

### ●Serise

Standard Fast Recovery

### ●Application

General rectification

For PFC

(CCM : Continuous Current Mode)

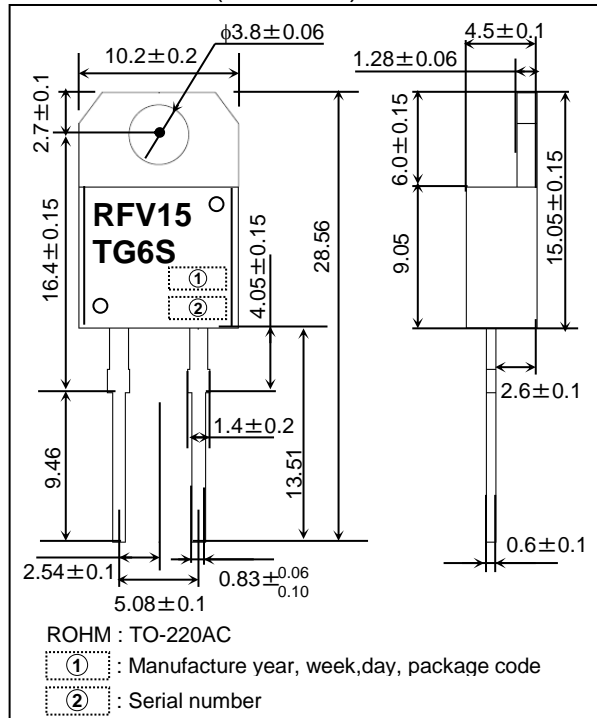
### ●Features

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

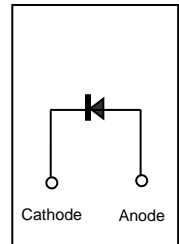
### ●Construction

Silicon epitaxial planar type

### ●Dimensions (Unit : mm)



### ●Structure



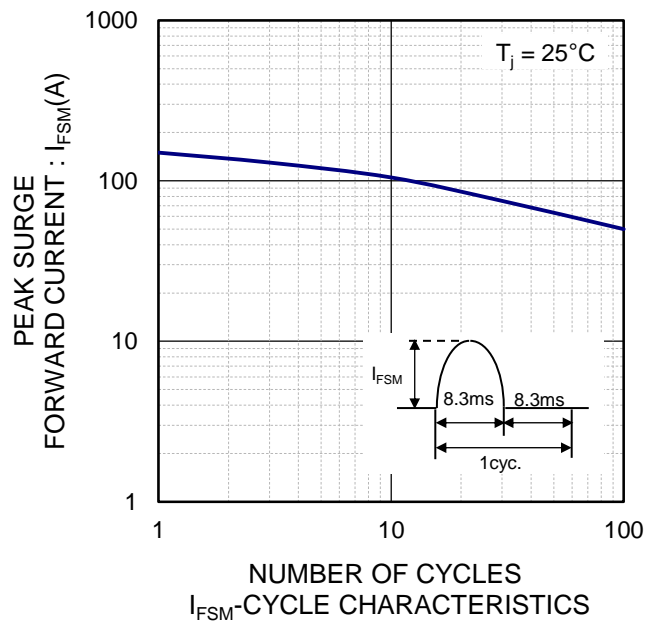
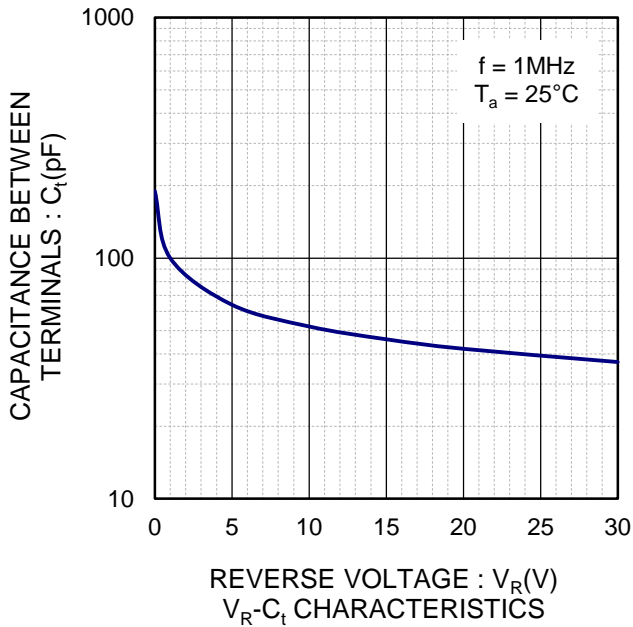
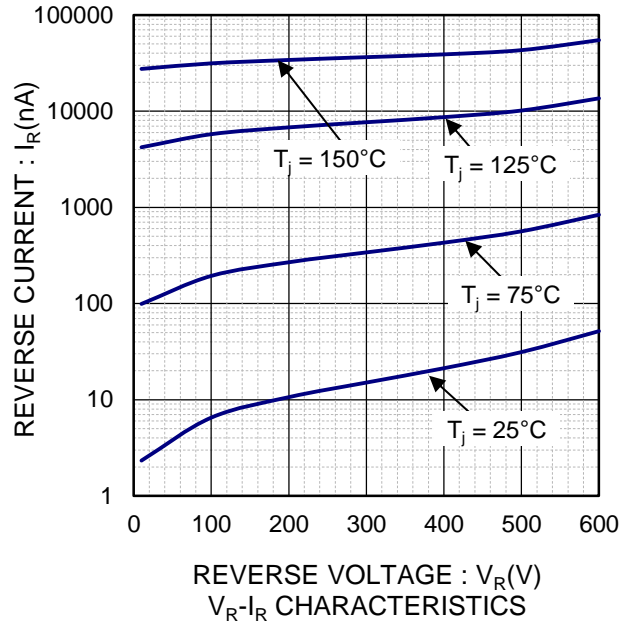
