

●Serise

Standard Fast Recovery

●Application

General rectification

For PFC

(CCM : Continuous Current Mode)

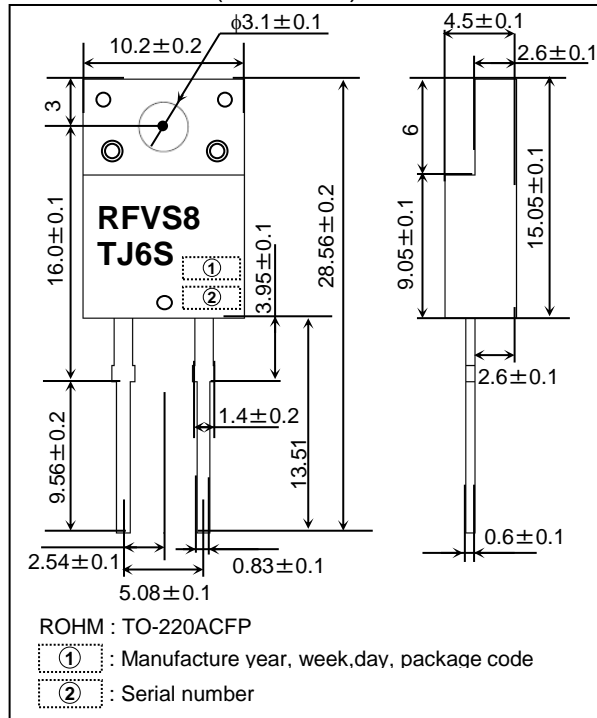
●Features

- 1) Hyper fast recovery / Hard recovery type
- 2) Ultra low switching loss
- 3) High current overload capacity

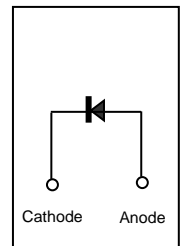
●Construction

Silicon epitaxial planar type

●Dimensions (Unit : mm)



