

# Schottky barrier diode

## RB085B-40

● **Applications**

General rectification

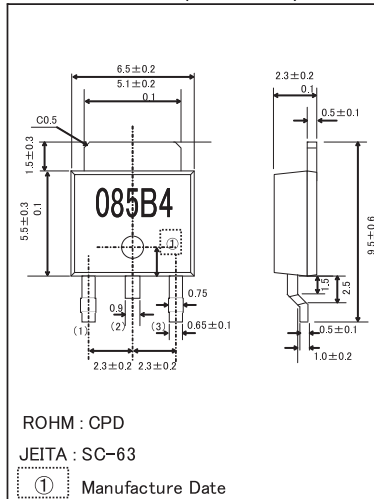
● **Features**

- 1) Power mold type. (CPD)
- 2) Low  $V_F$
- 3) High reliability

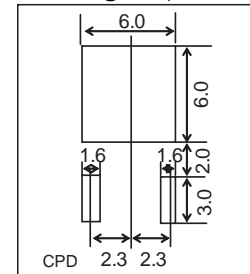
● **Construction**

Silicon epitaxial planar

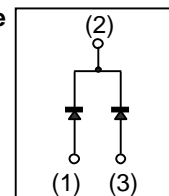
● **Dimensions (Unit : mm)**



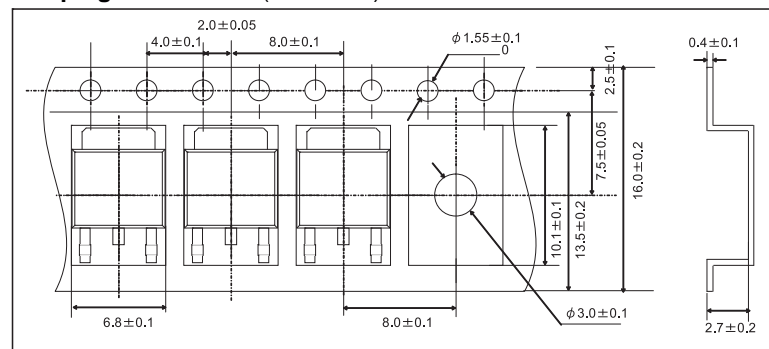
● **Land size figure (Unit : mm)**



● **Structure**



● **Taping dimensions (Unit : mm)**



● **Absolute maximum ratings (Ta=25°C)**

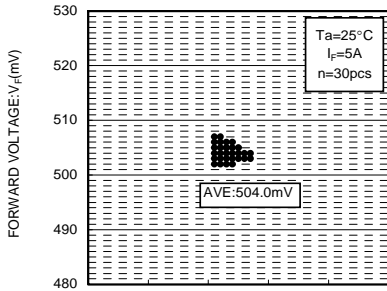
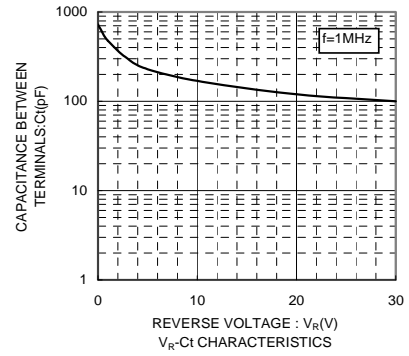
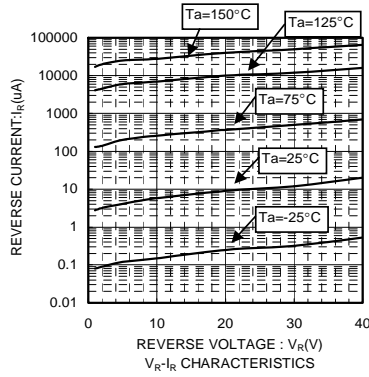
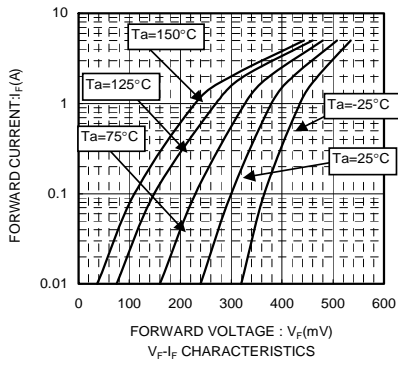
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	$V_{RM}$	45	V
Reverse voltage (DC)	$V_R$	40	V
Average rectified forward current(*1)	$I_o$	10	A
Forward current surge peak(60Hz / 1cyc)(*1)	$I_{FSM}$	45	A
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-40 to +150	°C

(\*1) Rating of per diode :  $I_o/2$

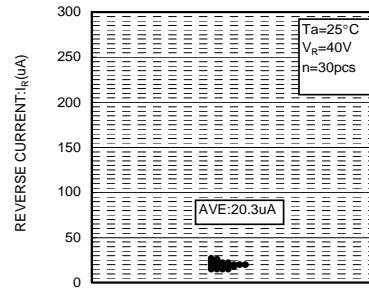
● **Electrical characteristic (Ta=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	$V_F$	-	-	0.55	V	$I_F=5.0A$
Reverse current	$I_R$	-	-	200	$\mu A$	$V_R=40V$
Thermal impedance	$\theta_{jc}$	-	-	6.0	°C/W	junction to case

