Super Fast Recovery Diode

RFVS8TJ6S

Data Sheet

●Serise

Standard Fast Recovery

●Application

General rectification

For PFC

(CCM : Continuous Current Mode)

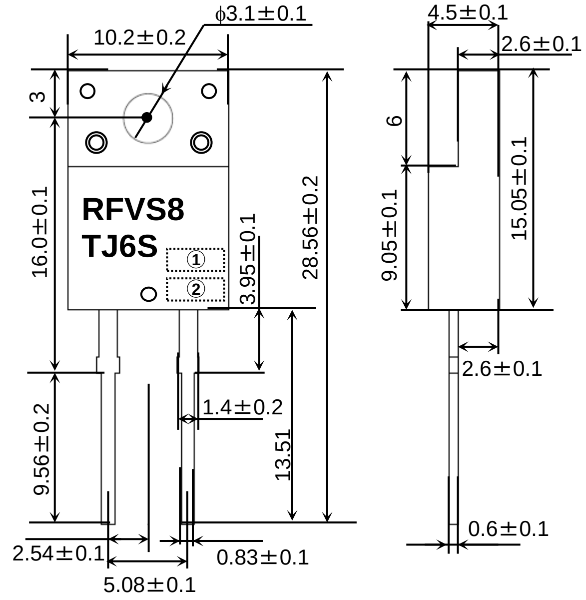
●Features

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)

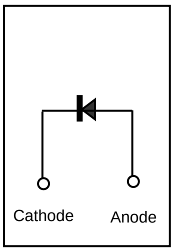


ROHM : TO-220ACFP

① : Manufacture year, week,day, package code

② : Serial number

●Structure



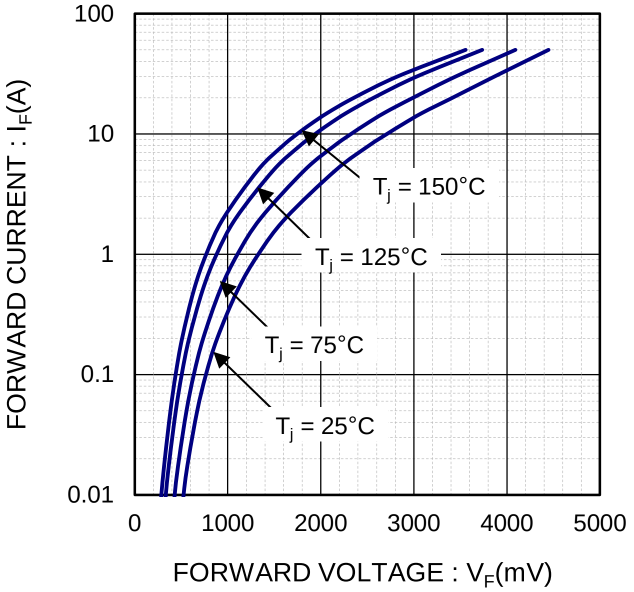
●Absolute Maximum Ratings (T_c= 25°C)

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

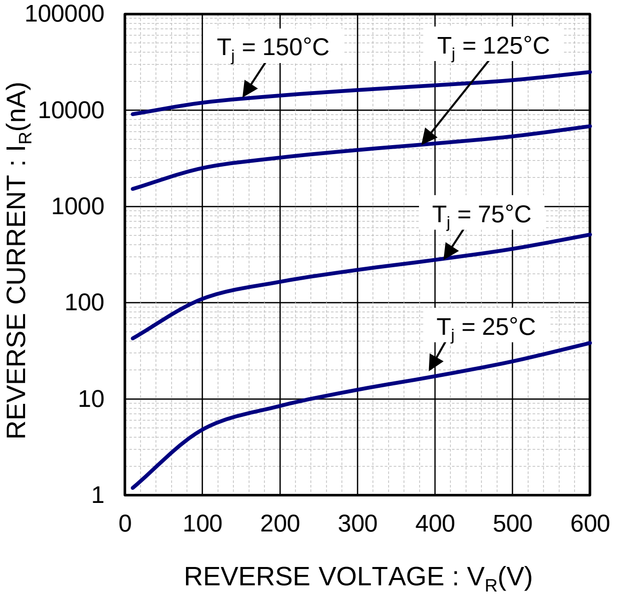
●Electrical Characteristics (T_j = 25°C)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F=8A	T_j=25°C	1.6	2.5	3.0	V
			T_j=125°C	-	1.8	-	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		-	12	20	ns
		I_F=8A, V_R=400V, dI_F/dt=–200A/µs		-	20	40	ns
Reverse recovery current	I_{Rp}	I_F=8A, V_R=400V dI_F/dt=–200A/µs	T_j=125°C	-	5.0	-	A
Reverse recovery charges	Qrr			-	145	-	nC
Forward recovery time	tfr	I_F=8A, dI_F/dt=100A/µs, V_{FR}=1.1xV_{Fmax}		-	110	-	ns
Forward recovery voltage	V_{Fp}			-	4.5	-	V
Thermal resistance	R_{th}(j-a)	Junction to ambient		-	-	10	°C/W
	R_{th}(j-c)	Junction to case		-	-	3.5	°C/W

