

●Serise

Standard Fast Recovery

●Application

General rectification

For PFC

(CCM : Continuous Current Mode)

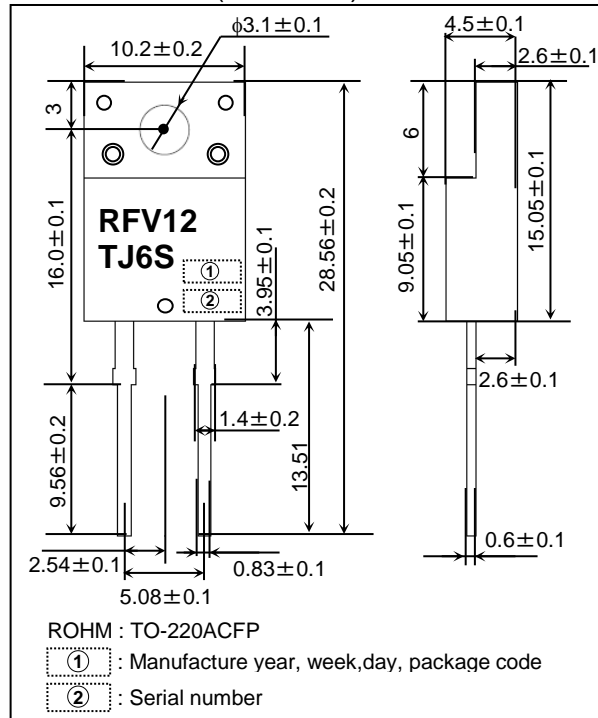
●Features

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

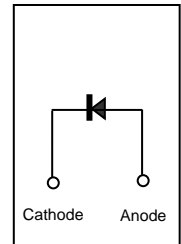
●Construction

