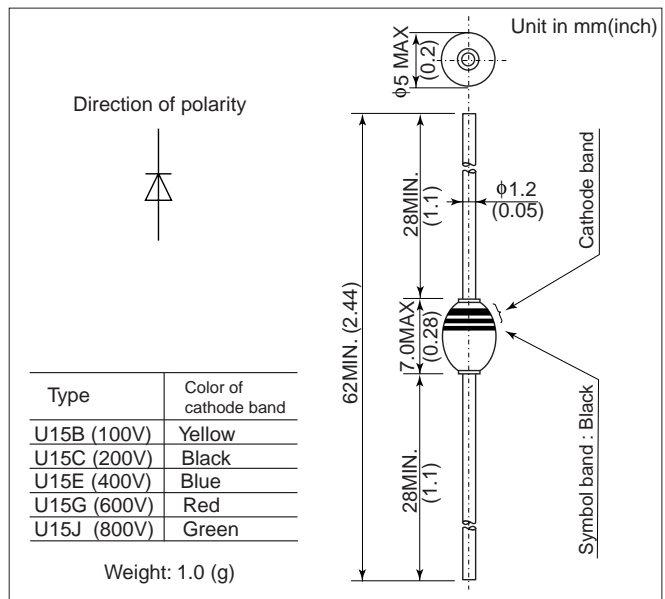


# U15

## FEATURES

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

## OUTLINE DRAWING



## ABSOLUTE MAXIMUM RATINGS

Item	Type	U15B	U15C	U15E	U15G	U15J	
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	100	200	400	600	800
Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	V	200	300	500	800	1000
Average Forward Current	$I_{F(AV)}$	A	3.0 (Single-phase half sine wave 180° conduction) ( $T_L = 100^\circ\text{C}$ , Lead length = 10mm)				
Surge(Non-Repetitive) Forward Current	$I_{FSM}$	A	80		60		
			(Without PIV, 10ms conduction, $T_j = 175^\circ\text{C}$ start)				
$I^2t$ Limit Value	$I^2t$	$\text{A}^2\text{s}$	25.6		14.4		
			(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				

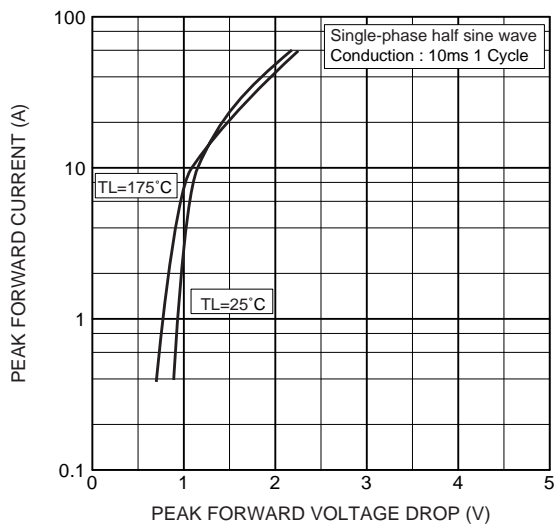
- Notes (1) Lead mounting : Lead temperature  $300^\circ\text{C}$  max. to 3.2mm from body for 5sec. max..  
 (2) Mechanical strength : Bending  $90^\circ \times 2$  cycles or  $180^\circ \times 1$  cycle, Tensile 3kg, Twist  $90^\circ \times 1$  cycle.

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

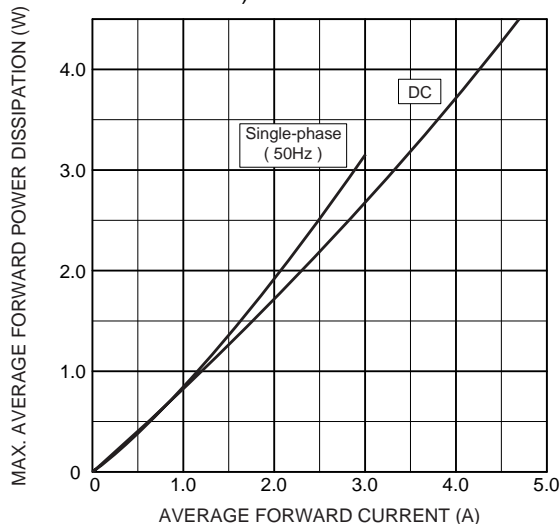
Item	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Peak Reverse Current	$I_{RRM}$	$\mu\text{A}$	—	1.5	60	B,C class Rated $V_{RRM}$
				0.6	10	
Peak Forward Voltage	$V_{FM}$	V	—	—	1.0	$I_{FM} = 3.0\text{A}$ p, Single-phase half sine wave 1 cycle
Reverse Recovery Time	$t_{rr}$	$\mu\text{s}$	—	3.0	—	$I_F = 2\text{mA}$ , $V_R = -15\text{V}$
Steady State Thermal Impedance	$R_{th(j-a)}$	$^\circ\text{C/W}$	—	—	50	Lead length = 10 mm
	$R_{th(j-l)}$				20	