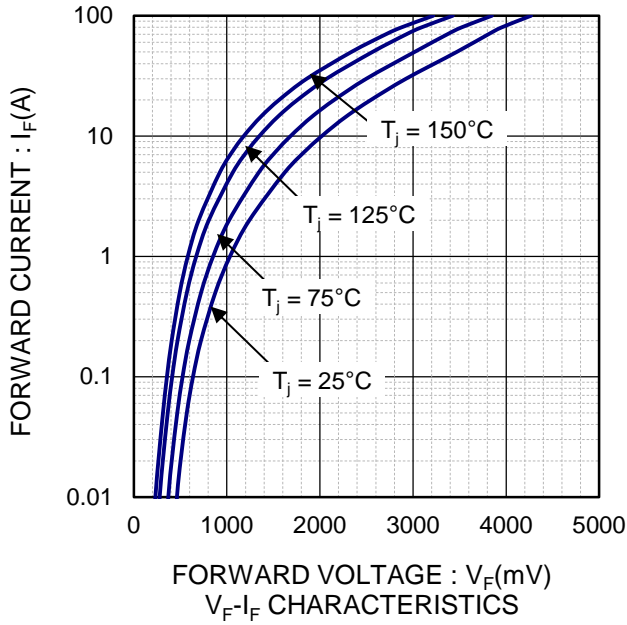
### ●Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	V <sub>RM</sub>	Duty ≤ 0.5	600	V
Reverse voltage	V <sub>R</sub>	Direct reverse voltage	600	V
Average current	I <sub>o</sub>	60Hz half sin wave , resistive load	15	A
Non-repetitive forward surge current	I <sub>FSM</sub>	60Hz half sin wave, one cycle, non-repetitive at T <sub>j</sub> =25°C	150	A
Operating junction temperature	T <sub>j</sub>	-	150	°C
Storage temperature	T <sub>stg</sub>	-	-55 to +150	°C

