

Schottky barrier diode

RB085T-40

● **Applications**

Switching power supply

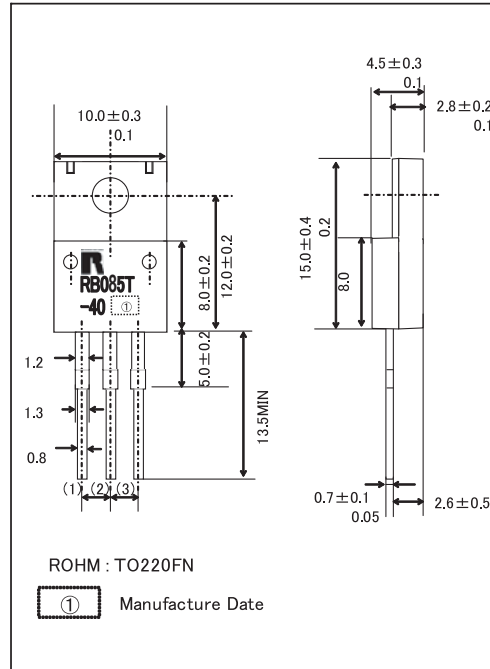
● **Features**

- 1) Cathode common type. (TO-220)
- 2) Low I_R
- 3) High reliability

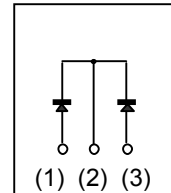
● **Construction**

Silicon epitaxial planar

● **Dimensions (Unit : mm)**



● **Structure**



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

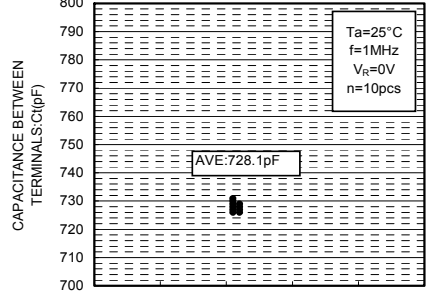
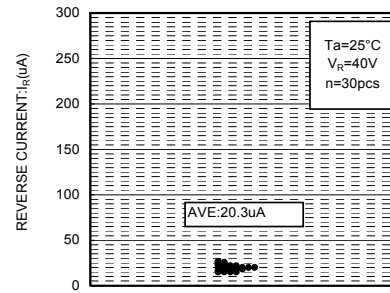
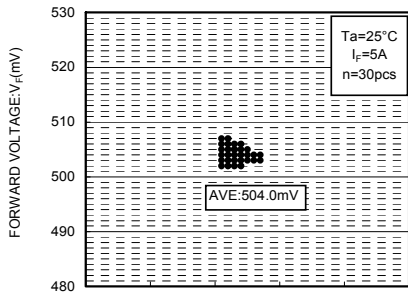
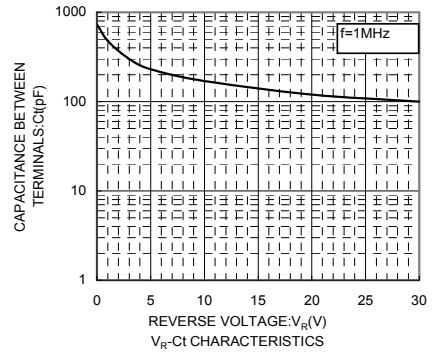
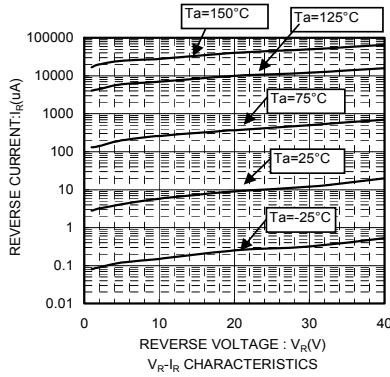
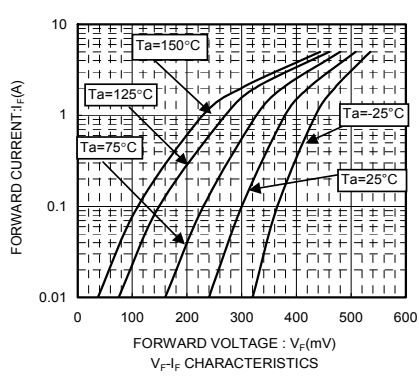
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	45	V
Reverse voltage (DC)	V_R	40	V
Average rectified forward current (*1)	I_o	10	A
Forward current surge peak (60Hz / 1cyc) (*1)	I_{FSM}	100	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-40 to +150	°C

(*1)Business frequencies, Rating of R-load, 1/2 I_o per diode, $T_c=132^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	-	0.55	V	$I_F=5\text{A}$
Reverse current	I_R	-	-	200	μA	$V_R=40\text{V}$
Thermal impedance	θ_{jc}	-	-	2.5	°C/W	junction to case

