

Schottky barrier diode

RB085T-40

●Applications

Switching power supply

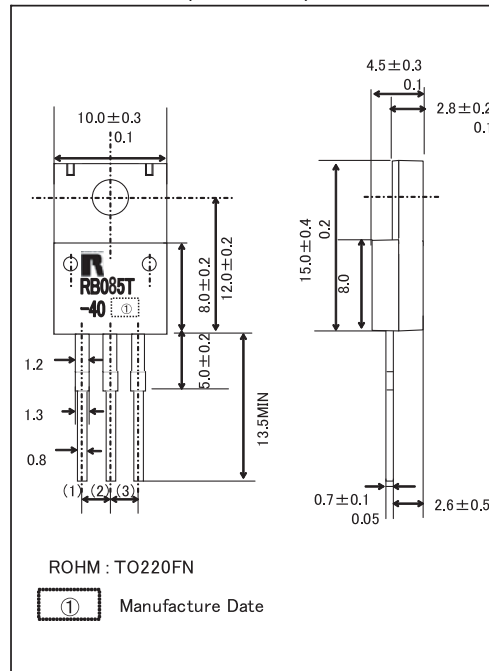
●Features

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

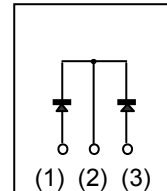
●Construction

Silicon epitaxial planar

●Dimensions (Unit : mm)



●Structure



●Absolute maximum ratings (Ta=25°C)

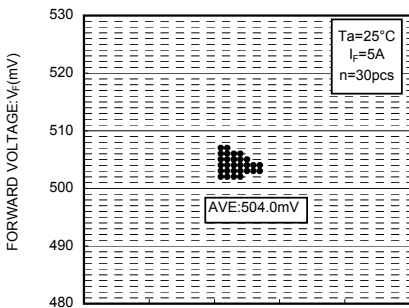
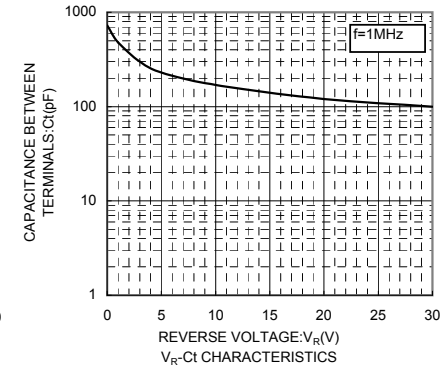
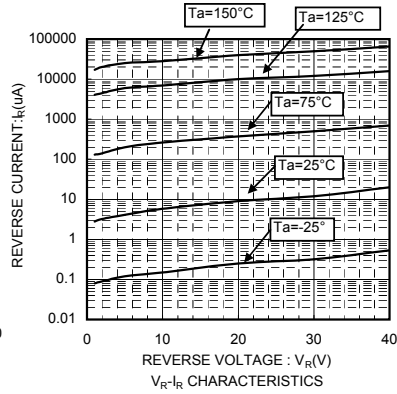
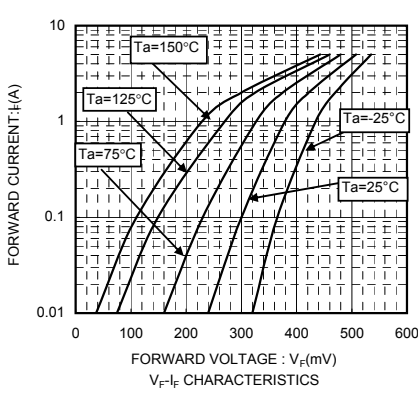
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	45	V
Reverse voltage (DC)	V_R	40	V
Average rectified forward current (*1)	I_o	10	A
Forward current surge peak (60Hz / 1cyc) (*1)	I_{FSM}	100	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-40 to +150	°C

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

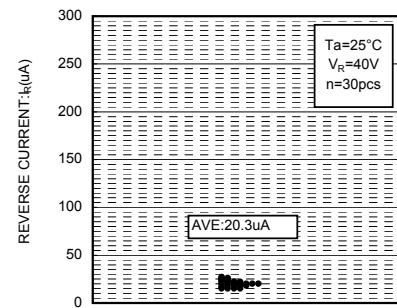
●Electrical characteristic (Ta=25°C)