●Structure



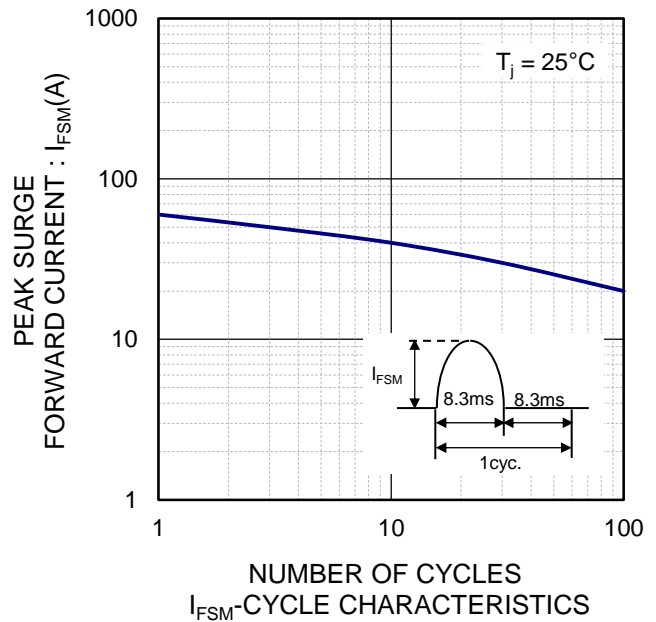
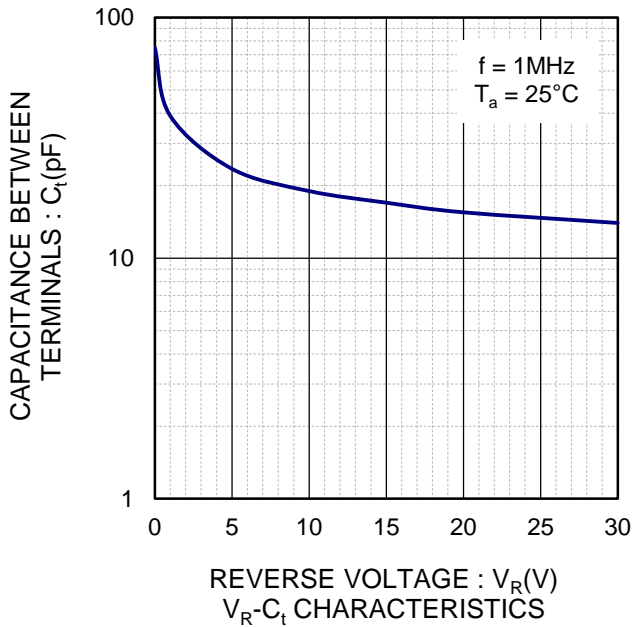
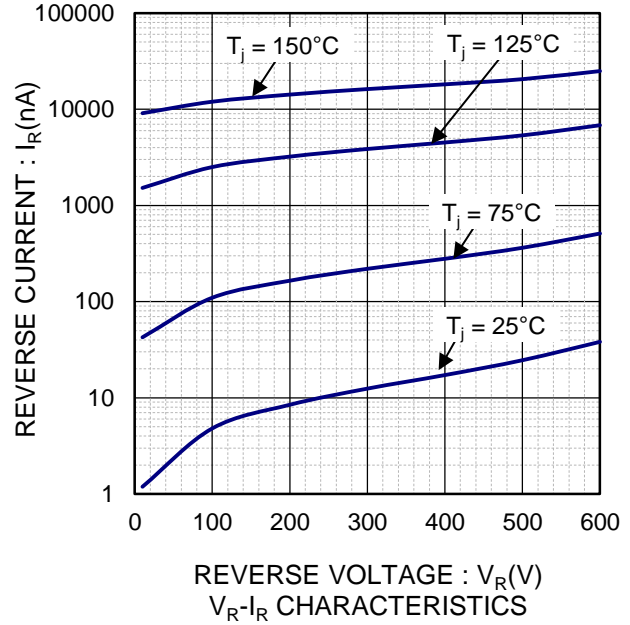
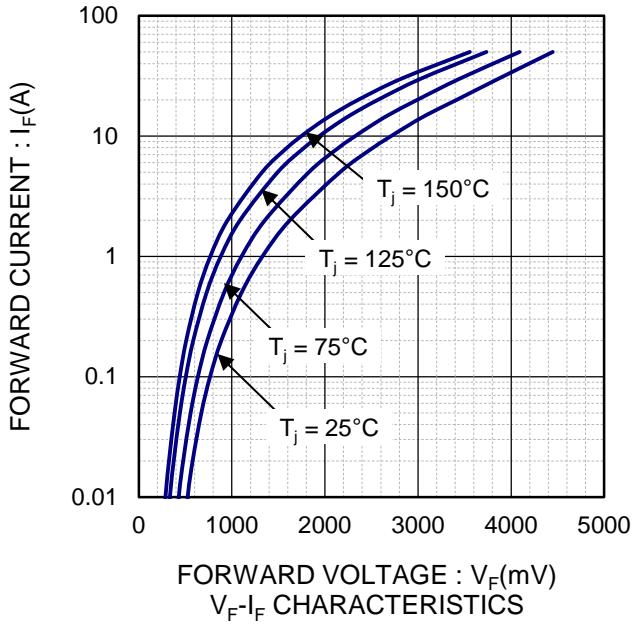
●Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty ≤ 0.5	600	V
Reverse voltage	V_R	Direct reverse voltage	600	V
Average current	I_o	60Hz half sin wave , resistive load $T_c=60^\circ\text{C}$	8	A
Non-repetitive forward surge current	I_{FSM}	60Hz half sin wave, one cycle, non-repetitive at $T_j=25^\circ\text{C}$	60	A
Operating junction temperature	T_j	-	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$

