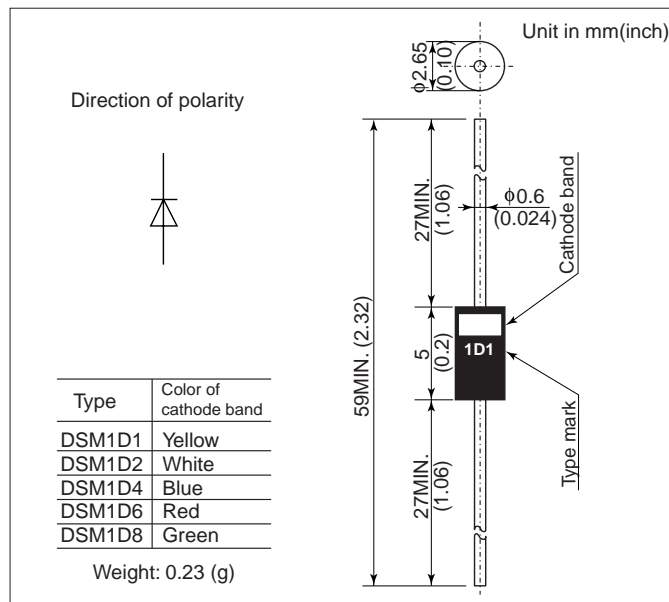


# DSM1D

## FEATURES

- For general purpose.
- Diffused-junction. Resin encapsulated.

## OUTLINE DRAWING



## ABSOLUTE MAXIMUM RATINGS

Items	Type	DSM1D1	DSM1D2	DSM1D4	DSM1D6	DSM1D8	
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	100	200	400	600	800
Average Forward Current	$I_{F(AV)}$	A	1.0 (Single-phase half sine wave 180° conduction) ( $T_L = 70^\circ\text{C}$ , Lead length = 6mm)				
Surge(Non-Repetitive) Forward Current	$I_{FSM}$	A	45		30		( Without PIV, 10ms conduction, $T_j = 40^\circ\text{C}$ start )
$I^2t$ Limit Value	$I^2t$	$\text{A}^2\text{s}$	8.1		3.6		( Time = 2 ~ 10ms, I = RMS value )
Operating Junction Temperature	$T_j$	$^\circ\text{C}$	-40 ~ +150				
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-40 ~ +150				

Notes (1) Lead mounting : Lead temperature  $280^\circ\text{C}$  max. to 3.2mm from body for 5sec. max..

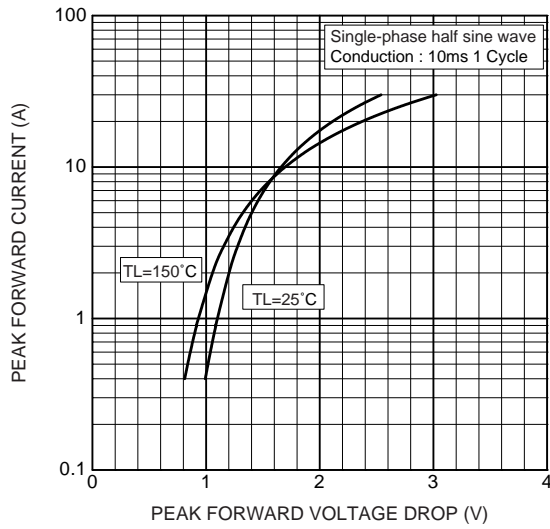
(2) Mechanical strength : Bending  $90^\circ \times 2$  cycles or  $180^\circ \times 1$  cycle, Tensile 2kg, Twist  $90^\circ \times 1$  cycle.

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

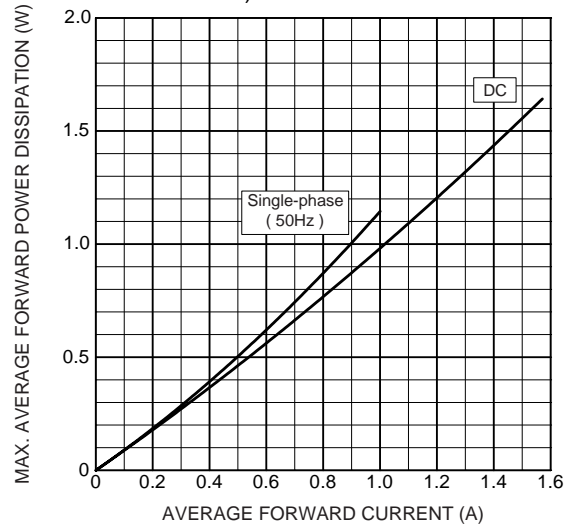
Items	Symbols	Units	Min.	Typ.	Max.	Test Conditions	
Peak Reverse Current	$I_{RRM}$	$\mu\text{A}$	—	—	20 10	DSM1D1,2 DSM1D4,6,8	Rated $V_{RRM}$
Peak Forward Voltage	$V_{FM}$	V	—	—	1.1	$I_{FM}=1.0\text{A}$ , Single-phase half sine wave 1 cycle	
Steady State Thermal Impedance	$R_{th(j-a)}$ $R_{th(j-l)}$	$^\circ\text{C}/\text{W}$	—	—	100 70	Lead length = 6 mm	

