

●Serie

Standard Fast Recovery

●Application

General rectification

For PFC

(CCM : Continuous Current Mode)

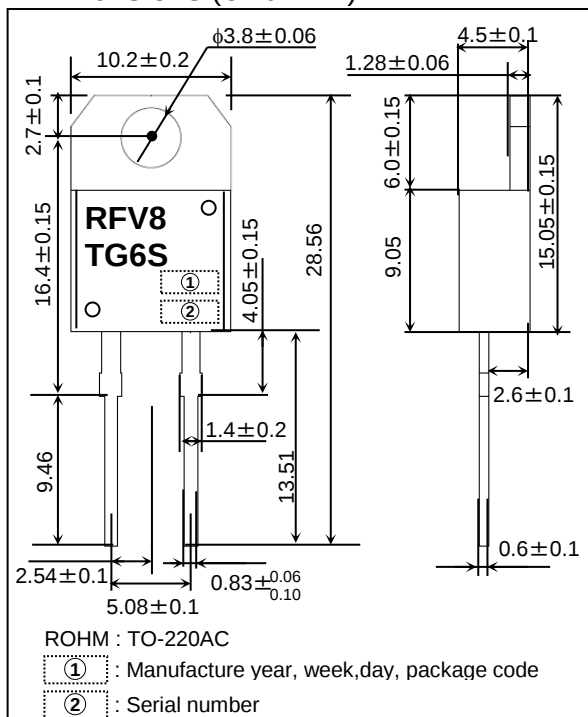
●Features

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

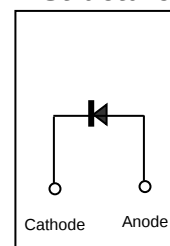
●Construction

Silicon epitaxial planar type

●Dimensions (Unit : mm)



