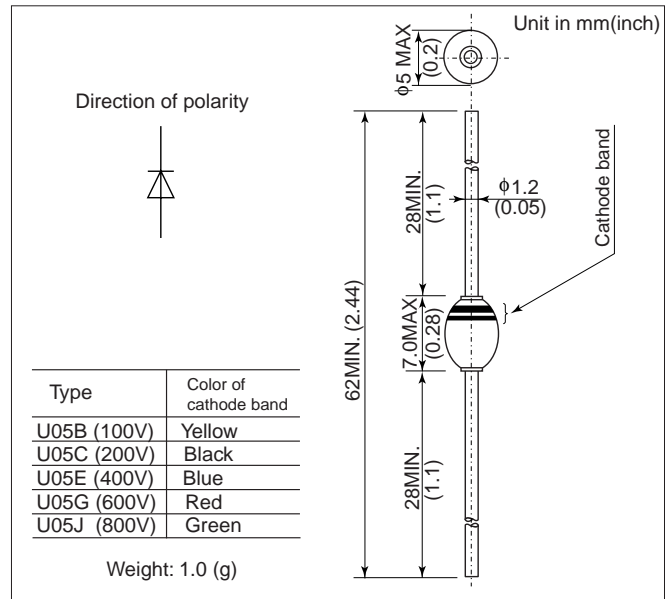


U05

FEATURES

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

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

Item	Type	U05B	U05C	U05E	U05G	U05J	
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	2.5 (Single-phase half sine wave 180° conduction) ($T_L = 90^\circ\text{C}$, Lead length = 10mm)				
Surge(Non-Repetitive) Forward Current	I_{FSM}	A	100 (Without PIV, 10ms conduction, $T_j = 175^\circ\text{C}$ start)				
I^2t Limit Value	I^2t	A^2s	40 (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				

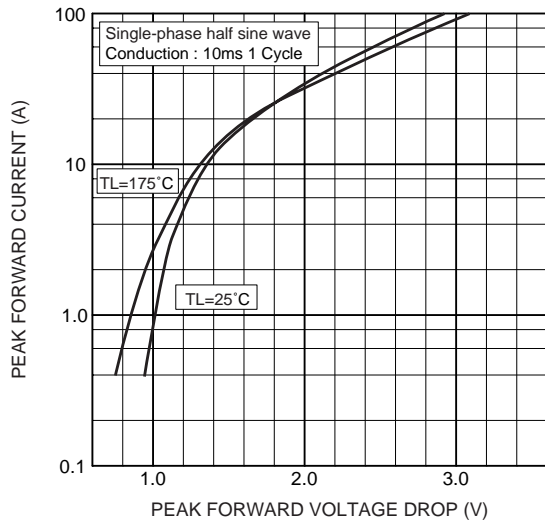
- Notes (1) Lead Mounting : Lead Temperature 300 $^\circ\text{C}$ max. to 3.2mm from body for 5sec. Max..
 (2) Mechanical Strength : Bending 90 $^\circ$ ×2 cycles or 180 $^\circ$ ×1 cycle, Tensile 3kg, Twist 90 $^\circ$ ×1 cycle.

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

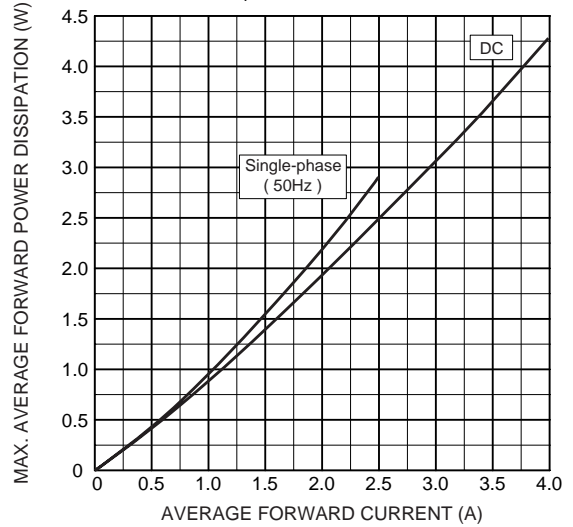
Item	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Peak Reverse Current	I_{RRM}	μA	—	1.5	60	B,C class
				0.6	10	E,G,J class
Peak Forward Voltage	V_{FM}	V	—	—	1.1	$I_{FM}=2.5\text{A}$ p, Single-phase half sine wave 1 cycle
Reverse Recovery Time	trr	μs	—	3.0	—	$I_F=2\text{mA}$, $V_R=-15\text{V}$
Steady State Thermal Impedance	$R_{th(j-a)}$	$^\circ\text{C/W}$	—	—	60	Lead length = 10 mm
	$R_{th(j-l)}$				30	

