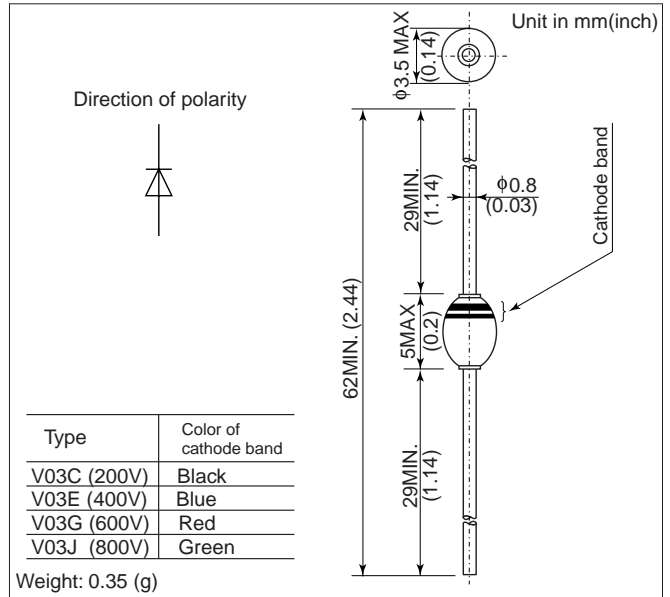


# V03

## FEATURES

- For general purpose.
- Diffused-junction. Glass passivated and encapsulated.

## OUTLINE DRAWING



## ABSOLUTE MAXIMUM RATINGS

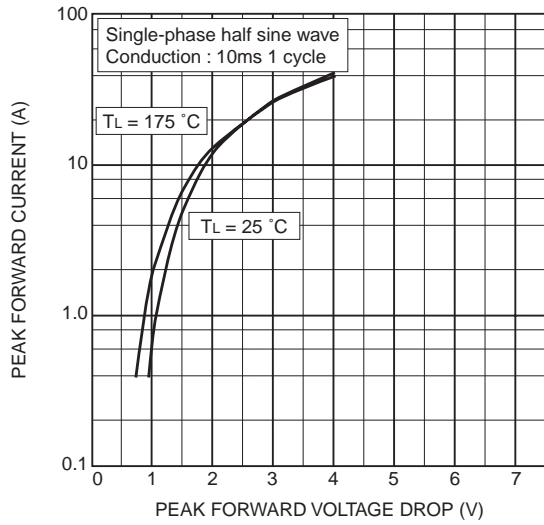
Item	Type	Units	V03C	V03E	V03G	V03J
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	200	400	600	800
Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	V	300	500	800	1000
Average Forward Current	$I_{F(AV)}$	A	1.3 (Single-phase half sine wave 180° conduction) ( $T_L = 90^\circ\text{C}$ , Lead length = 10mm)			
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.

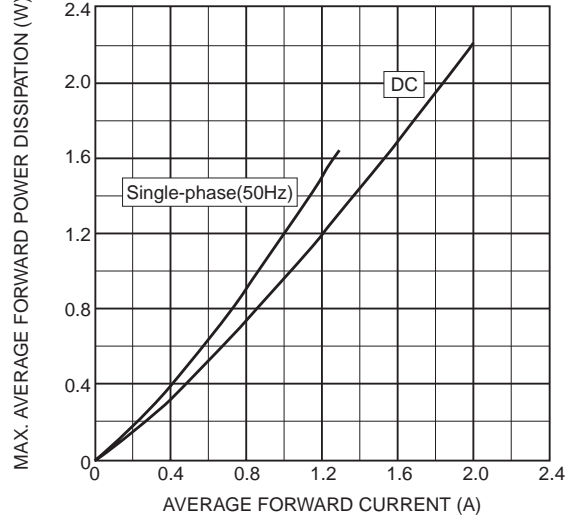
## CHARACTERISTICS( $T_L = 25^\circ\text{C}$ )

Item	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Peak Reverse Current	$I_{RRM}$	$\mu\text{A}$	-	1.5	20	C class
				0.6	10	E,G,J class
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	-	$I_F = 2\text{mA}$ , $V_R = -15\text{V}$
Steady State Thermal Impedance	$R_{th(j-a)}$	$^\circ\text{C/W}$	-	-	80	Lead length = 10 mm
	$R_{th(j-l)}$				50	