●Structure



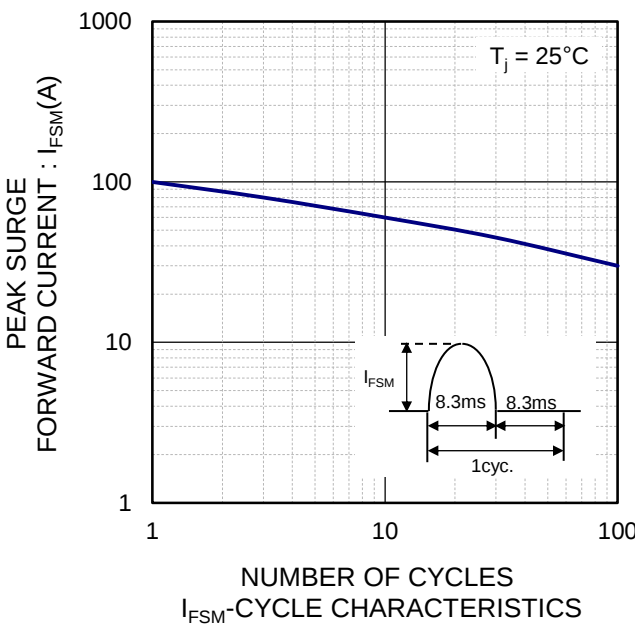
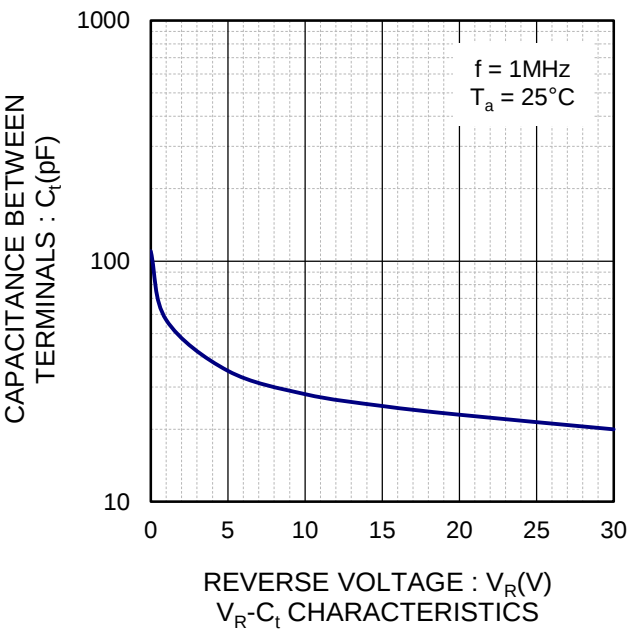
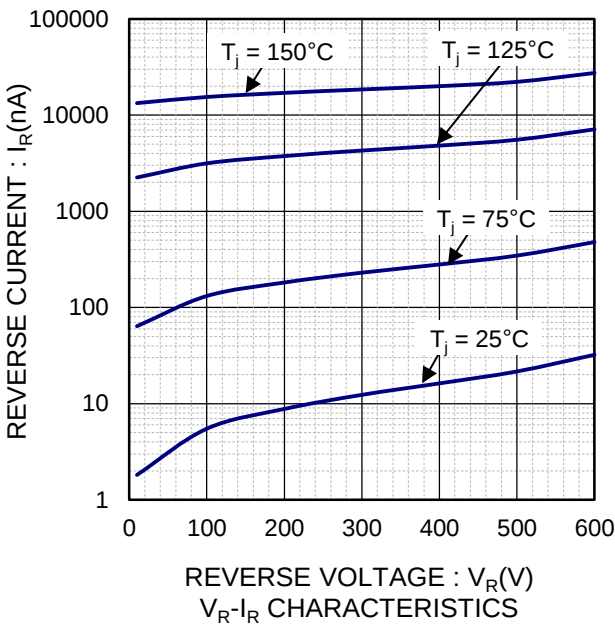
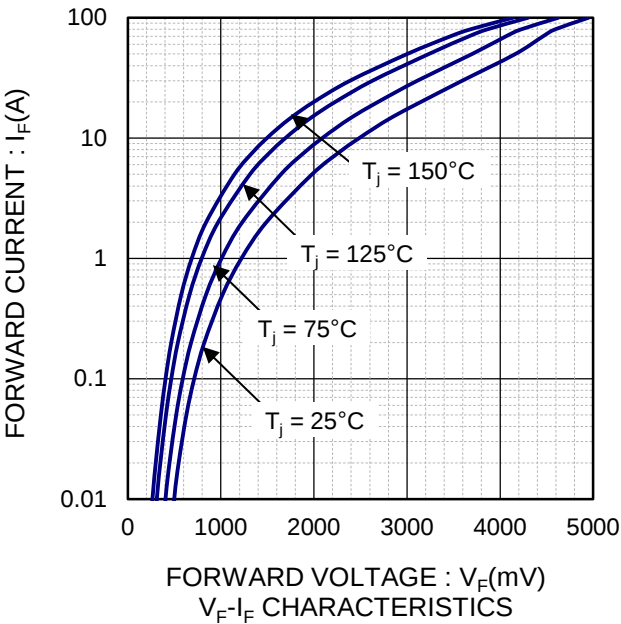
●Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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	8	A
Non-repetitive forward surge current	I_{FSM}	60Hz half sin wave, one cycle, non-repetitive at $T_j = 25^\circ\text{C}$	100	A
Operating junction temperature	T_j	-	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$

