

# Schottky Barrier Diode

## RB051M-2Y

● **Applications**

General rectification

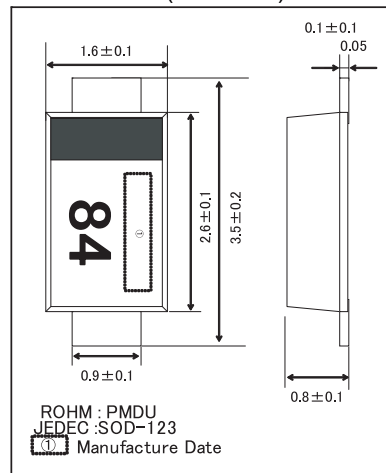
● **Features**

- 1) Small power mold type. (PMDU)
- 2) Ultra Low  $V_F$
- 3) High reliability

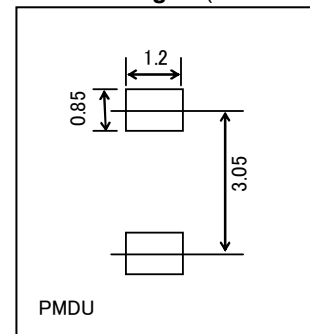
● **Construction**

Silicon epitaxial planar

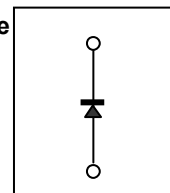
● **Dimensions**(Unit : mm)



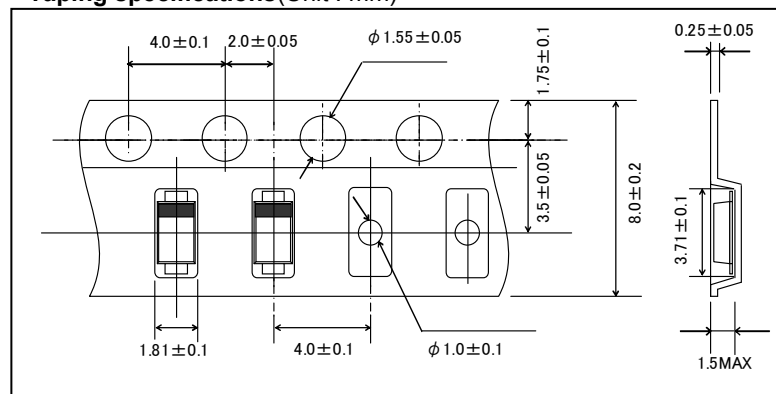
● **Land size figure**(Unit : mm)



● **Structure**



● **Taping specifications**(Unit : mm)



● **Absolute maximum ratings**( $T_a=25^\circ\text{C}$ )

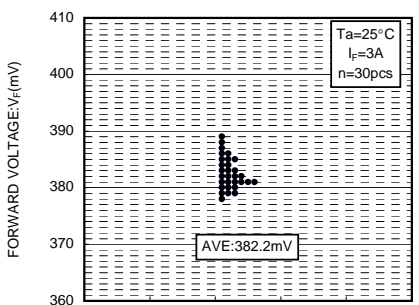
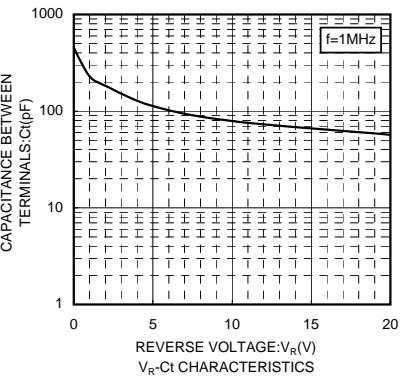
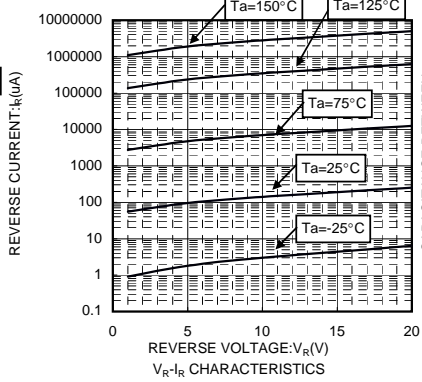
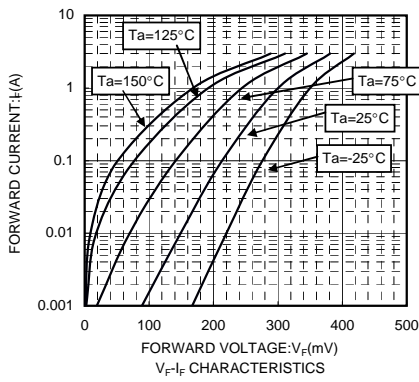
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive)	$V_{RM}$	20	V
Reverse voltage (DC)	$V_R$	20	V
Average rectified forward current(*1)	$I_o$	3	A
Forward current surge peak (60Hz·1cyc)	$I_{FSM}$	30	A
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +125	$^\circ\text{C}$