# DSM1D

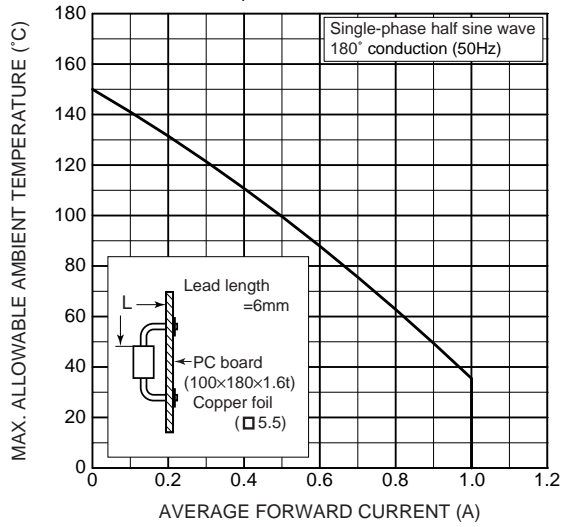
Forward characteristics



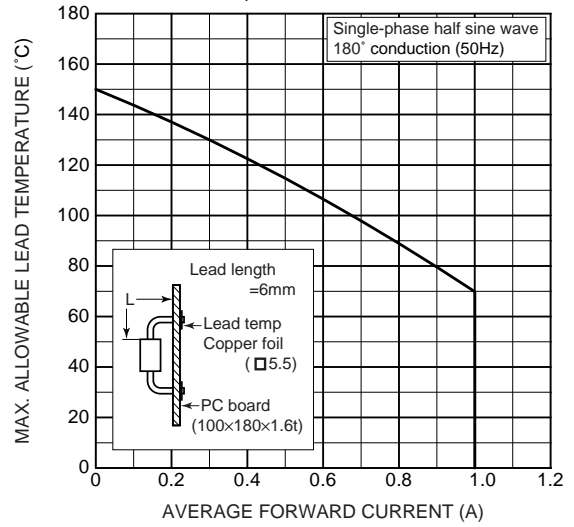
Max. average forward power dissipation (Resistive or inductive load)



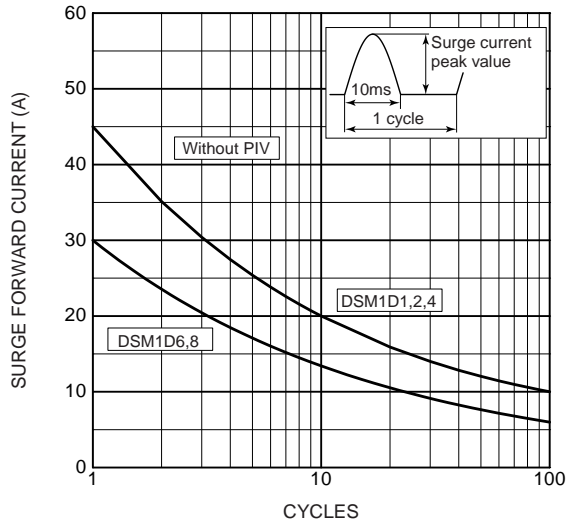
Max. allowable ambient temperature (Resistive or inductive load)



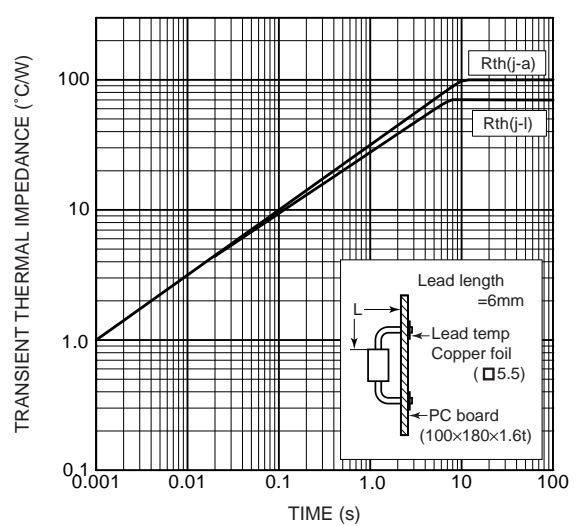
Max. allowable lead temperature (Resistive or inductive load)



Surge forward current characteristic (Non-repetitive)



Transient thermal impedance



# HITACHI POWER SEMICONDUCTORS

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