Super Fast Recovery Diode

RFNL15TJ6S Data Sheet

●Serise

Standard Fast Recovery

●Application

General rectification

For PFC

(DCM : Discontinuous Current Mode)

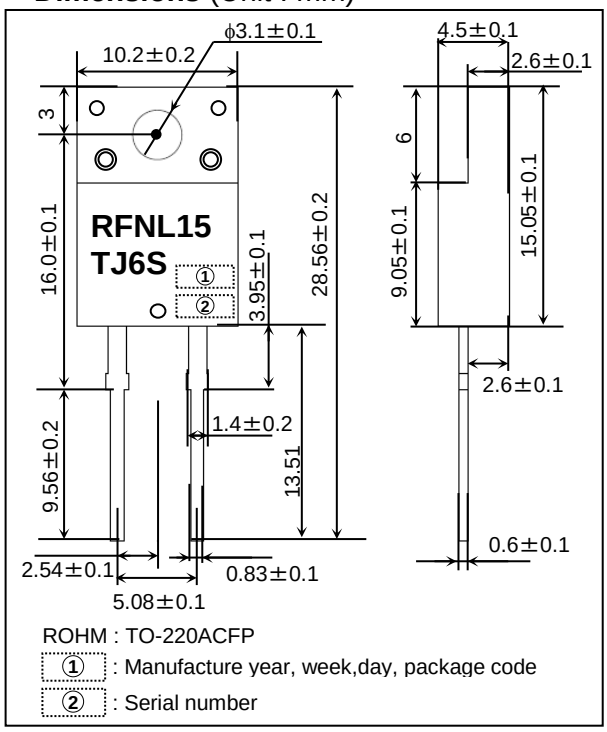
●Features

1) Ultra low forward voltage
2) Low switching loss
3) High current overload capacity

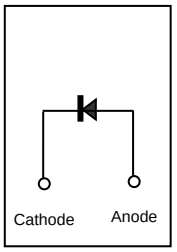
●Construction

Silicon epitaxial planar type

●Dimensions (Unit : mm)



●Structure



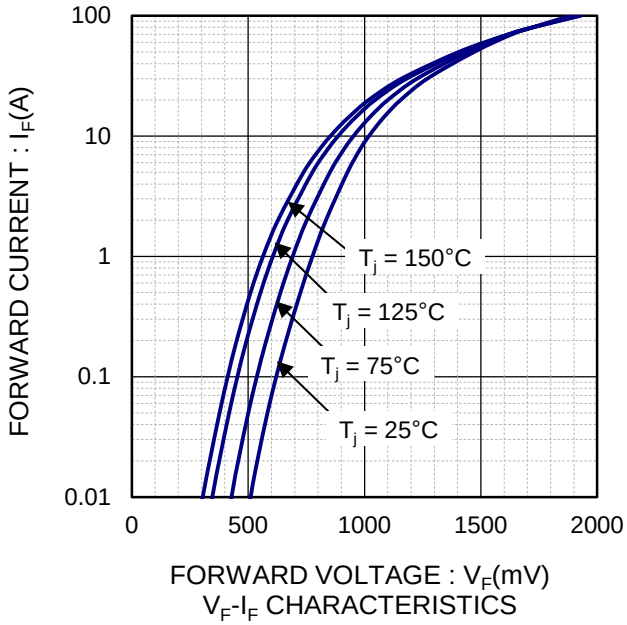
●Absolute Maximum Ratings (T_c= 25°C)

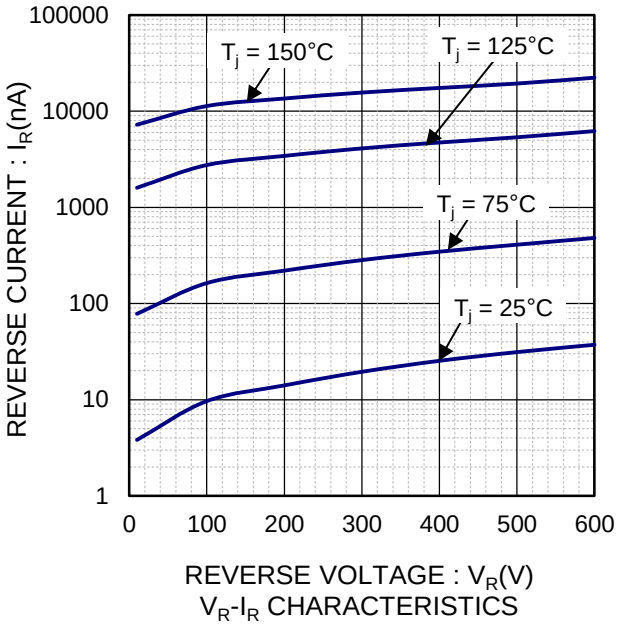
Parameter	Symbol	Conditions		Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty≦0.5		600	V
Reverse voltage	V_R	Direct reverse voltage		600	V
Average current	I_o	60Hz half sin wave , resistive load	T_c=80°C	15	A
Non-repetitive forward surge current	I_{FSM}	60Hz half sin wave, one cycle, non-repetitive at T_j=25°C		160	A
Operating junction temperature	T_j	-		150	°C
Storage temperature	T_{stg}	-		−55 to +150	°C