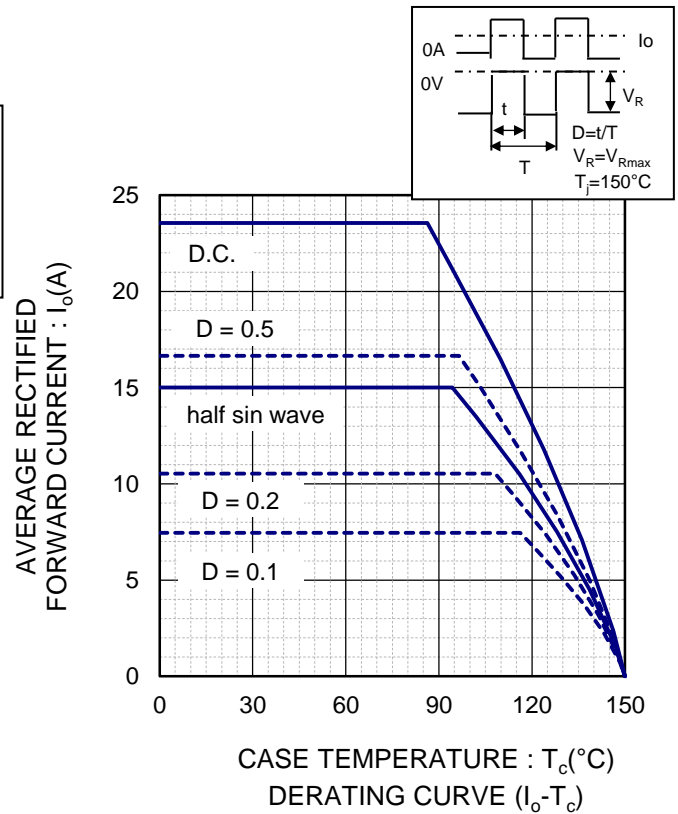
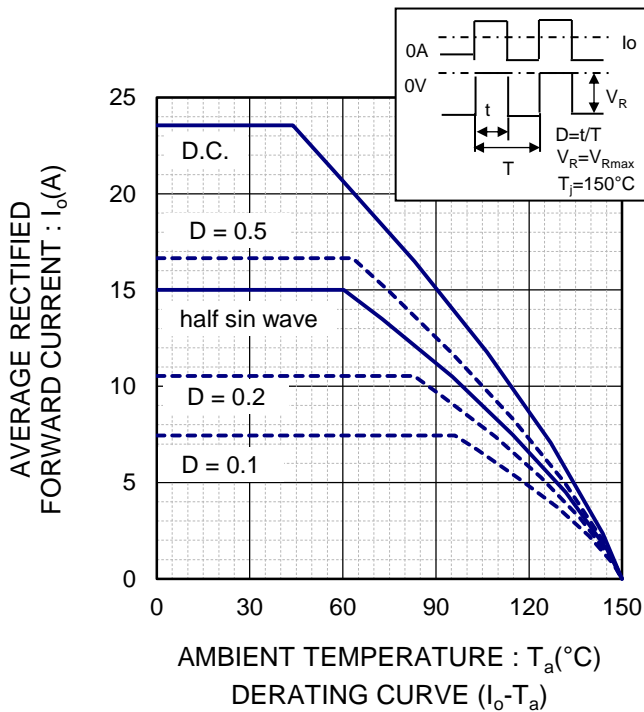
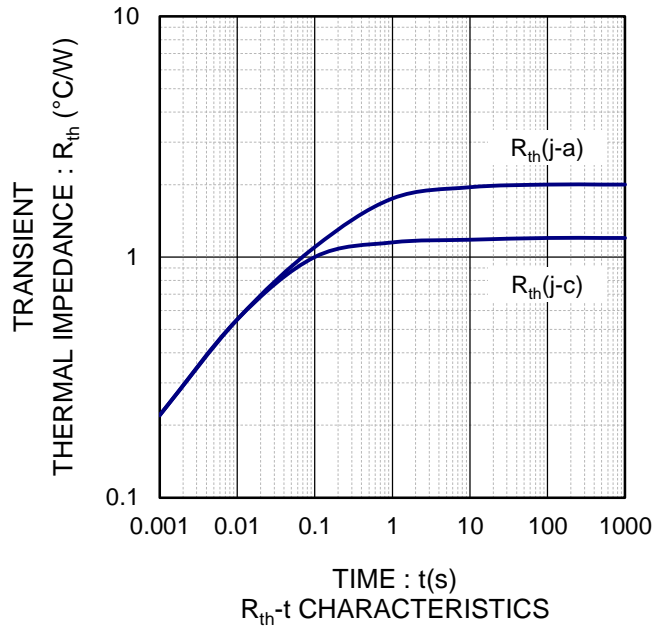
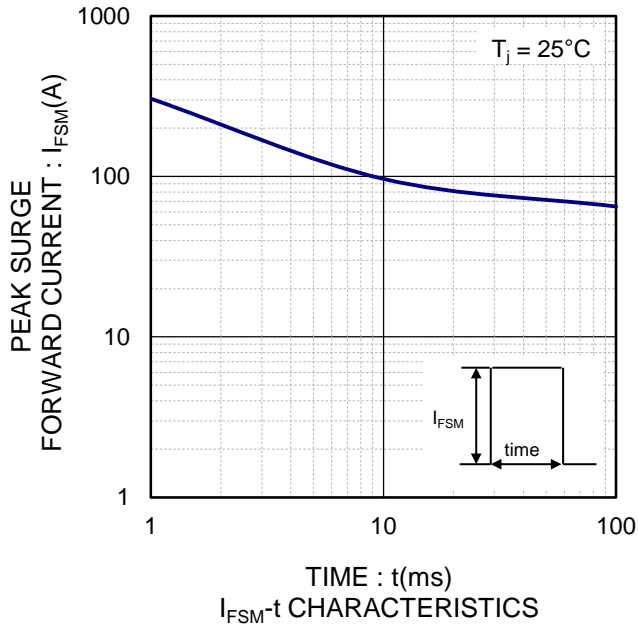
### ●Electrical Characteristics (T<sub>j</sub> = 25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =15A	T <sub>j</sub> =25°C	1.6	2.3	2.8	V
			T <sub>j</sub> =125°C	-	1.55	-	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =600V	T <sub>j</sub> =25°C	-	0.03	10	μA
			T <sub>j</sub> =125°C	-	10	200	μA
Reverse recovery time	trr	I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, I <sub>rr</sub> =0.25×I <sub>R</sub>	-	20	30	ns	
		I <sub>F</sub> =15A, V <sub>R</sub> =400V, dI <sub>F</sub> /dt=-200A/μs	-	30	50	ns	
Reverse recovery current	I <sub>RP</sub>	I <sub>F</sub> =15A, V <sub>R</sub> =400V	-	6.5	-	A	
Reverse recovery charges	Q <sub>rr</sub>	dI <sub>F</sub> /dt=-200A/μs	-	200	-	nC	
Forward recovery time	t <sub>fr</sub>	I <sub>F</sub> =15A, dI <sub>F</sub> /dt=200A/μs,	-	150	-	ns	
Forward recovery voltage	V <sub>Fp</sub>	V <sub>FR</sub> =1.1×V <sub>Fmax</sub>	-	5.5	-	V	
Thermal resistance	R <sub>th(j-a)</sub>	Junction to ambient	-	-	2.0	°C/W	
	R <sub>th(j-c)</sub>	Junction to case	-	-	1.2	°C/W	