Silicon epitaxial planar type

●Dimensions (Unit : mm)



●Structure



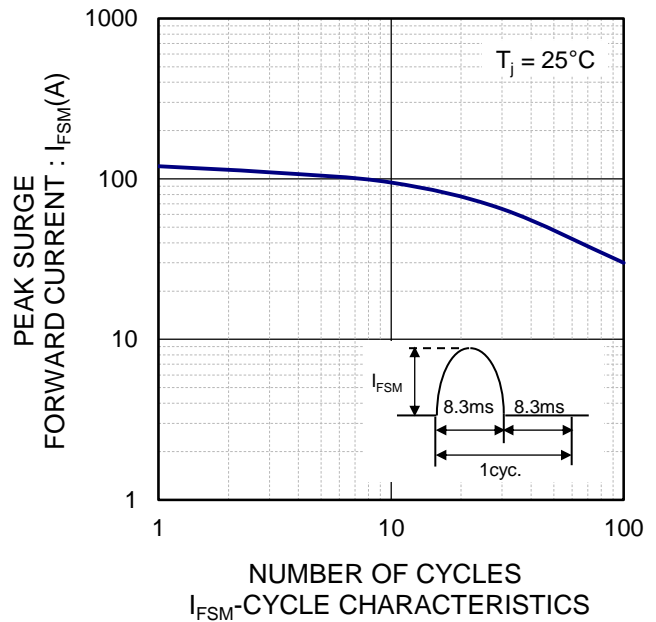
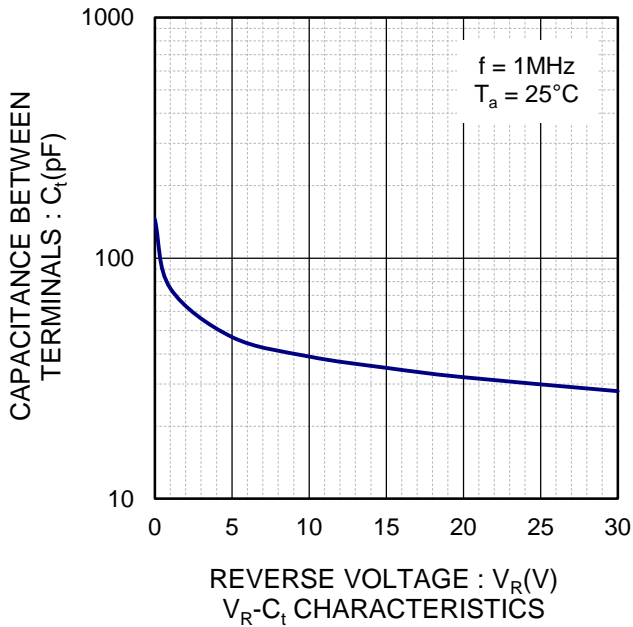
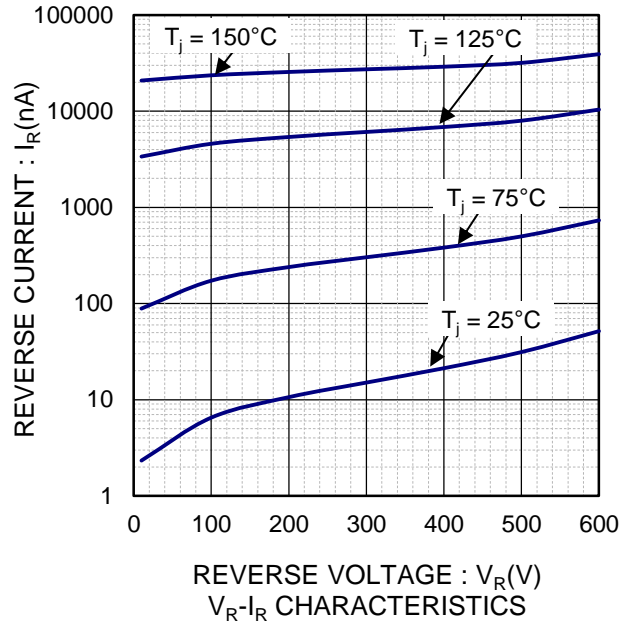
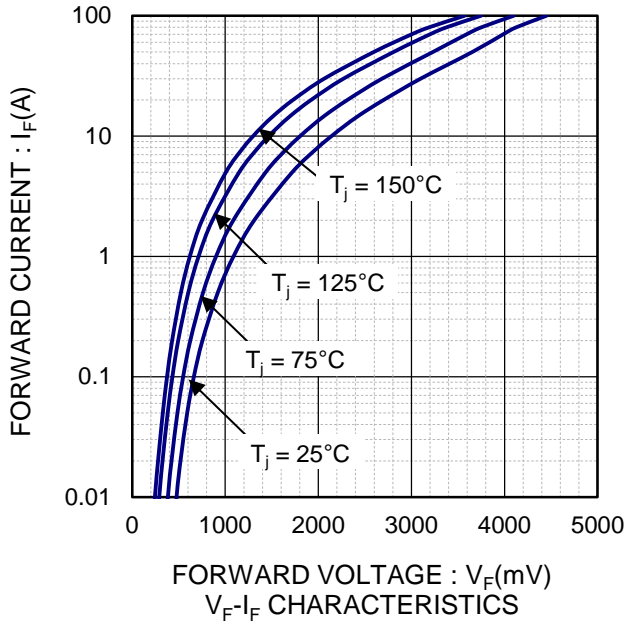
●Absolute Maximum Ratings (T_c= 25°C)