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

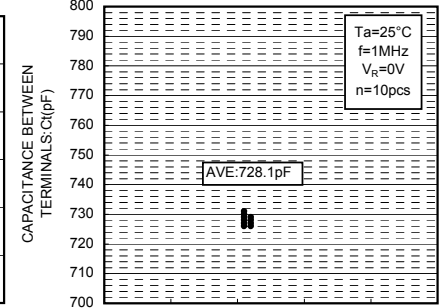
● Electrical characteristic curves



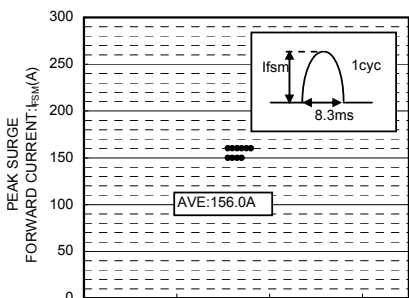
V_F DISPERSION MAP



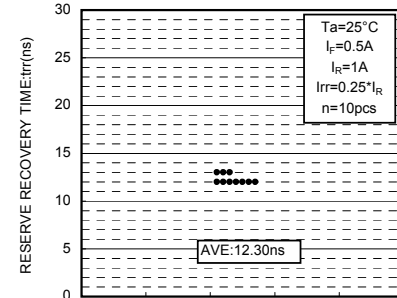
I_R DISPERSION MAP



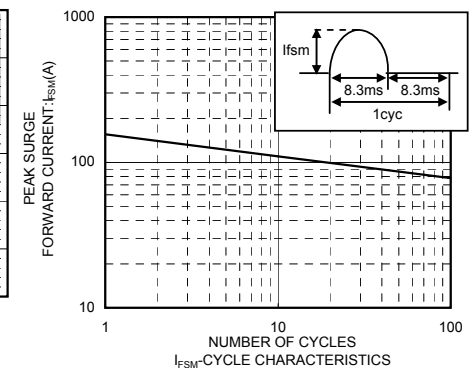
C_t DISPERSION MAP



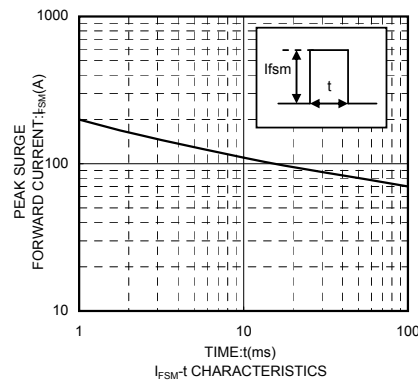
I_{FSM} DISPERSION MAP



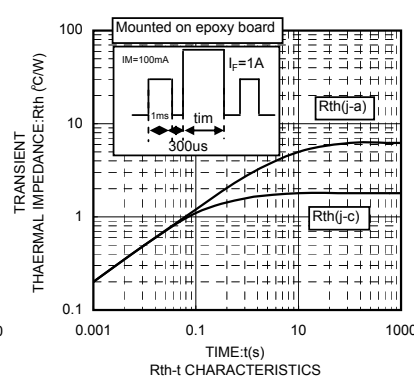
t_{rr} DISPERSION MAP



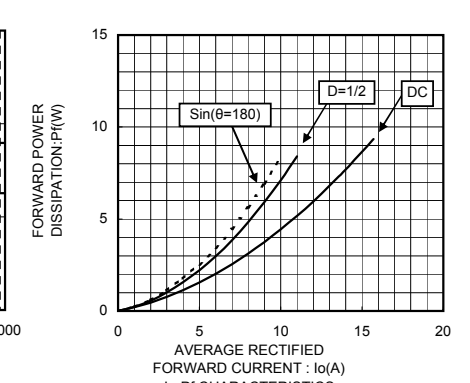
I_{FSM} CYCLE CHARACTERISTICS



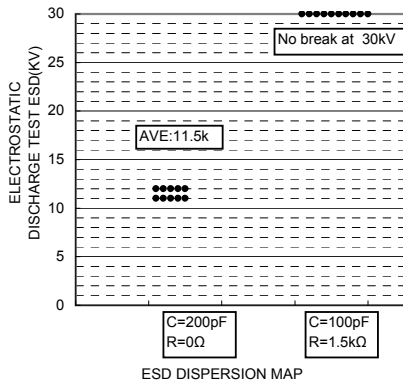
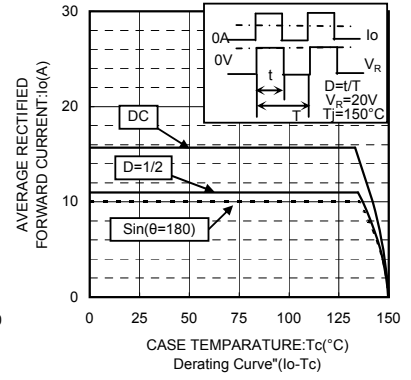
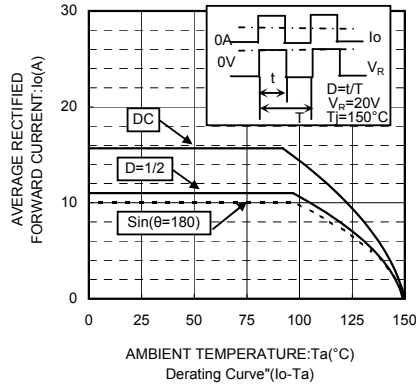
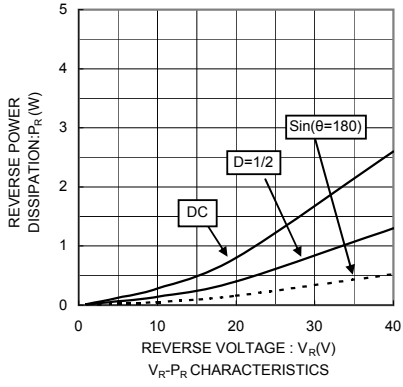
I_{FSM} - t CHARACTERISTICS



R_{th} - t CHARACTERISTICS



I_o - P_f CHARACTERISTICS



Notes

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