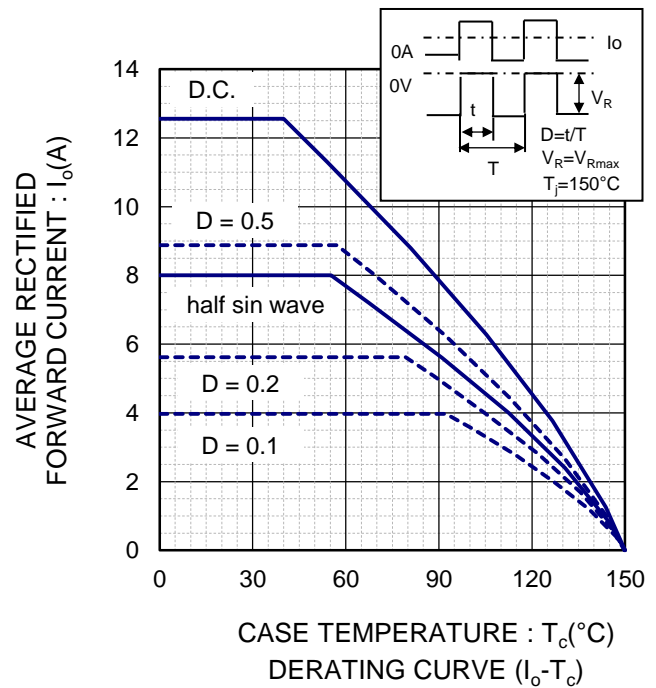
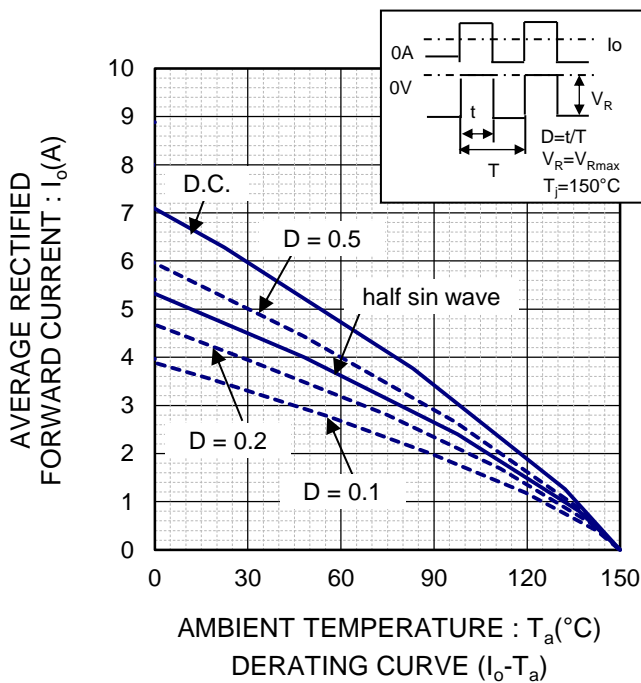
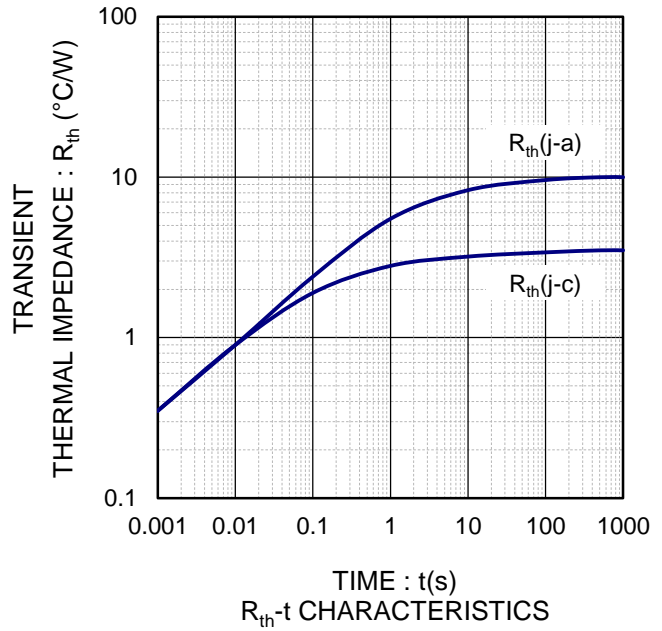
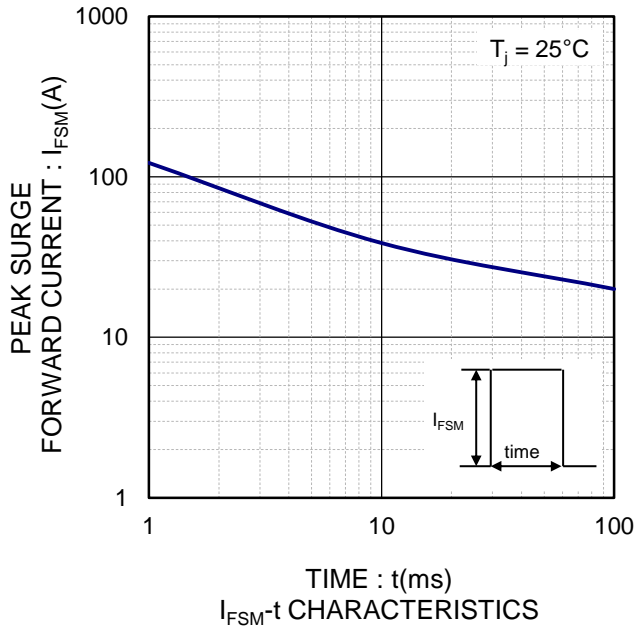
●Electrical Characteristics ($T_j = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Forward voltage	V_F	$I_F=8\text{A}$	$T_j=25^\circ\text{C}$	1.6	2.5	3.0	V
			$T_j=125^\circ\text{C}$	-	1.8	-	V
Reverse current	I_R	$V_R=600\text{V}$	$T_j=25^\circ\text{C}$	-	0.03	10	μA
			$T_j=125^\circ\text{C}$	-	5	200	μA
Reverse recovery time	t_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25 \times I_R$	-	12	20	ns	
		$I_F=8\text{A}, V_R=400\text{V}, dl_F/dt=-200\text{A}/\mu\text{s}$	-	20	40	ns	
Reverse recovery current	I_{Rp}	$I_F=8\text{A}, V_R=400\text{V}$	-	5.0	-	A	
Reverse recovery charges	Q_{rr}	$dl_F/dt=-200\text{A}/\mu\text{s}$	-	145	-	nC	
Forward recovery time	t_{fr}	$I_F=8\text{A}, dl_F/dt=100\text{A}/\mu\text{s}$	-	110	-	ns	
Forward recovery voltage	V_{Fp}	$V_{FR}=1.1 \times V_{Fmax}$	-	4.5	-	V	
Thermal resistance	$R_{th(j-a)}$	Junction to ambient	-	-	10	$^\circ\text{C}/\text{W}$	
	$R_{th(j-c)}$	Junction to case	-	-	3.5	$^\circ\text{C}/\text{W}$	