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 =50°C	12	A
Non-repetitive forward surge current	I _{FSM}	60Hz half sin wave, one cycle, non-repetitive at T _j =25°C	120	A
Operating junction temperature	T _j	-	150	°C
Storage temperature	T _{stg}	-	-55 to +150	°C

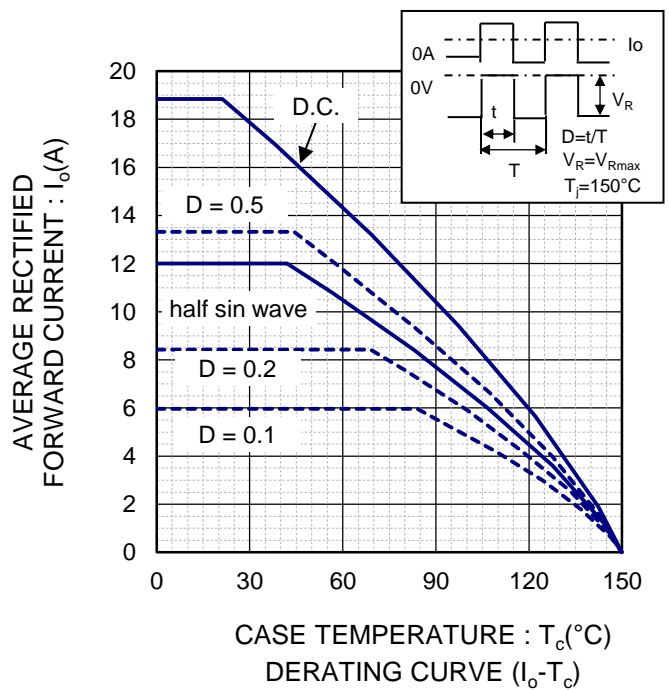
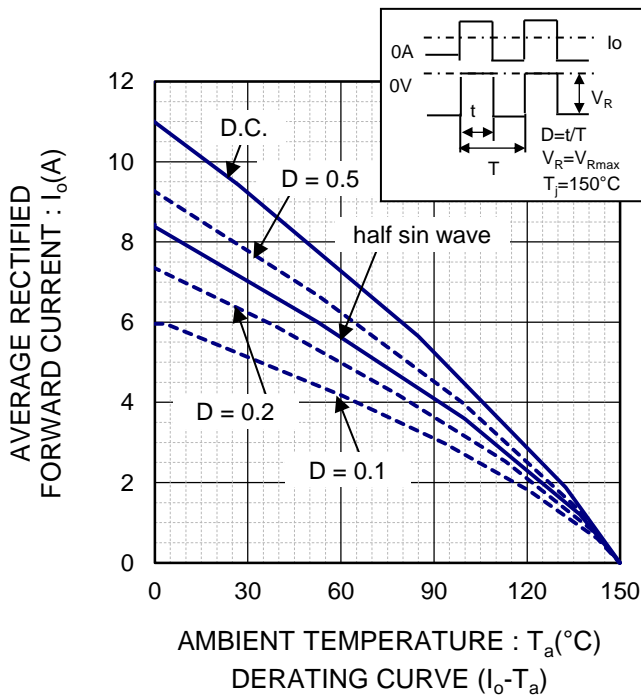
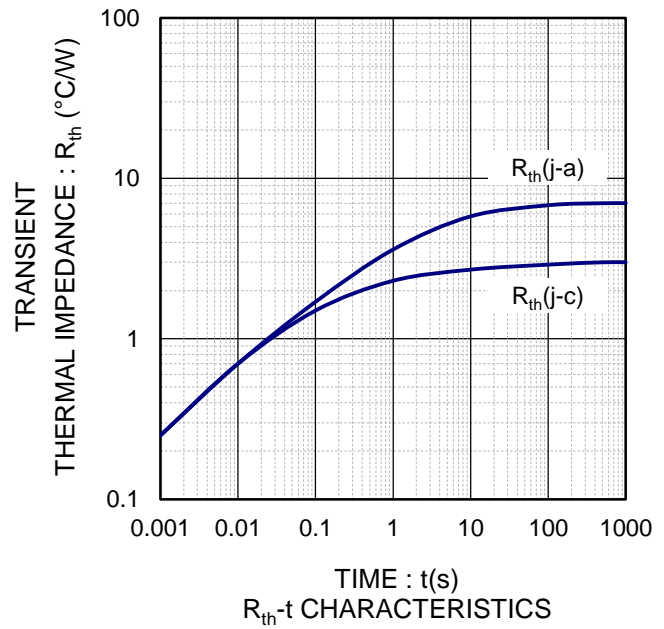
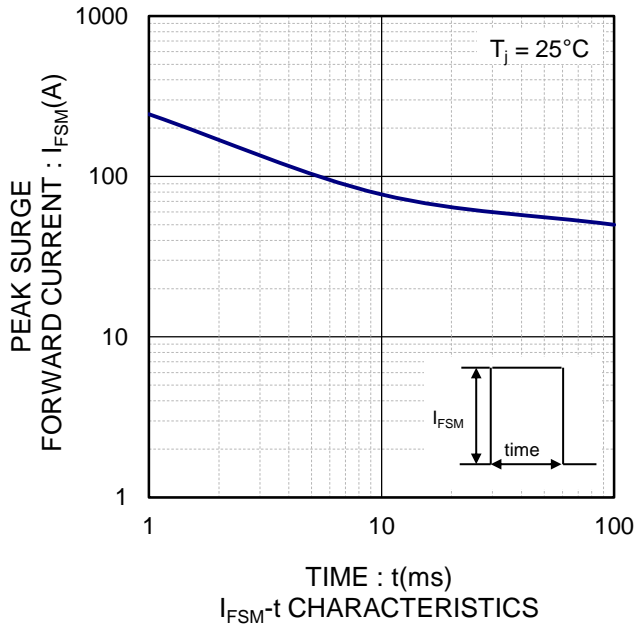
●Electrical Characteristics (T_j = 25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Forward voltage	V _F	I _F =12A	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	-	8	200	μA
Reverse recovery time	trr	I _F =0.5A, I _R =1A, I _{rr} =0.25×I _R	-	18	25	ns	
		I _F =12A, V _R =400V, dI _F /dt=-200A/μs	-	27	45	ns	
Reverse recovery current	I _{RP}	I _F =12A, V _R =400V	-	6.0	-	A	
Reverse recovery charges	Q _{rr}	dI _F /dt=-200A/μs	-	180	-	nC	
Forward recovery time	t _{fr}	I _F =12A, dI _F /dt=200A/μs,	-	120	-	ns	
Forward recovery voltage	V _{Fp}	V _{FR} =1.1×V _{Fmax}	-	5.5	-	V	
Thermal resistance	R _{th(j-a)}	Junction to ambient	-	-	7.0	°C/W	
	R _{th(j-c)}	Junction to case	-	-	3.0	°C/W	