(\*1) Mounting on alumina board.  $T_c=95^\circ\text{C}$  Max.

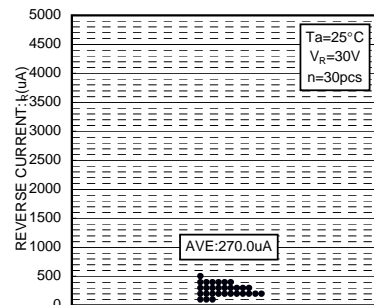
● **Electrical characteristics**( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	$V_F$	-	-	0.46	V	$I_F=3\text{A}$
Reverse current	$I_R$	-	-	0.9	mA	$V_R=20\text{V}$

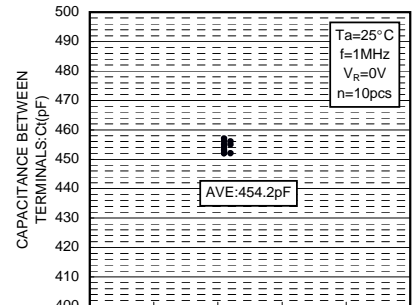
●Electrical characteristic curves



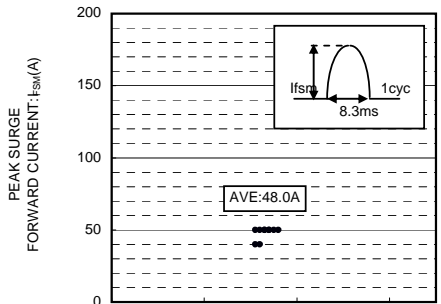
$V_F$  DISPERSION MAP



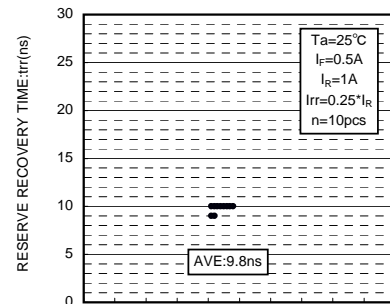
$I_R$  DISPERSION MAP



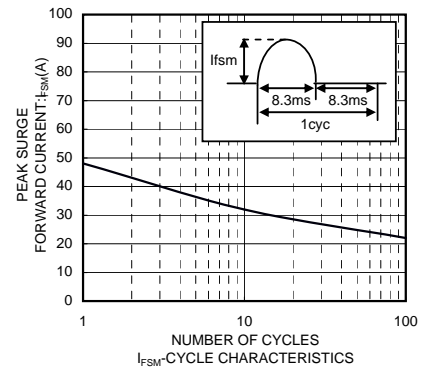
$C_t$  DISPERSION MAP