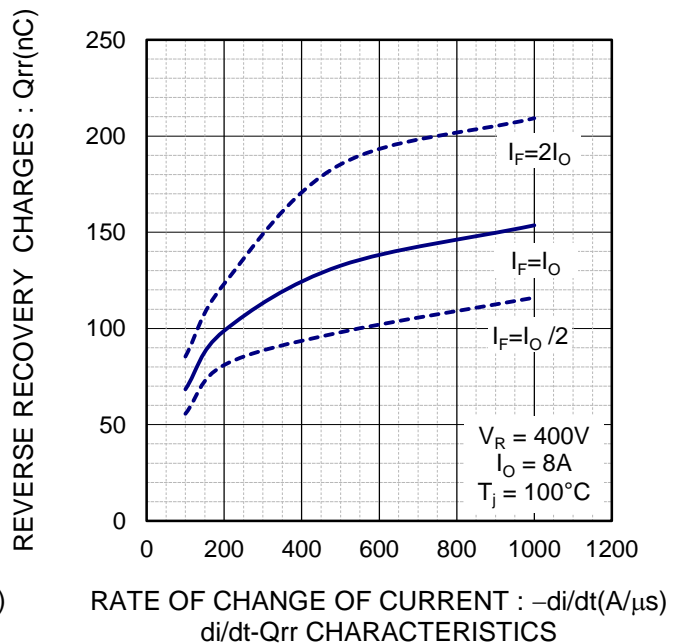
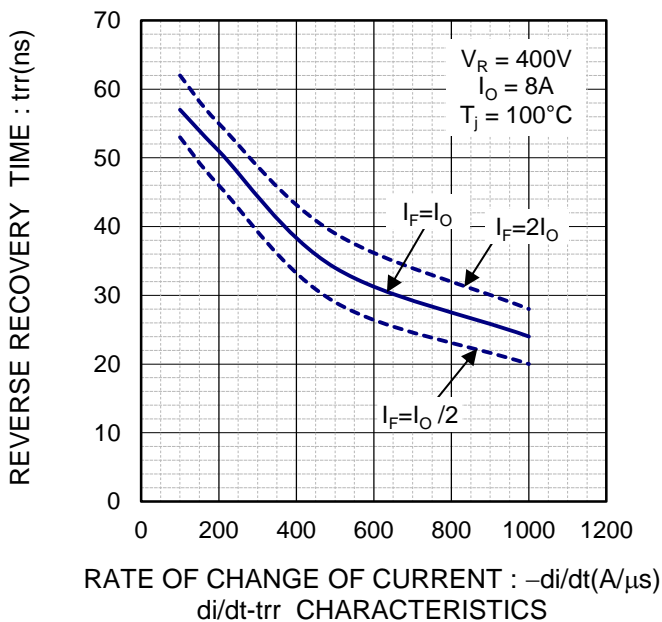
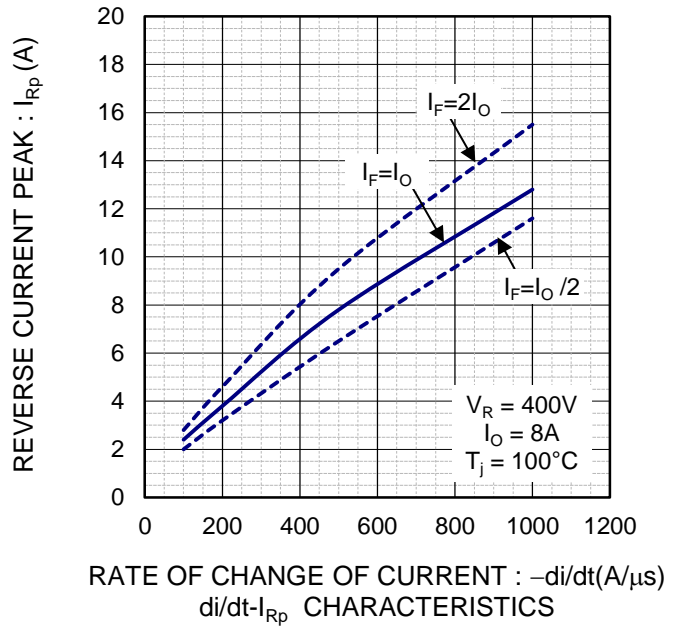
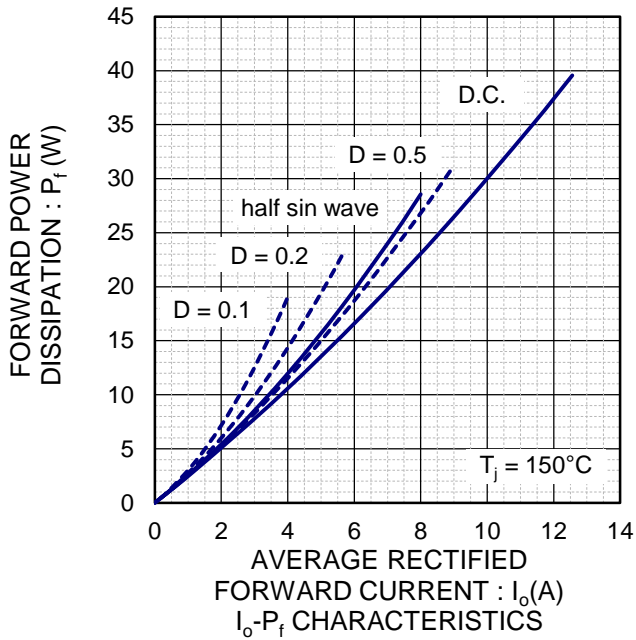
●Electrical Characteristic Curves