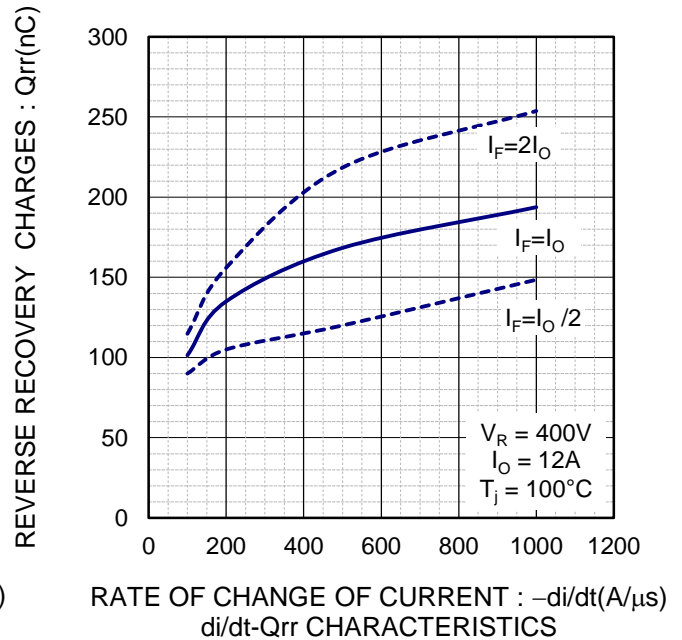
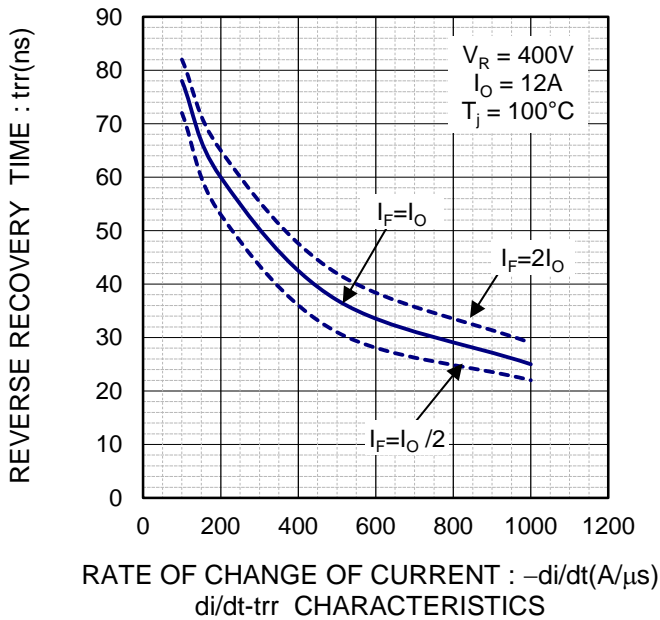
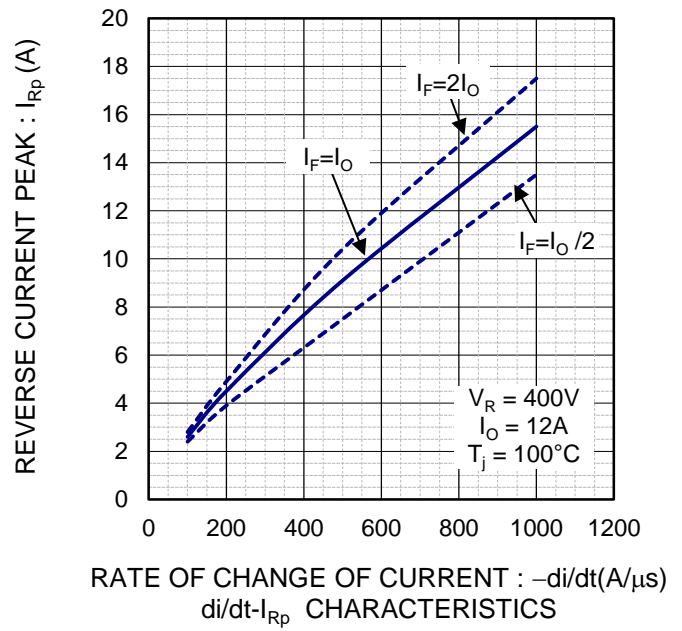
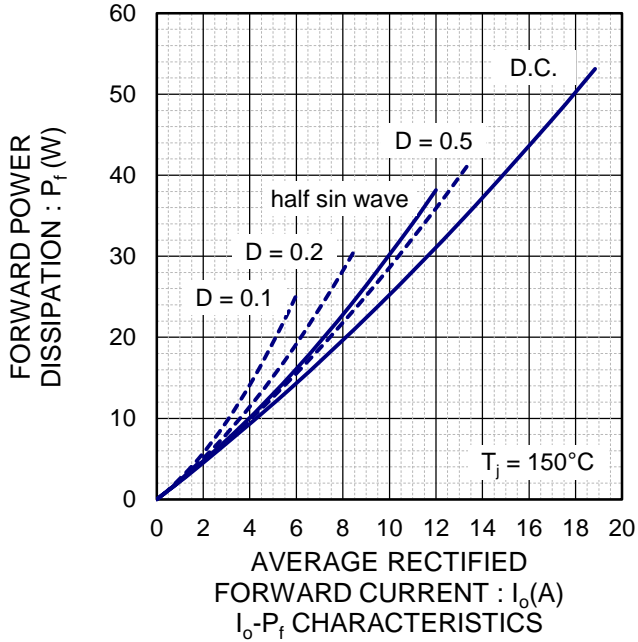
●Electrical Characteristic Curves