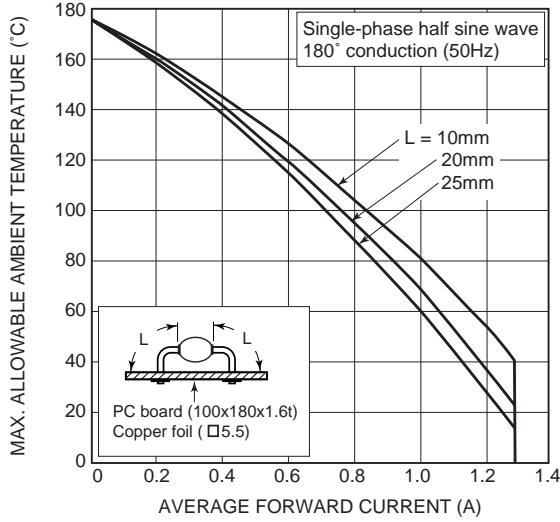
## Forward characteristic



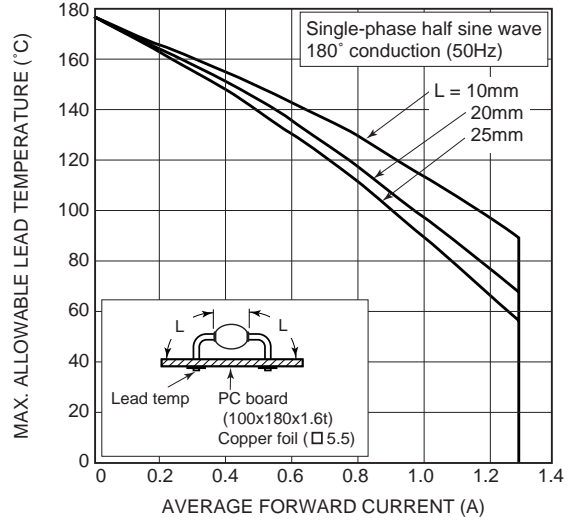
## Max. average forward power dissipation (Resistive or inductive load)



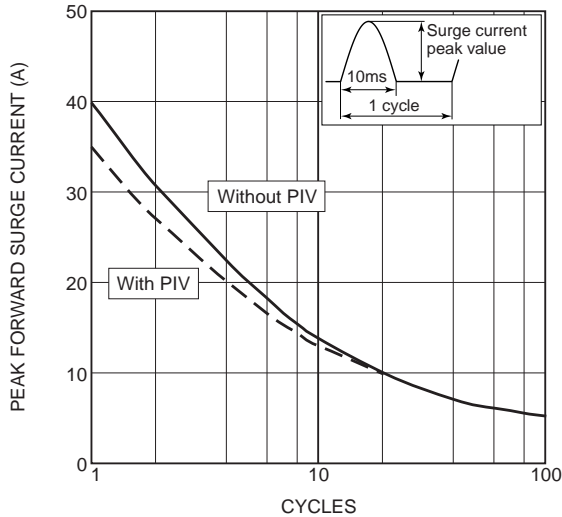
## Max. allowable ambient temperature (Resistive or inductive load)



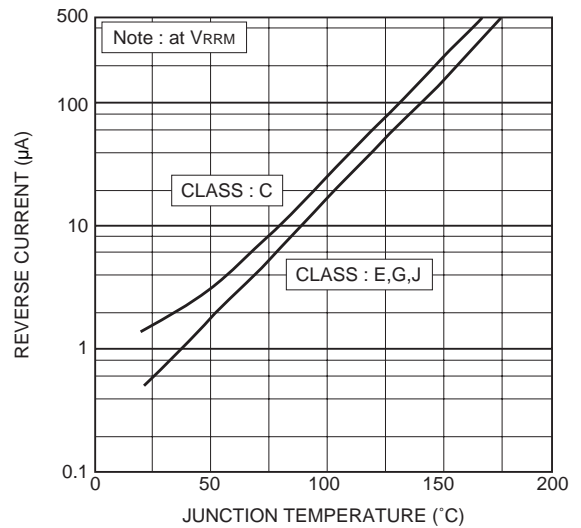
## Max. allowable lead temperature (Resistive or inductive load)



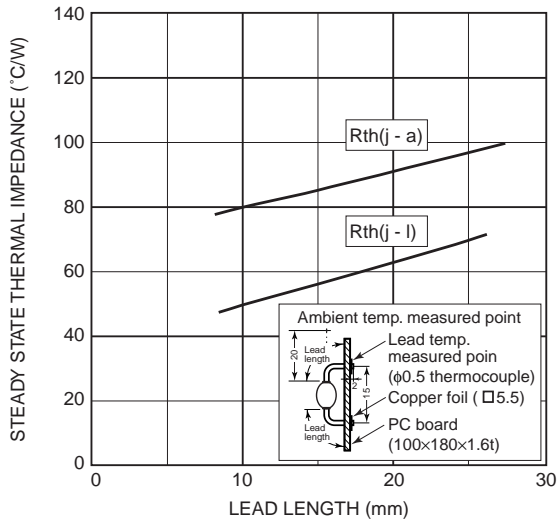
## Surge forward current characteristic (Non-repetitive)



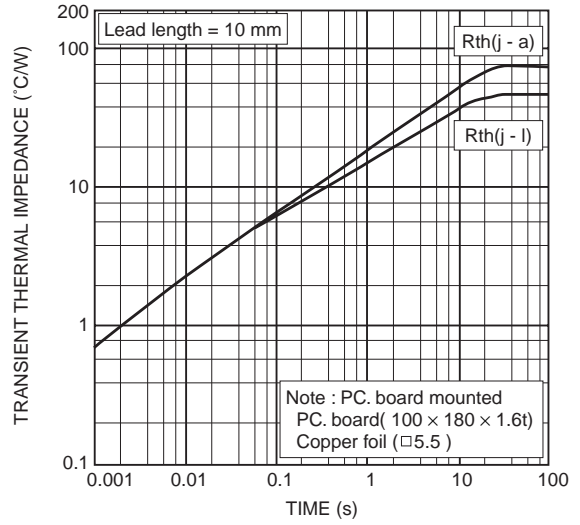
## Typ. reverse current vs. junction temperature



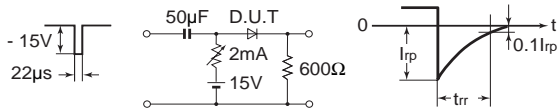
## Steady state thermal impedance



## Transient thermal impedance



## Reverse recovery time( $t_{rr}$ ) test circuit



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