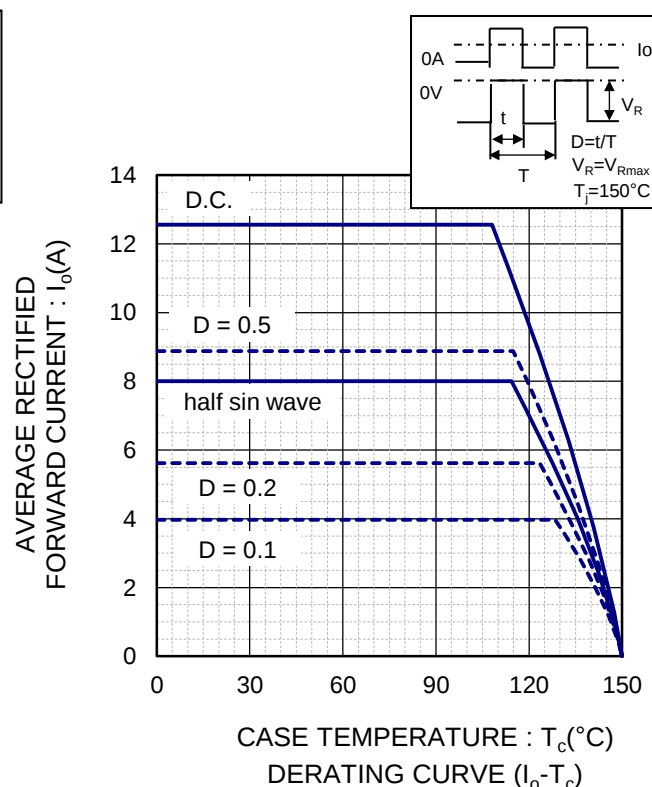
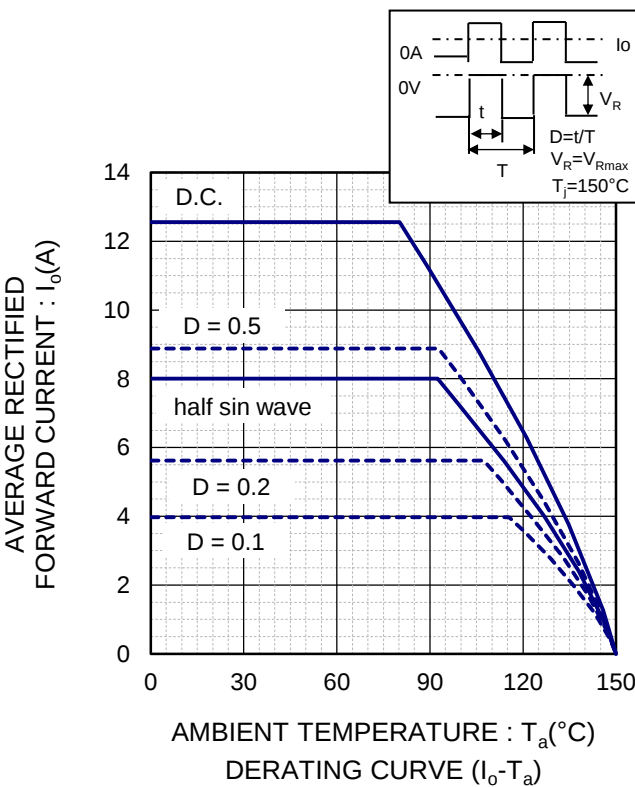
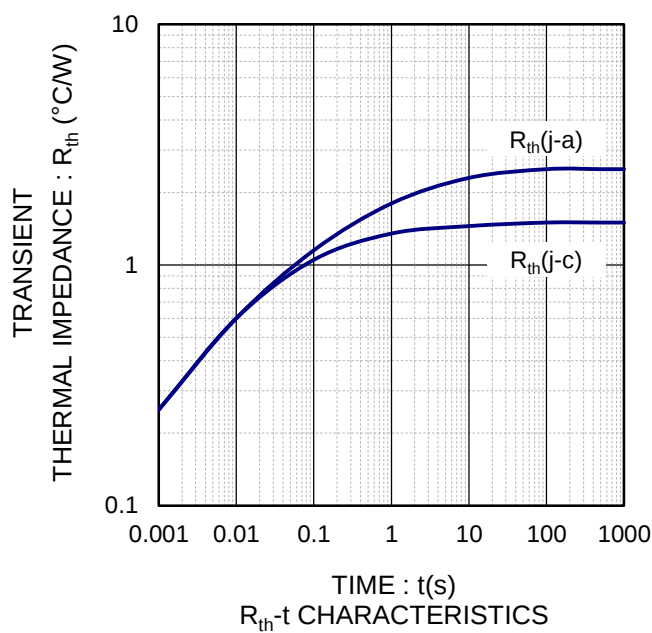
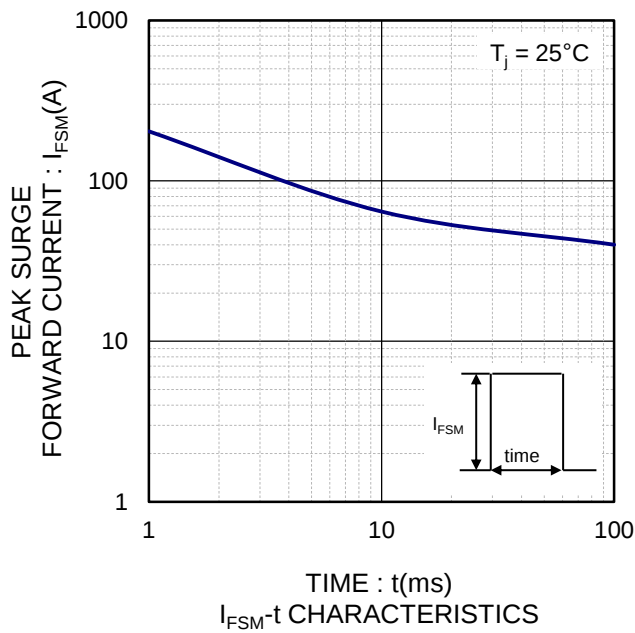
●Electrical Characteristics ($T_j = 25^\circ\text{C}$)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit
Forward voltage	V _F	I _F =8A	T _j =25°C	1.6	2.3	2.8	V
			T _j =125°C	-	1.55	-	V
Reverse current	I _R	V _R =600V	T _j =25°C	-	0.03	10	μA
			T _j =125°C	-	5	200	μA
Reverse recovery time	trr	I _F =0.5A, I _R =1A, Irr=0.25×I _R		-	15	25	ns
		I _F =8A, V _R =400V, dI _F /dt=-200A/μs		-	25	45	ns
Reverse recovery current	I _{Rp}	I _F =8A, V _R =400V	T _j =125°C	-	5.5	-	A
Reverse recovery charges	Qrr	dI _F /dt=-200A/μs		-	150	-	nC
Forward recovery time	tfr	I _F =8A, dI _F /dt=100A/μs,		-	125	-	ns
Forward recovery voltage	V _{Fp}	V _{FR} =1.1×V _{Fmax}		-	4.5	-	V
Thermal resistance	R _{th(j-a)}	Junction to ambient		-	-	2.5	°C/W
	R _{th(j-c)}	Junction to case		-	-	1.5	°C/W