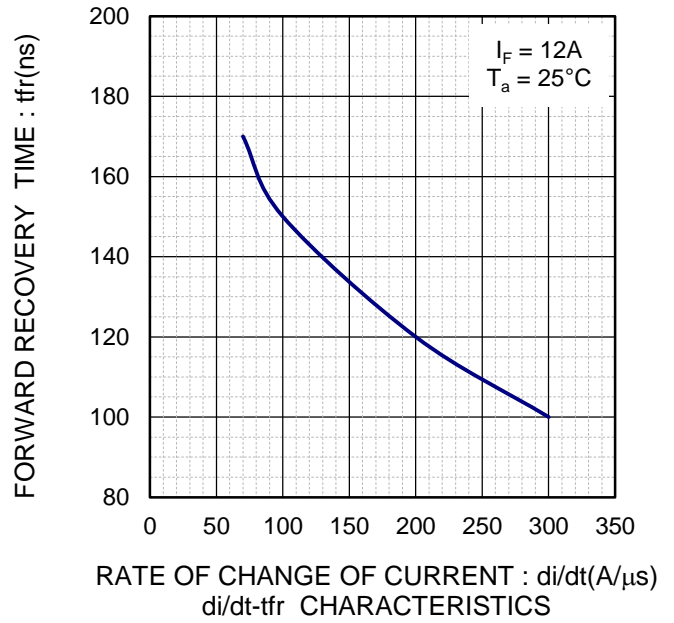
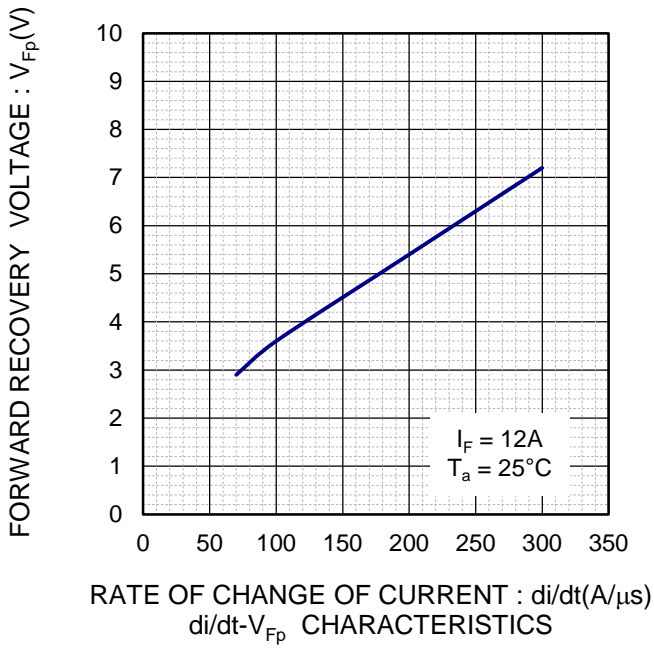
●Electrical characteristic curves



●Electrical characteristic curves



●Electrical characteristic curves



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