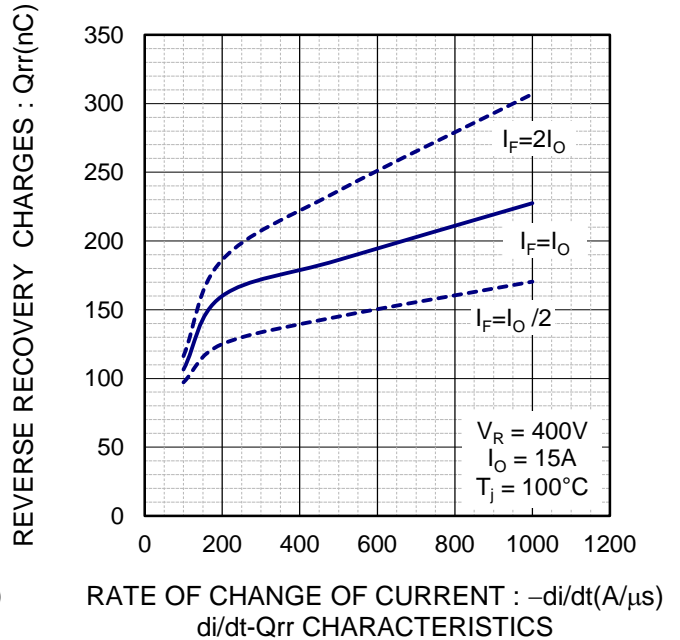
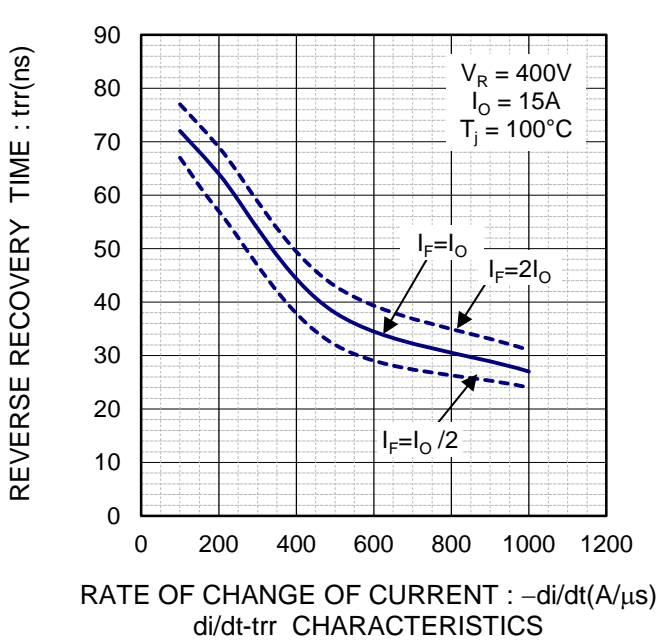
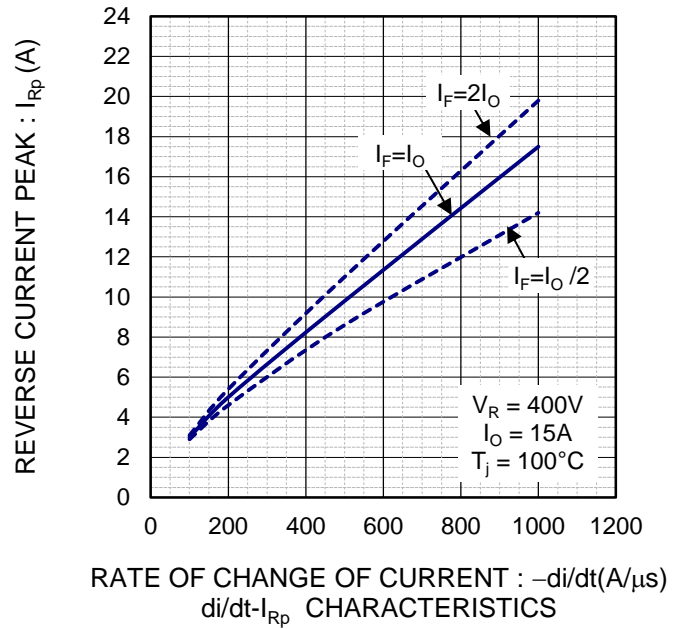
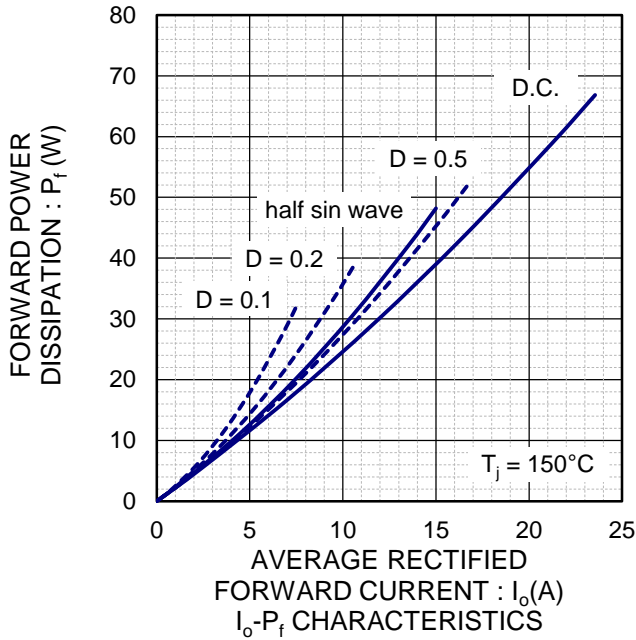
●Electrical Characteristic Curves