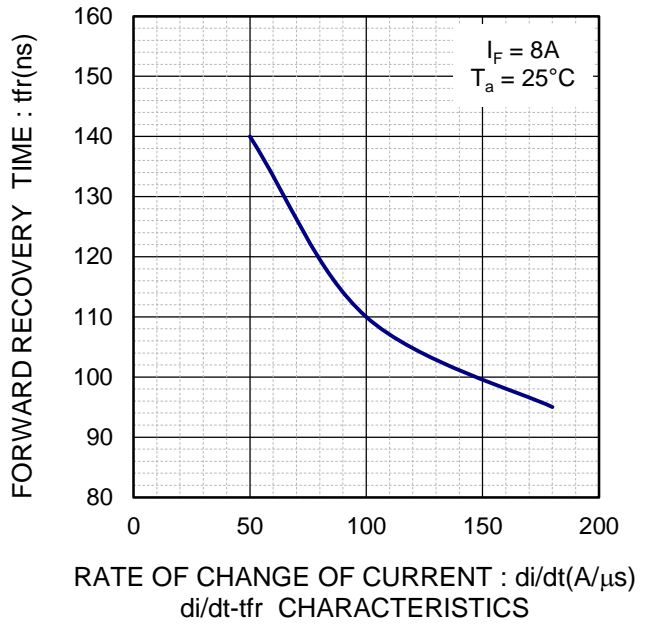
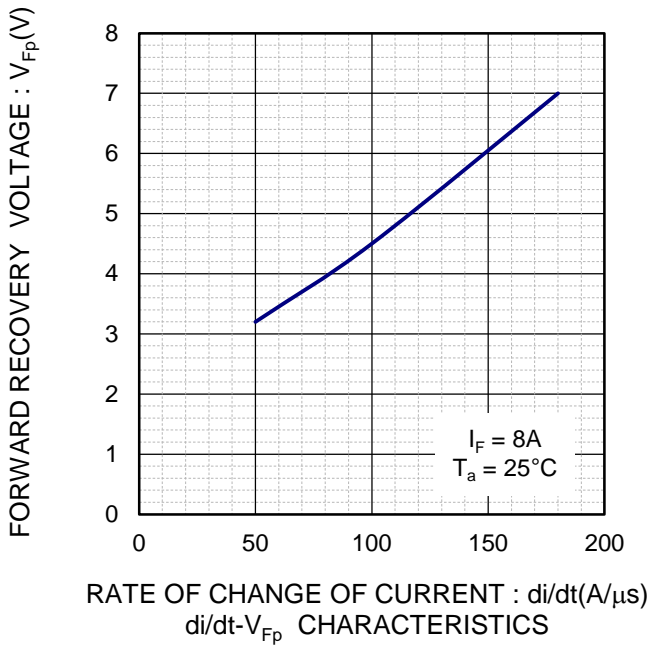
●Electrical characteristic curves



●Electrical characteristic curves



●Electrical characteristic curves



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