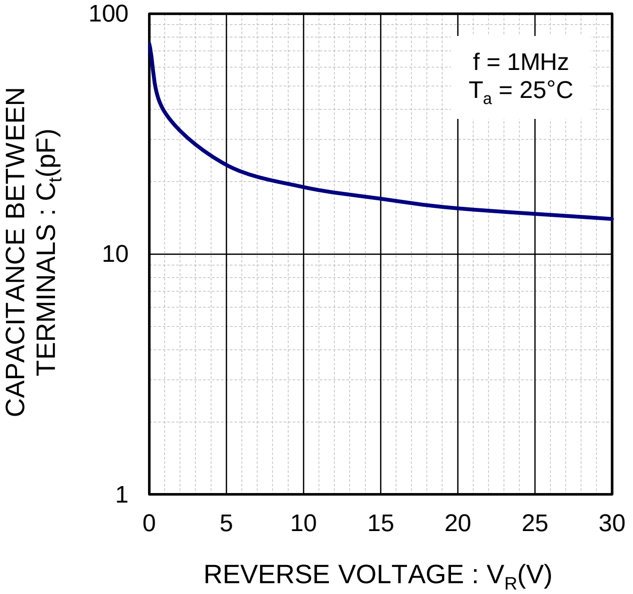
●Electrical Characteristic Curves



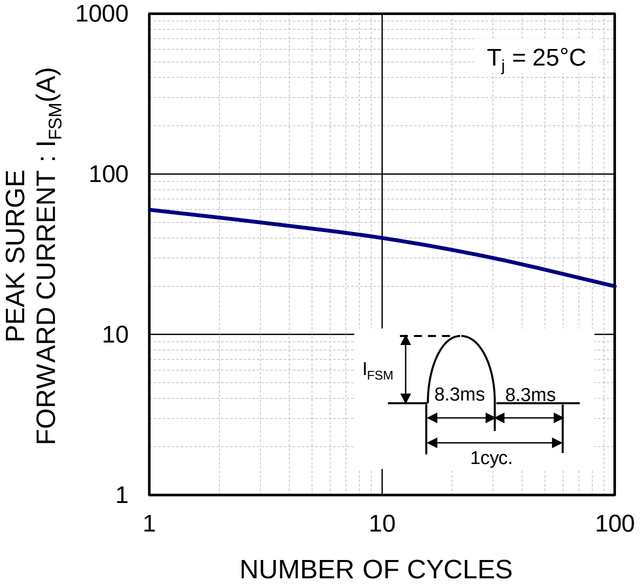
V_F-I_F CHARACTERISTICS



V_R-I_R CHARACTERISTICS

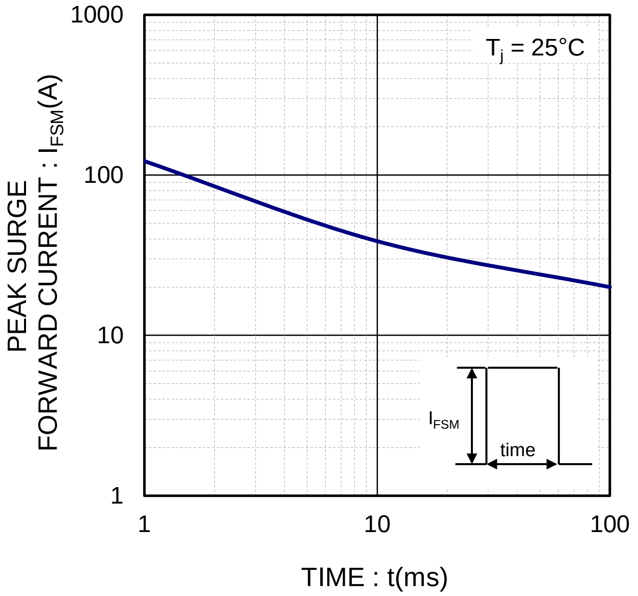