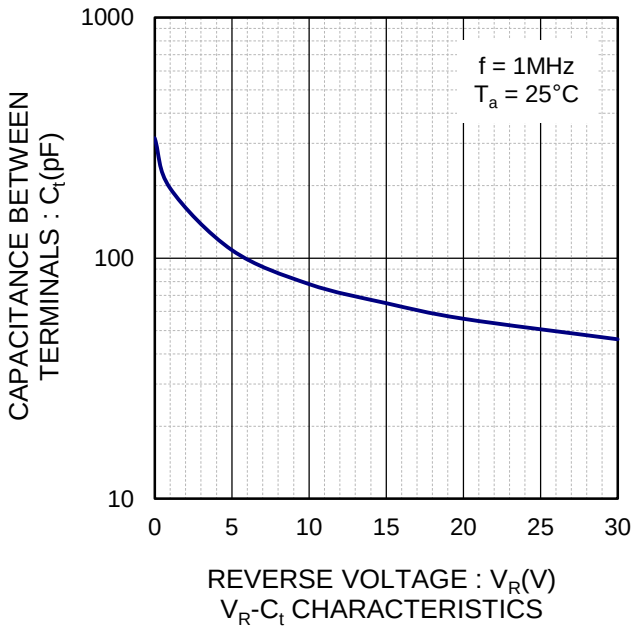
●Electrical Characteristics (T_j = 25°C)

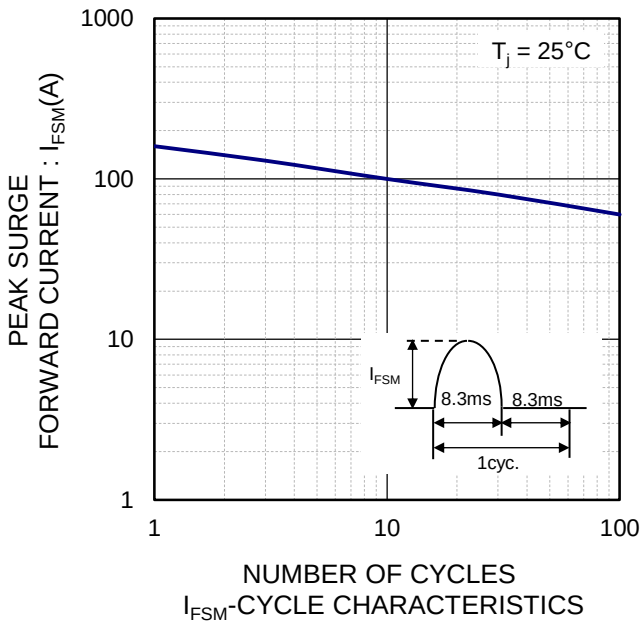
Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F=15A	T_j=25°C	0.9	1.1	1.3	V
			T_j=125°C	-	0.95	-	V
Reverse current	I_R	V_R=600V	T_j=25°C	-	0.04	10	μA
			T_j=125°C	-	6	200	μA
Reverse recovery time	trr	I_F=0.5A, I_R=1A, Irr=0.25×I_R		-	48	65	ns
		I_F=15A, V_R=400V, dI_F/dt=−100A/μs		-	105	160	ns
Forward recovery time	tfr	I_F=15A, dI_F/dt=100A/μs, V_{FR}=1.1xV_{Fmax}		-	170	-	ns
Forward recovery voltage	V_{Fp}			-	3.2	-	V
Thermal resistance	R_{th}(j-a)	Junction to ambient		-	-	7.5	°C/W
	R_{th}(j-c)	Junction to case		-	-	2.8	°C/W

