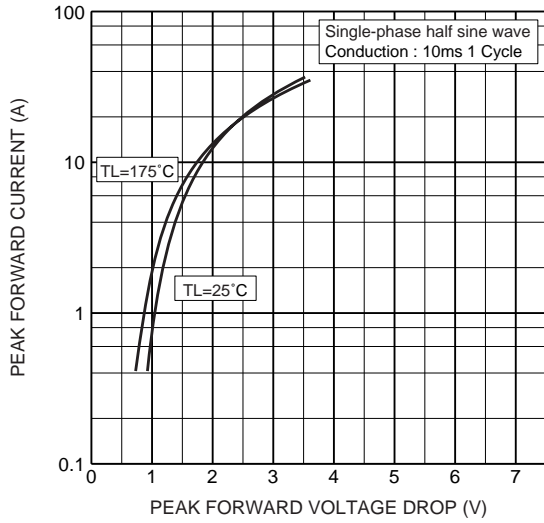
Items	Type		V07E	V07G	V07J
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	400	600	800
Peak Reverse Power	$P_{RM}$	W	40( $T_j = 165^\circ\text{C}$ , Pulse duration 1ms Non-repetitive )		
Average Forward Current	$I_{F(AV)}$	A	1.3 ( Single-phase half sine wave $180^\circ$ conduction $T_L=90^\circ\text{C}$ , Lead length = 10mm )		
Surge(Non-Repetitive) Forward Current	$I_{FSM}$	A	40( Without PIV, 10ms conduction, $T_j = 175^\circ\text{C}$ start )		
$I^2t$ Limit Value	$I^2t$	$\text{A}^2\text{s}$	6.4( 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  $300^\circ\text{C}$  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.

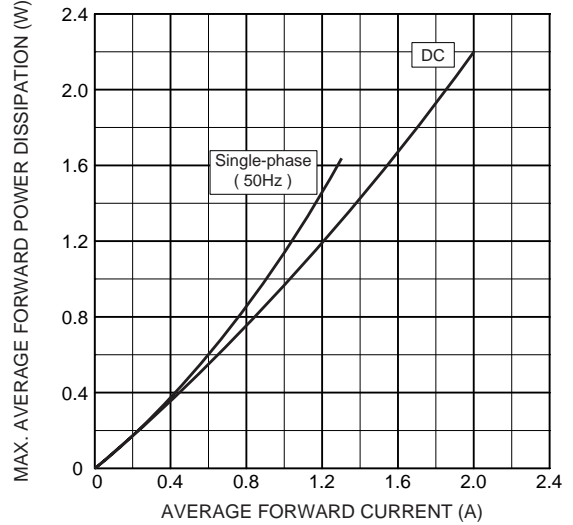
## CHARACTERISTICS( $T_L=25^\circ\text{C}$ )

Items	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Peak Reverse Current	$I_{RRM}$	$\mu\text{A}$	—	0.6	10	All class, Rated $V_{RRM}$
Peak Forward Voltage	$V_{FM}$	V	—	—	1.1	$I_{FM}=1.3A_p$ , Single-phase half sine wave 1 cycle
Reverse Recovery Time	$t_{rr}$	$\mu\text{s}$	—	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	

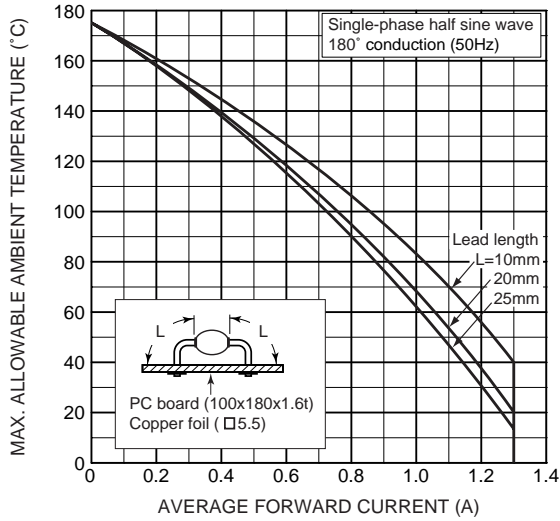
## Forward characteristics



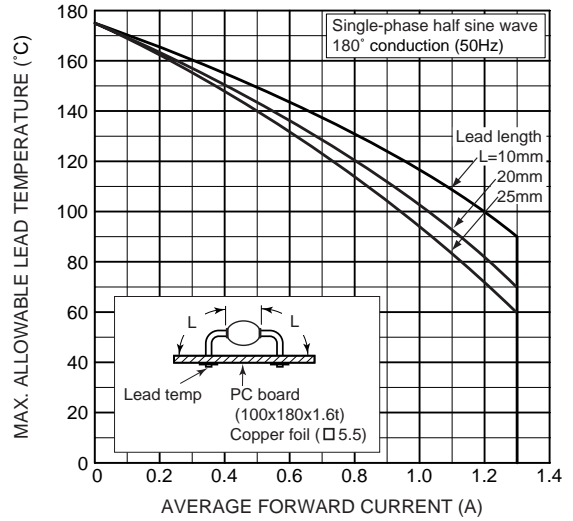
## Max. average forward power dissipation (Resistive or inductive load)