V_R-C_t CHARACTERISTICS

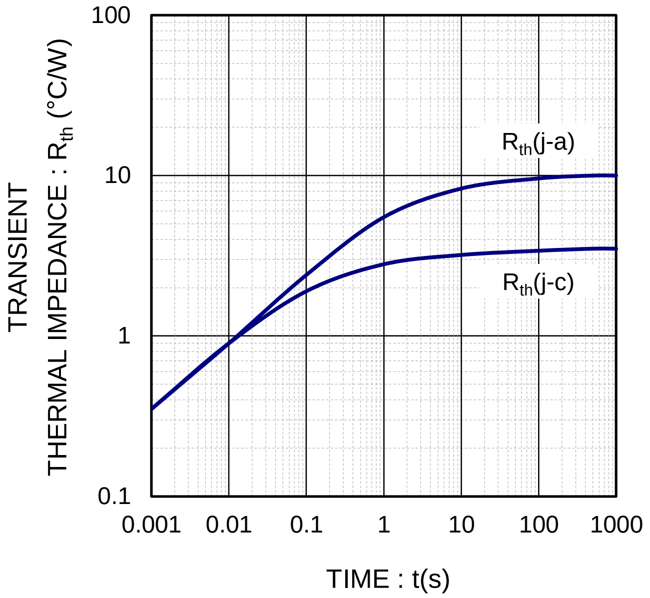


I_{FSM}-CYCLE CHARACTERISTICS

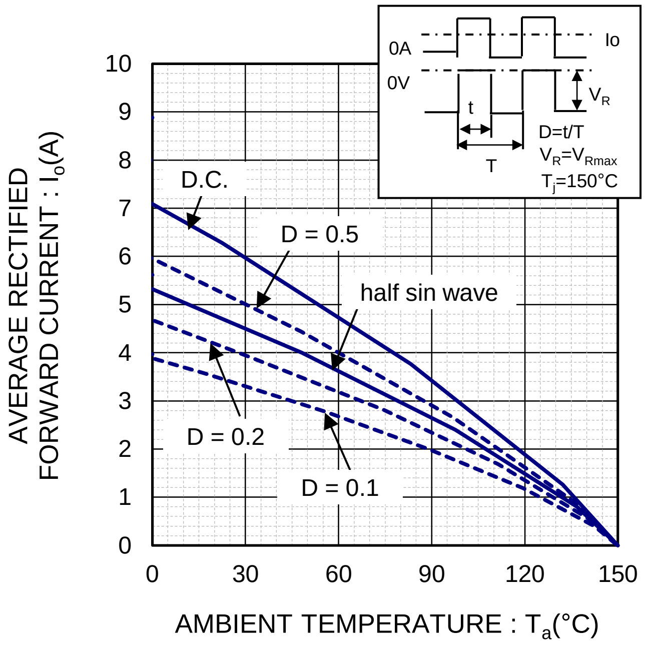
●Electrical characteristic curves



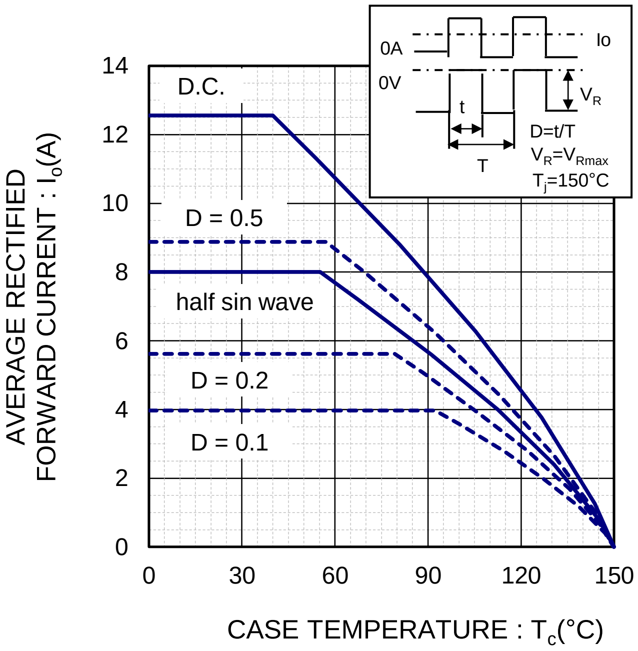