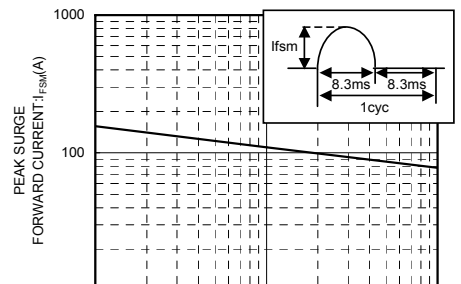
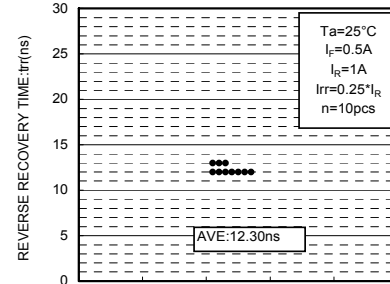
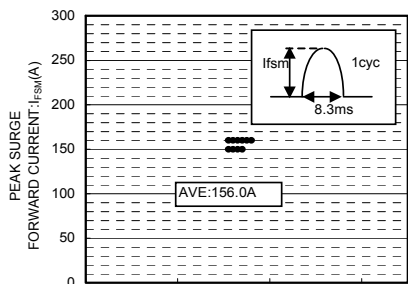
● Electrical characteristic curves



V_F DISPERSION MAP

I_R DISPERSION MAP

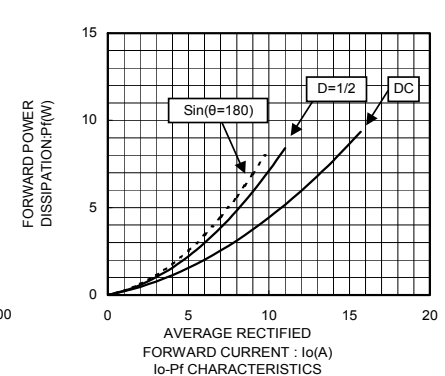
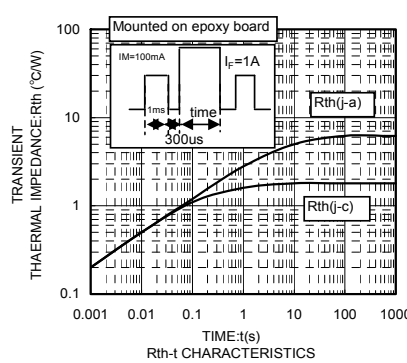
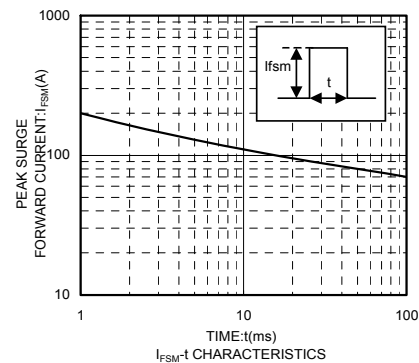
C_t DISPERSION MAP



I_{FSM} DISPERSION MAP

tr_r DISPERSION MAP

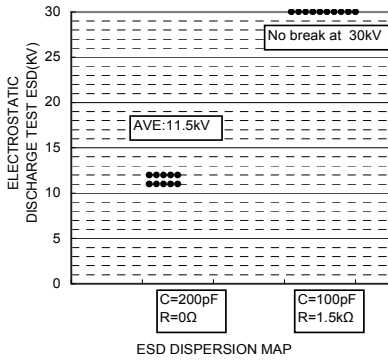
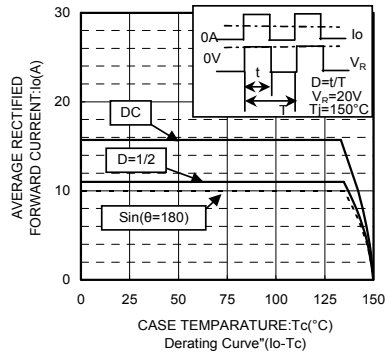
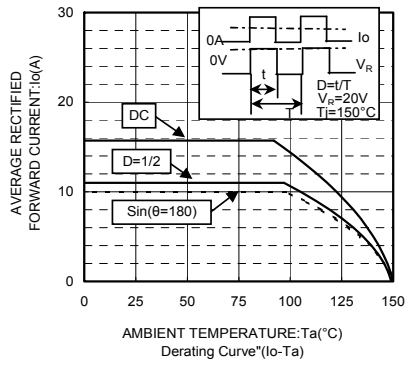
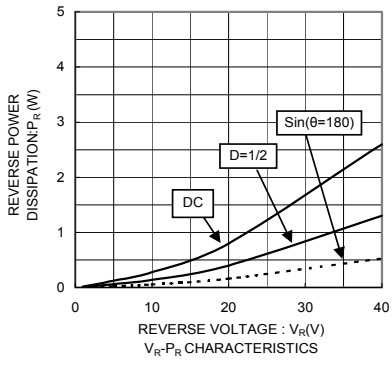
I_{FSM}-CYCLE CHARACTERISTICS



I_{FSM}-t CHARACTERISTICS

R_{th}-t CHARACTERISTICS

I_o-P_f CHARACTERISTICS



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