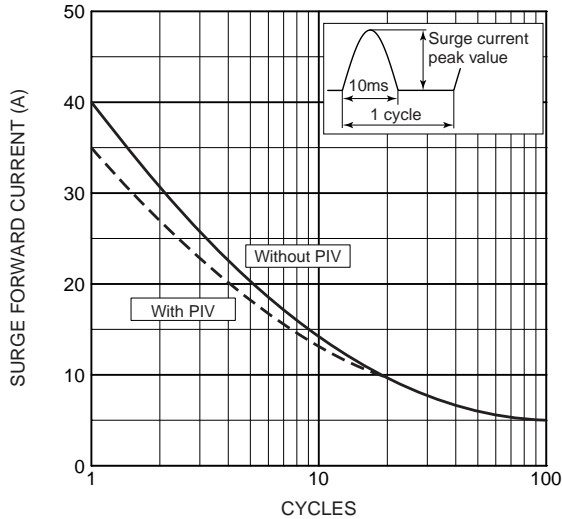
## Max. allowable ambient temperature (Resistive or inductive load)



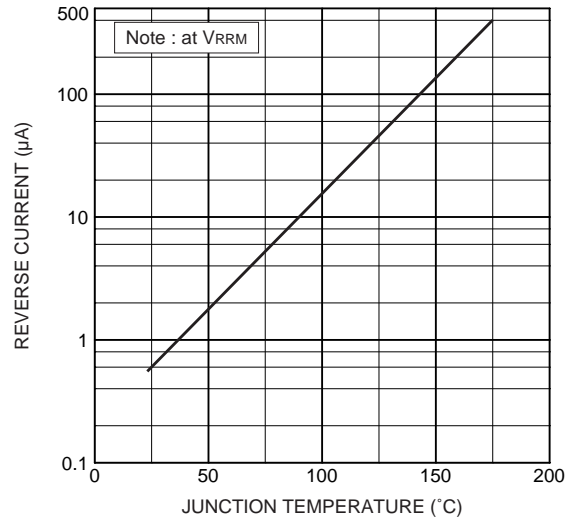
## Max. allowable lead temperature (Resistive or inductive load)



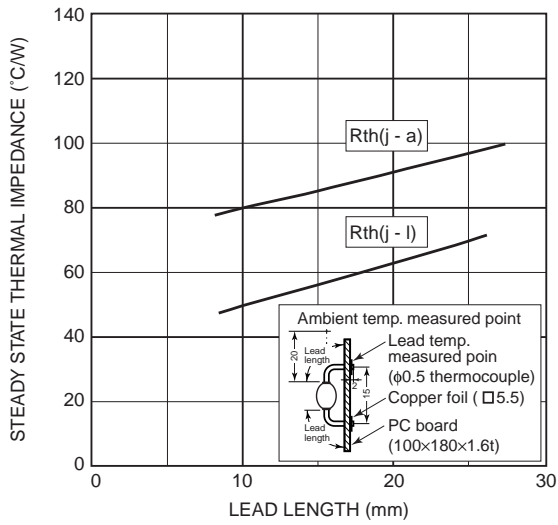
## Surge forward current characteristic (Non-repetitive)



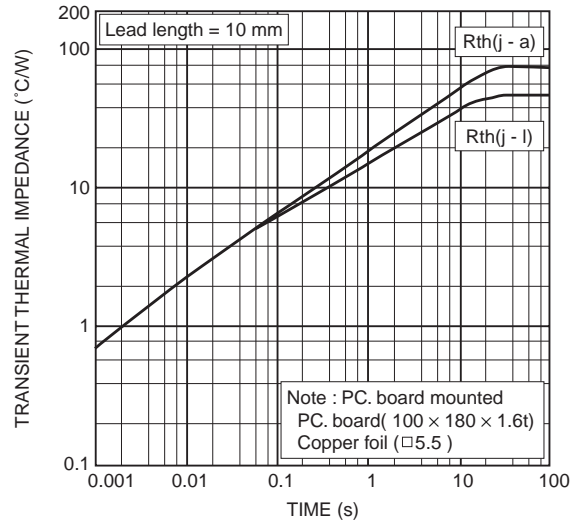
## Typ. Reverse current vs. junction temperature



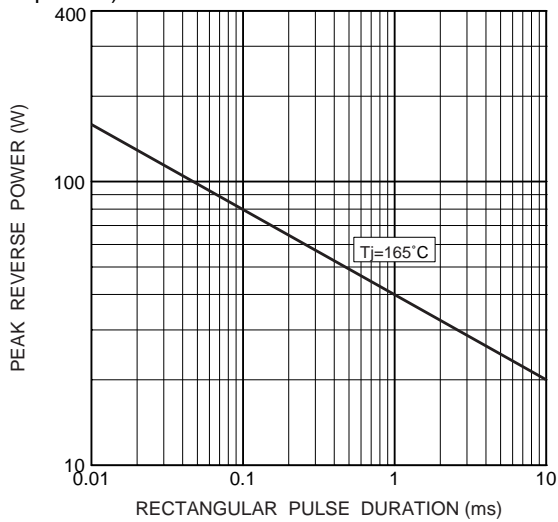
## Steady-state thermal impedance



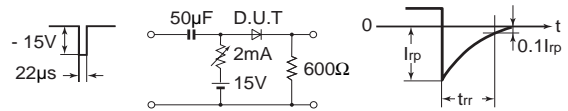
## Transient thermal impedance



## Typical reverse power characteristic (Non-repetitive)



## Reverse recovery time (trr) test circuit



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