I_{FSM}-t CHARACTERISTICS



R_{th}-t CHARACTERISTICS

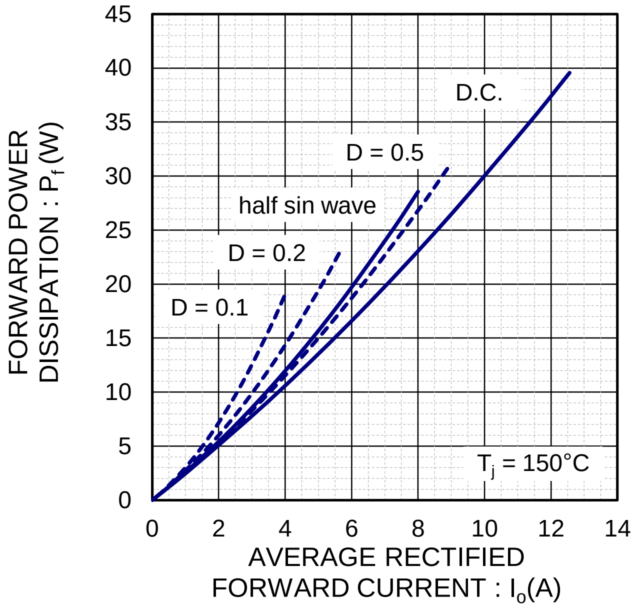


DERATING CURVE (I_o-T_a)

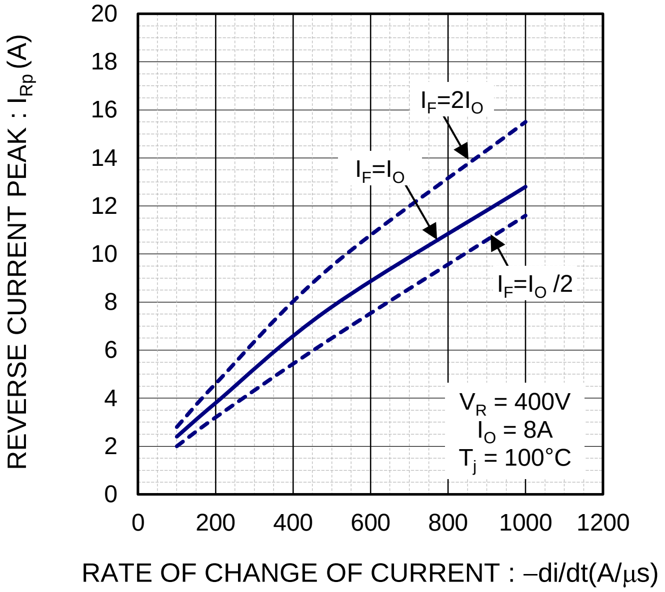


DERATING CURVE (I_o-T_c)