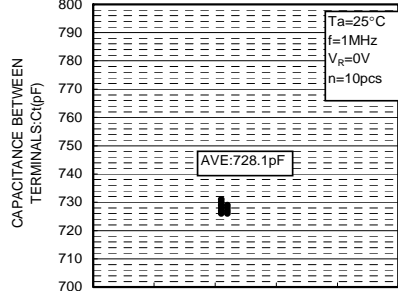
● Electrical characteristic curves



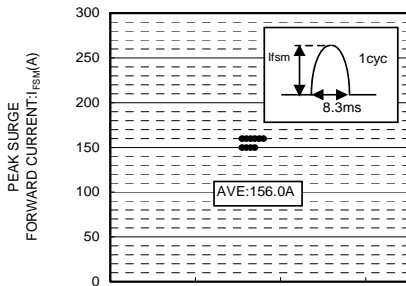
$V_F$  DISPERSION MAP



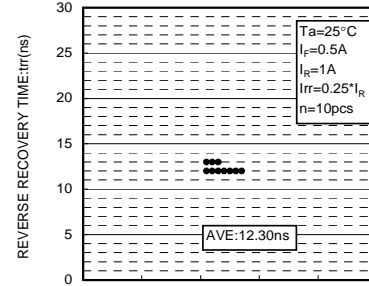
$I_R$  DISPERSION MAP



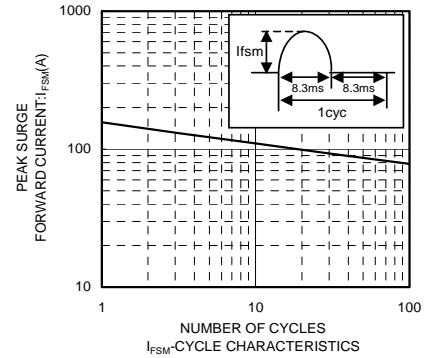
$C_t$  DISPERSION MAP



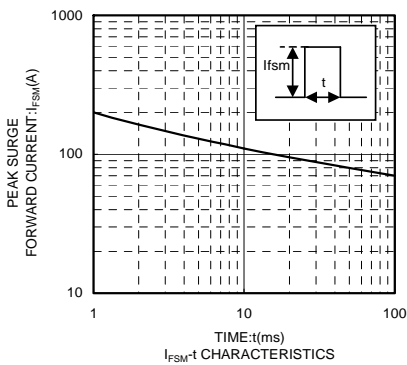
$I_{FSM}$  DISPERSION MAP



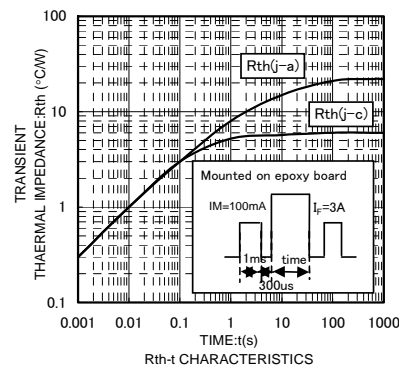
$t_{rr}$  DISPERSION MAP



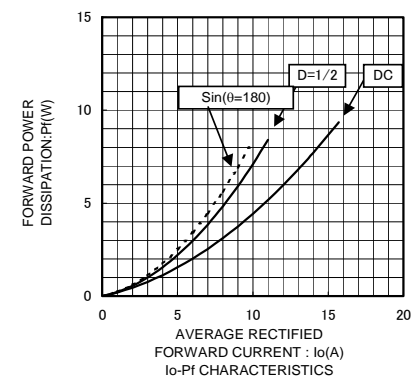
$I_{FSM}$ -CYCLE CHARACTERISTICS



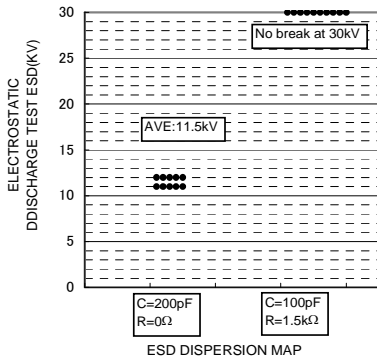
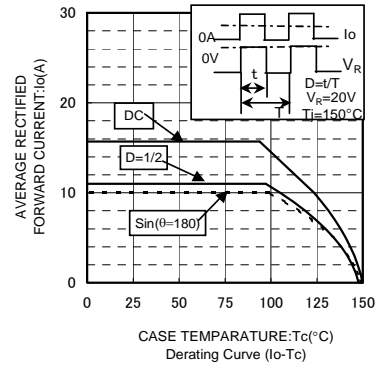
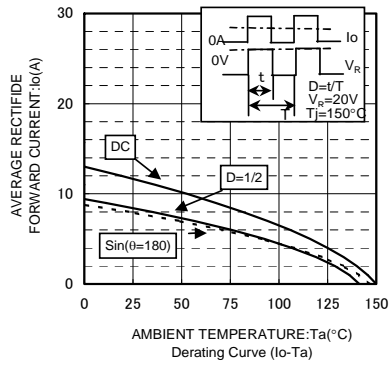
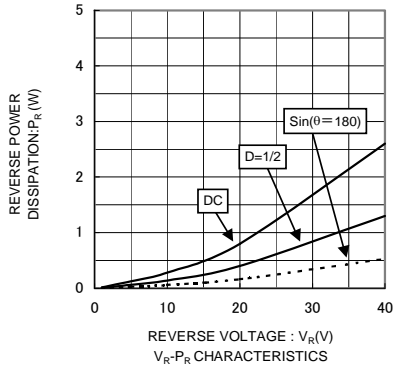
$I_{FSM}$ - $t$  CHARACTERISTICS



$R_{th}$ - $t$  CHARACTERISTICS



$I_o$ - $P$  CHARACTERISTICS



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