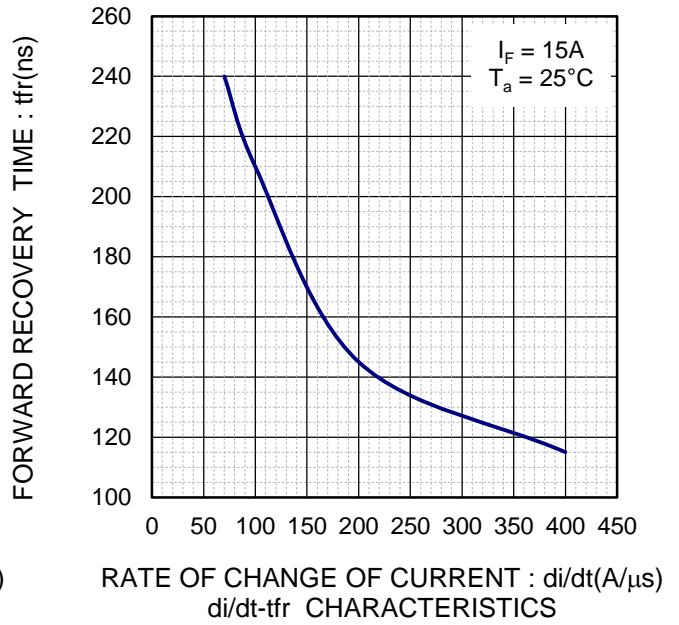
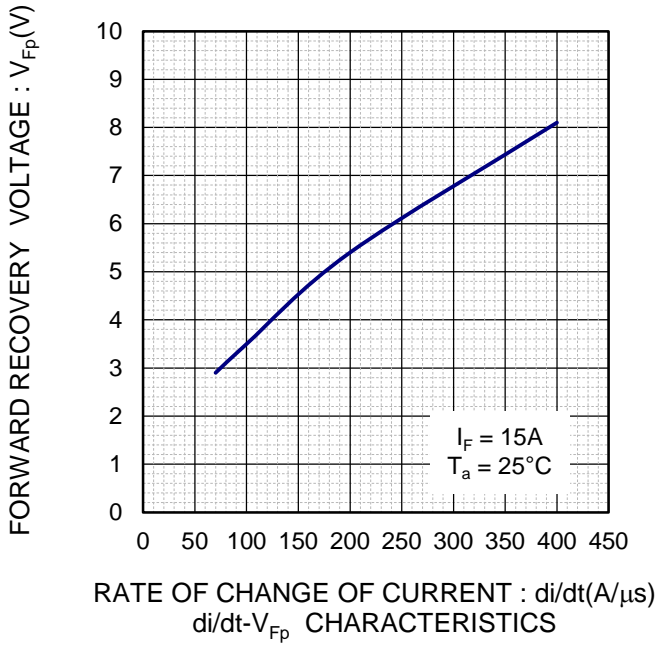
●Electrical characteristic curves



●Electrical characteristic curves



●Electrical characteristic curves



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