U05

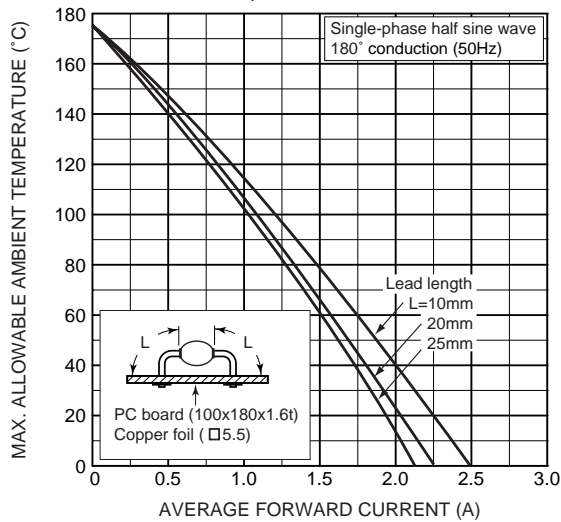
Forward characteristic



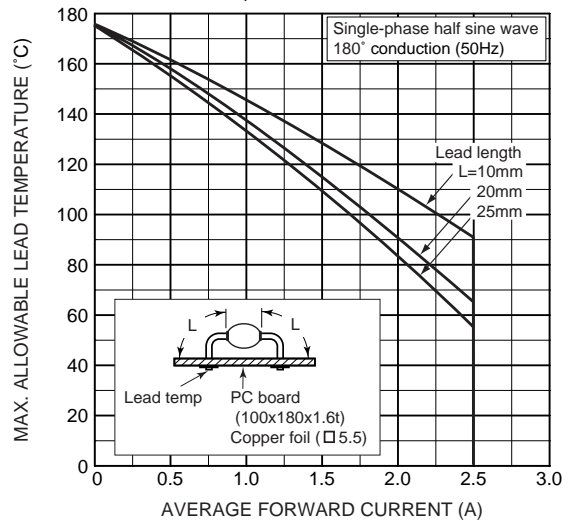
Max. average forward power dissipation (Resistive or inductive load)



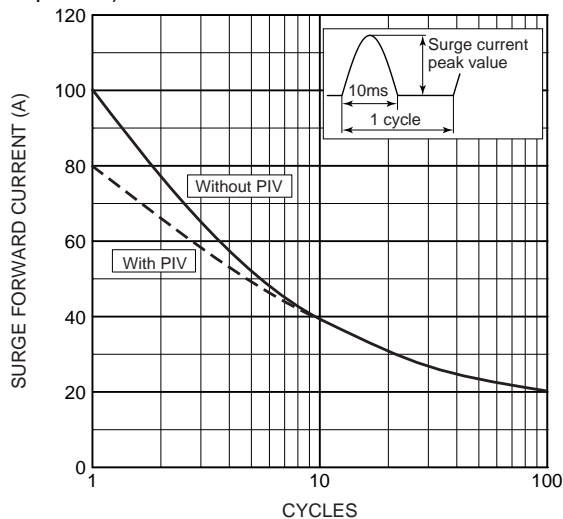
Max. allowable ambient temperature (Resistive or Inductive Load)



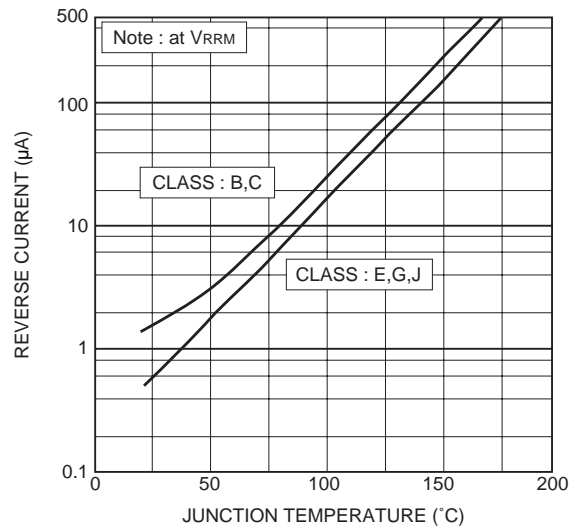
Max. allowable lead temperature (Resistive or inductive load)



Surge forward current characteristic (Non-repetitive)

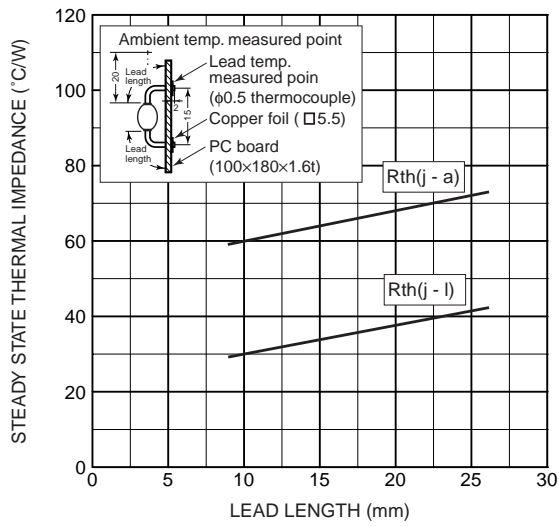


Typ. reverse current vs. junction temperature

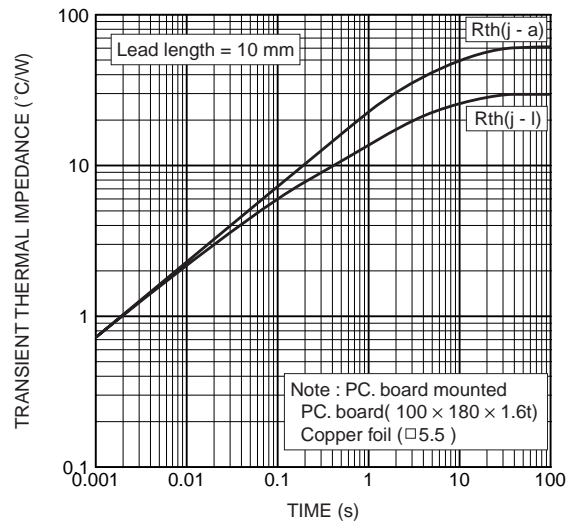


U05

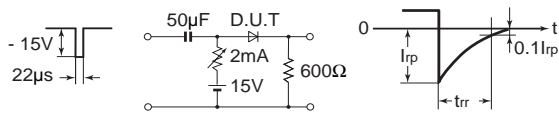
Steady state thermal impedance



Transient thermal impedance



Reverse recovery time(trr) test circuit



HITACHI POWER SEMICONDUCTORS

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