●Electrical Characteristic Curves

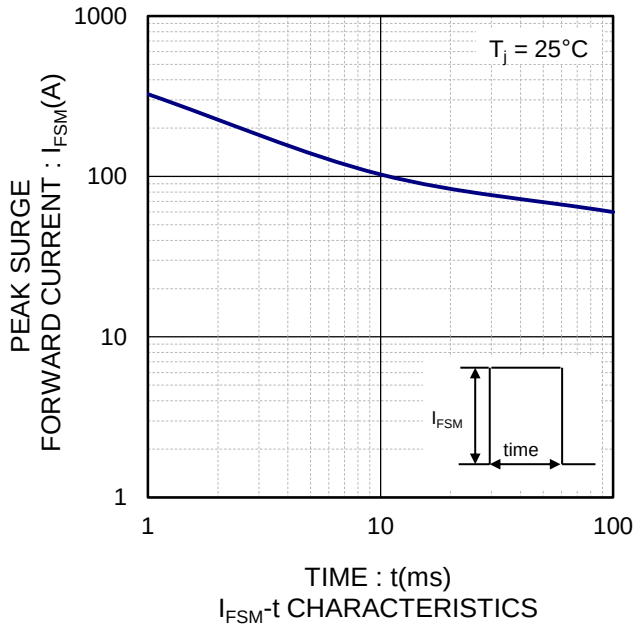


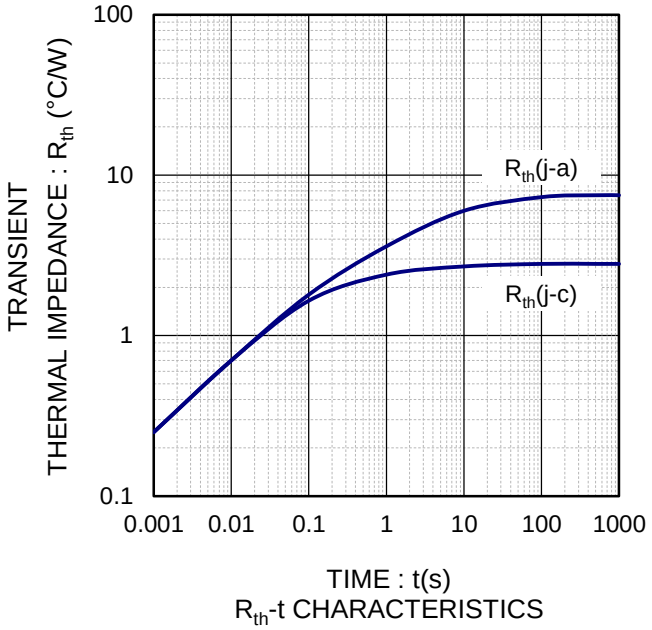


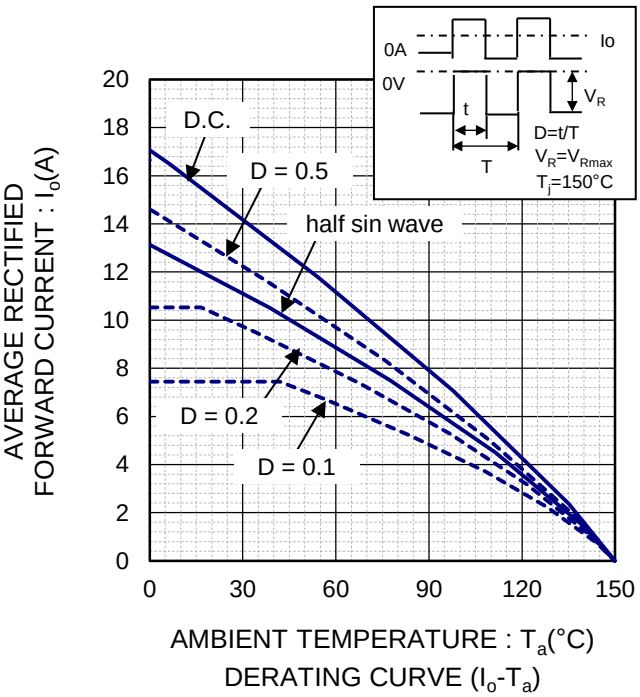


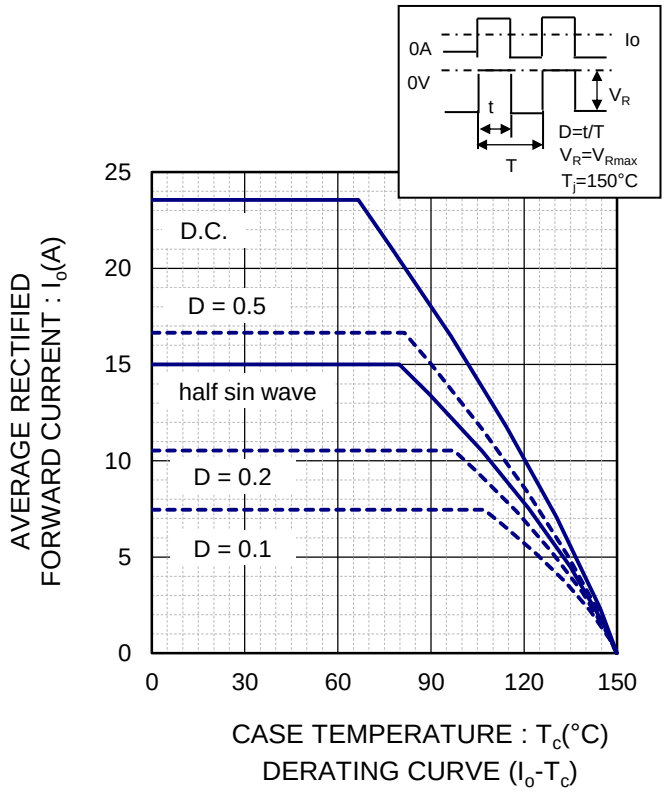


●Electrical characteristic curves

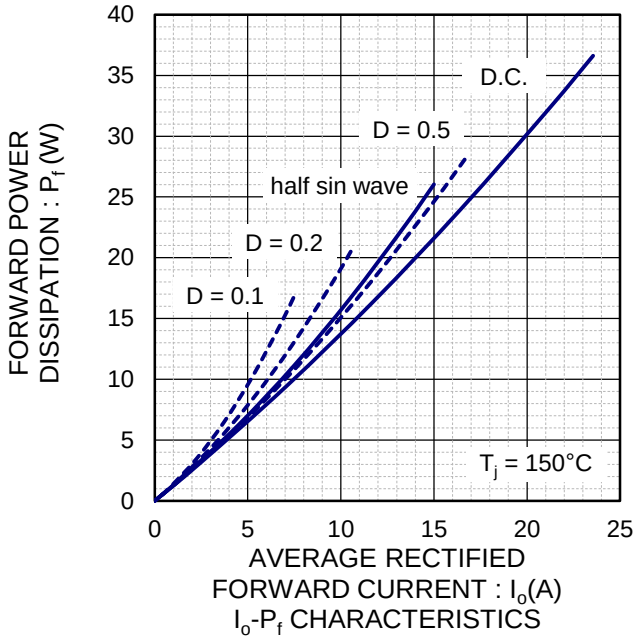