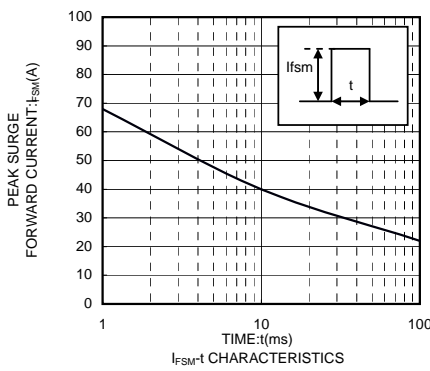
$I_{FSM}$  DISPERSION MAP



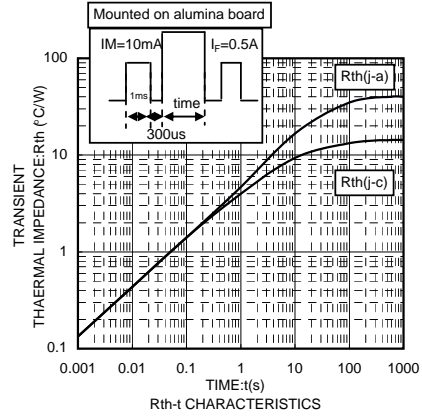
$t_{rr}$  DISPERSION MAP



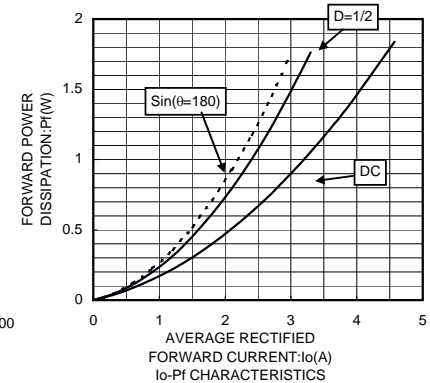
$I_{FSM}$  CYCLE CHARACTERISTICS



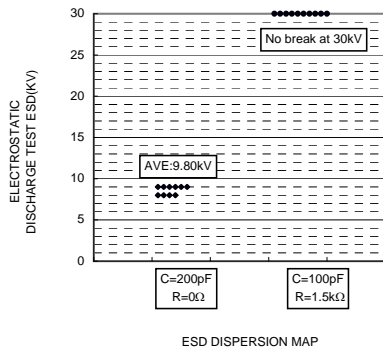
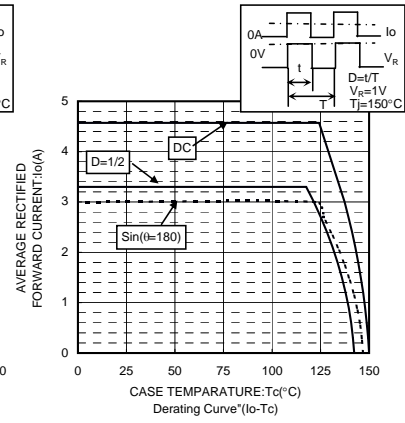
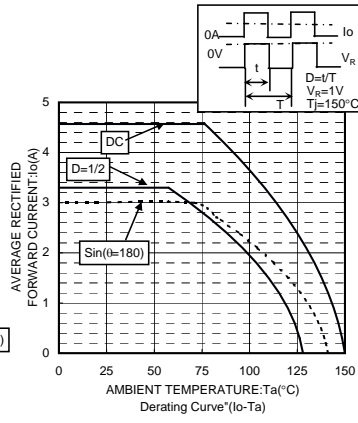
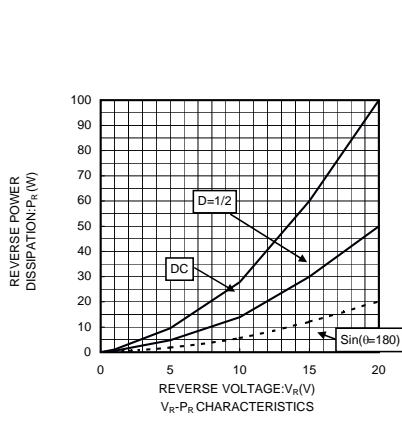
$I_{FSM}$ - $t$  CHARACTERISTICS



$R_{th}$ - $t$  CHARACTERISTICS



$I_o$ - $P$  CHARACTERISTICS



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