# U15

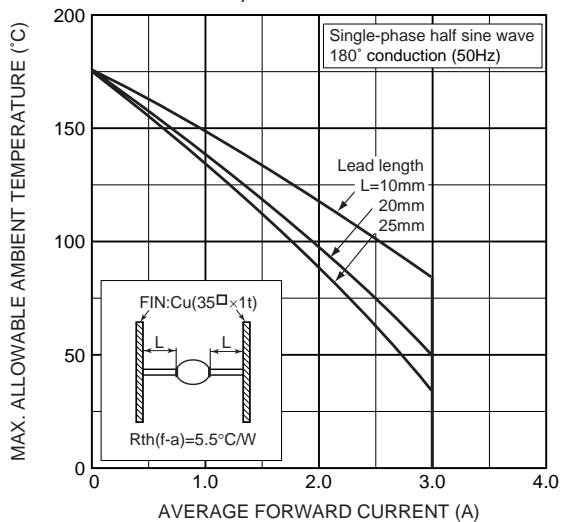
## Forward characteristics



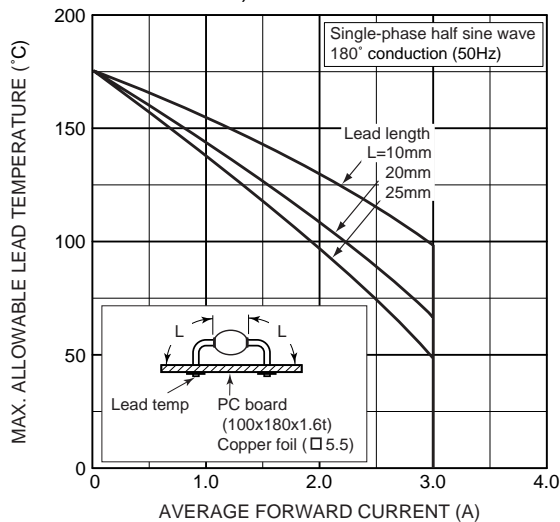
## Max. average forward power dissipation (Resistive or inductive load)



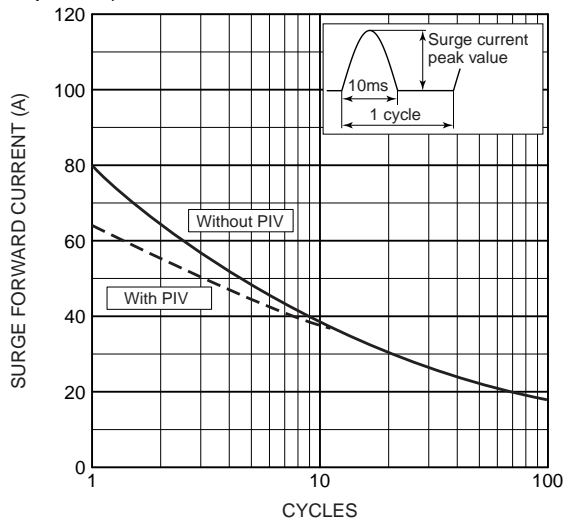
## Max. allowable ambient temperature (Resistive or inductive load)



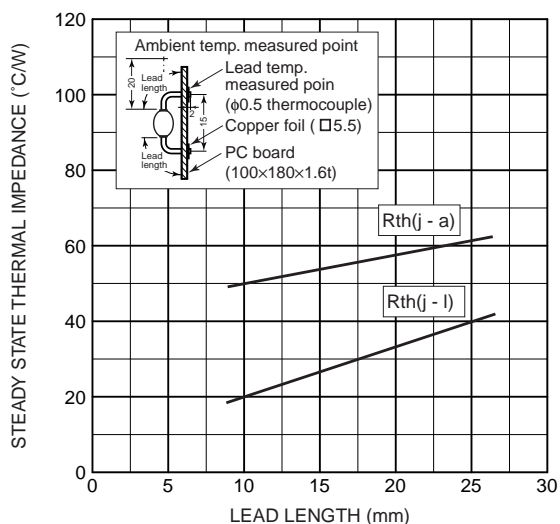
## Max. allowable lead temperature (Resistive or inductive load)



## Surge forward current characteristics (Non-repetitive)

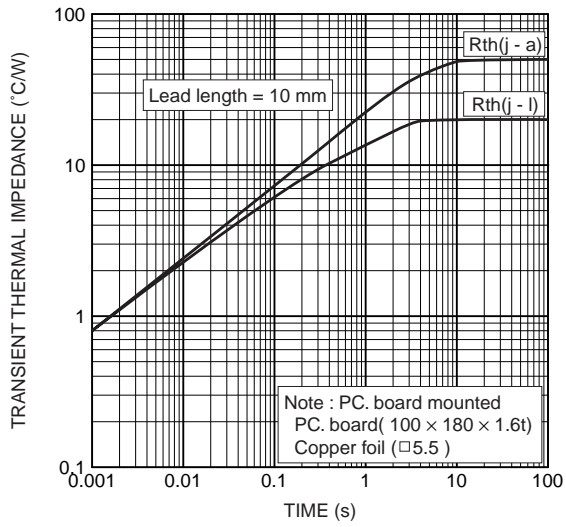


## Steady state thermal impedance

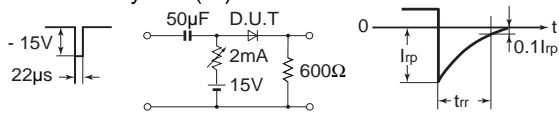


# U15

## Transient thermal impedance



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



# HITACHI POWER SEMICONDUCTORS

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