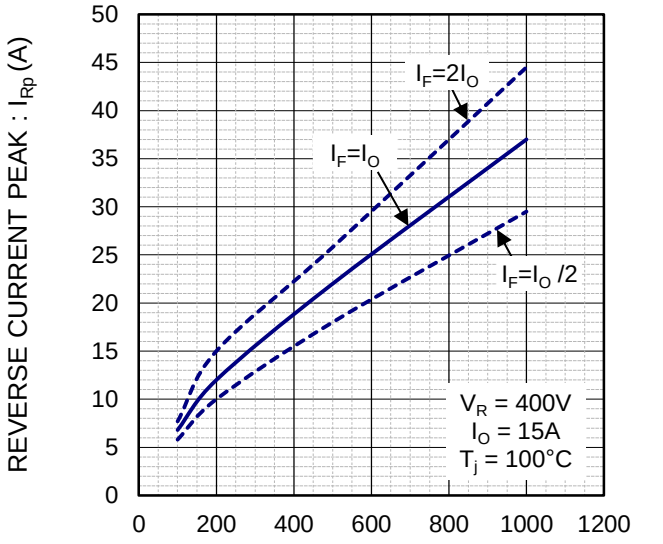




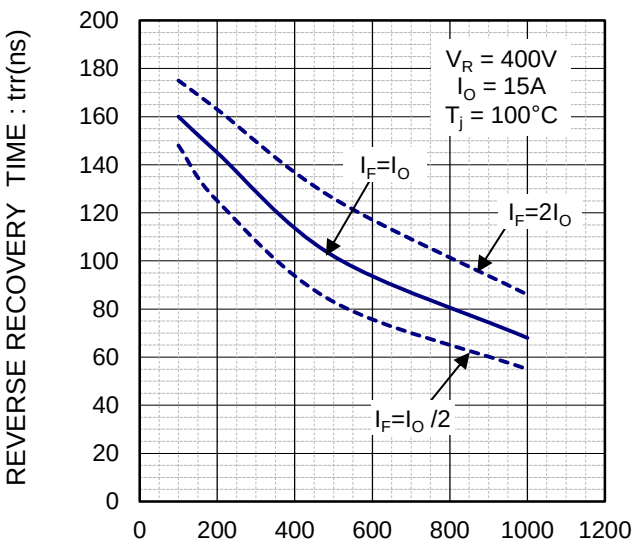
●Electrical characteristic curves



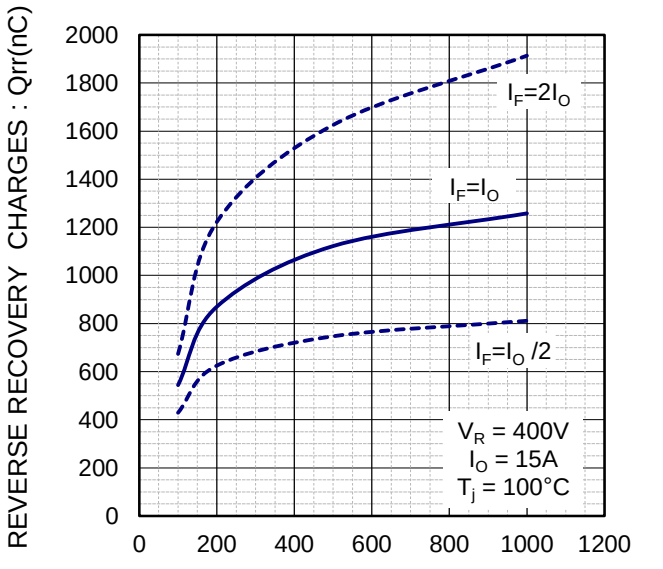
I_o-P_f CHARACTERISTICS



di/dt-I_{Rp} CHARACTERISTICS

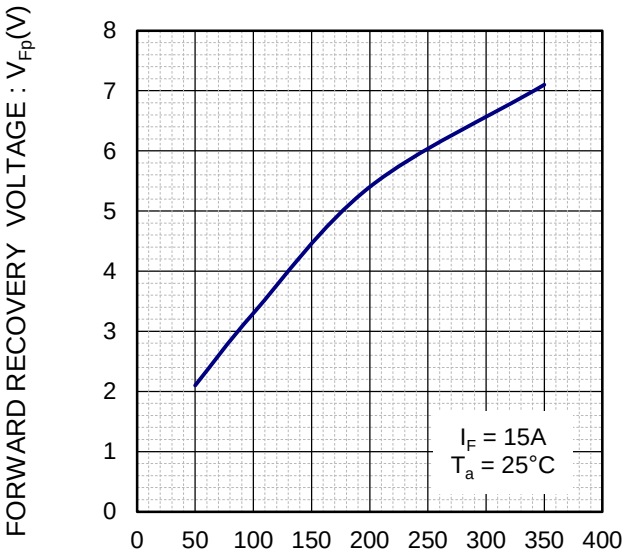