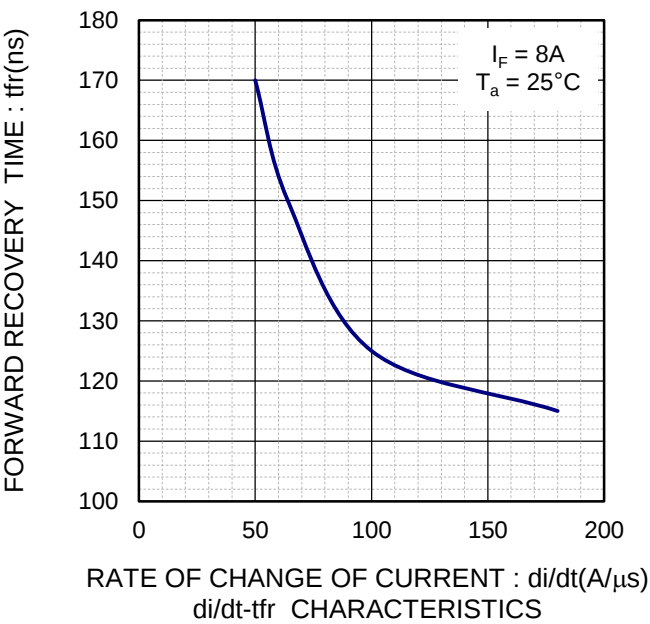
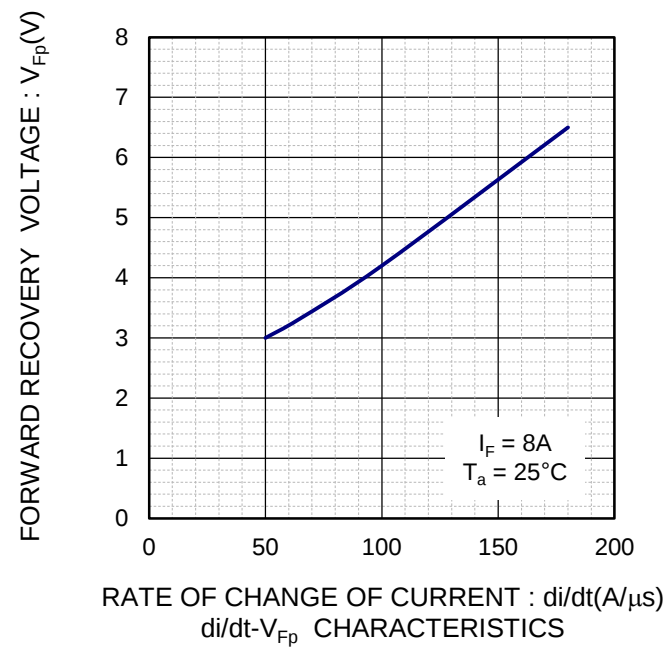
●Electrical Characteristic Curves



●Electrical characteristic curves



●Electrical characteristic curves



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