di/dt-trr CHARACTERISTICS

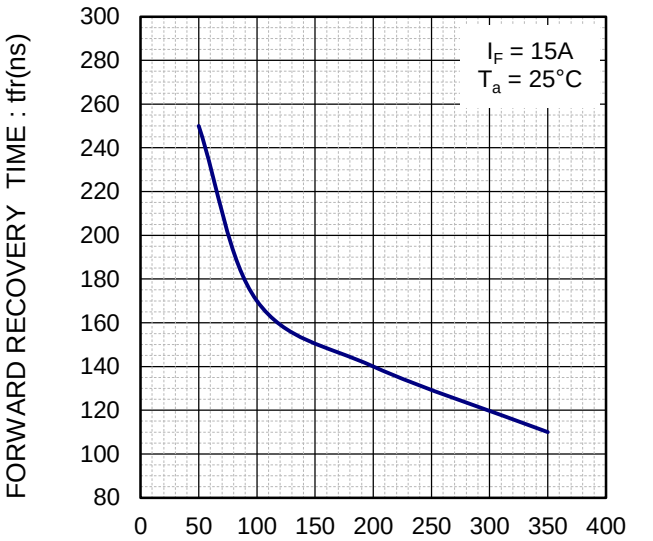


di/dt-Qrr CHARACTERISTICS

●Electrical characteristic curves



di/dt-V_{Fp} CHARACTERISTICS



di/dt-tfr CHARACTERISTICS

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