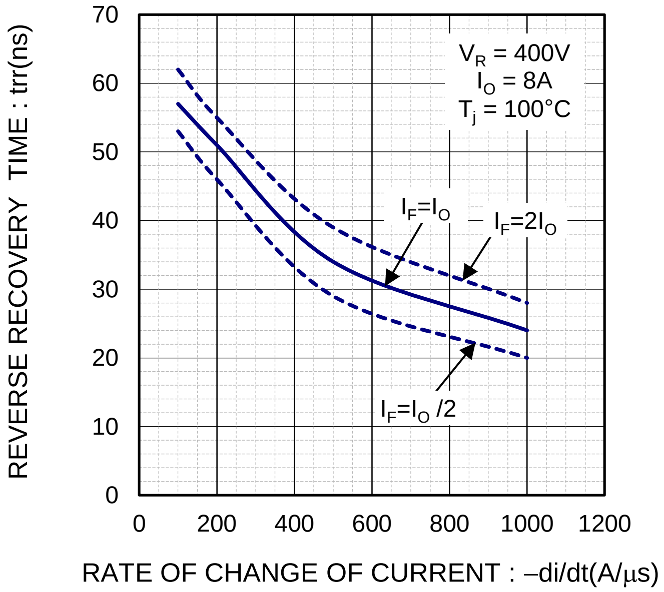
●Electrical characteristic curves



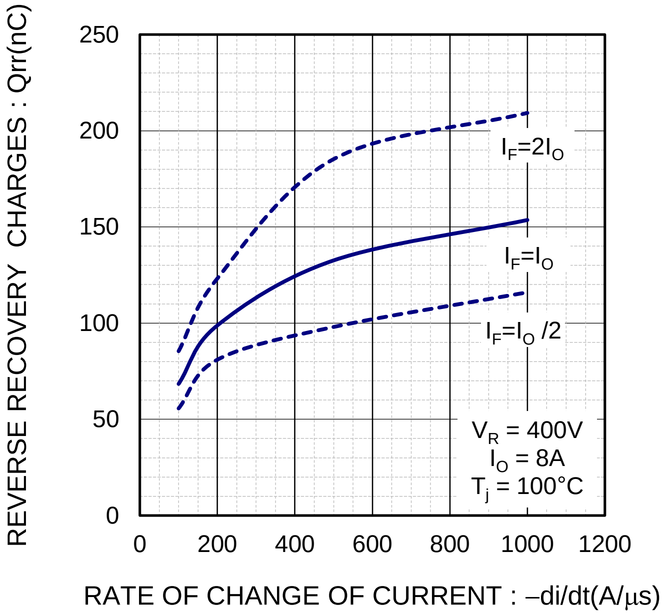
I_o-P_f CHARACTERISTICS



di/dt-I_{Rp} CHARACTERISTICS

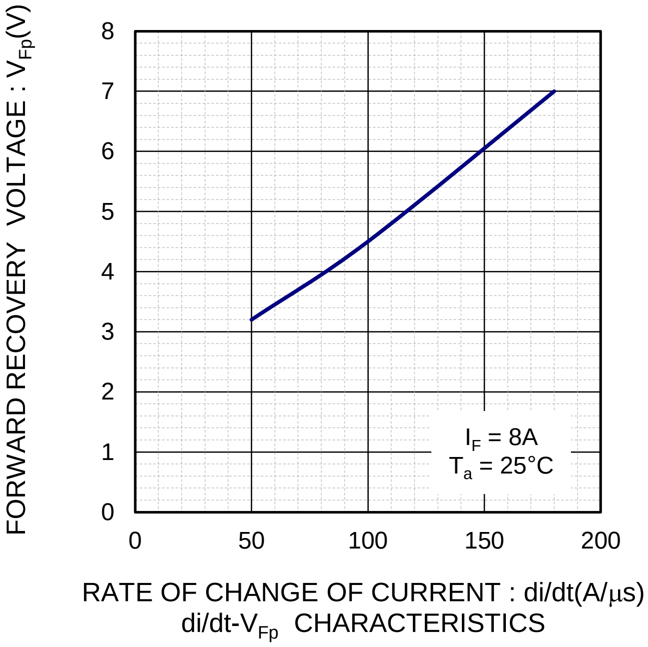


di/dt-trr CHARACTERISTICS

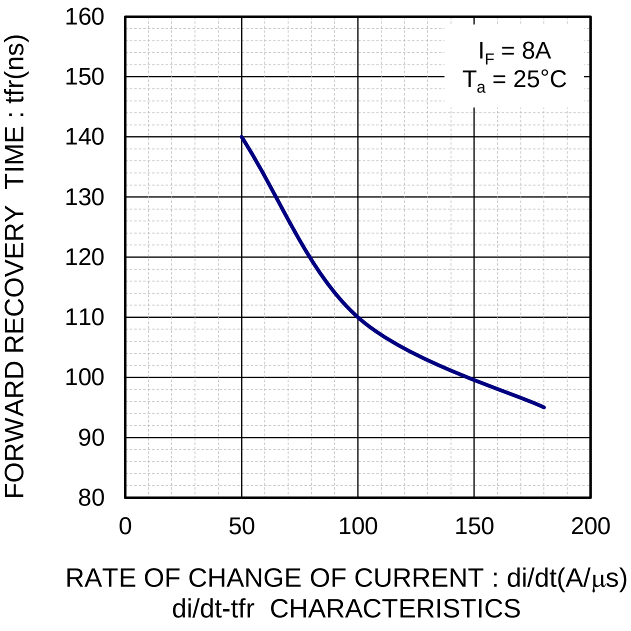


di/dt-Qrr CHARACTERISTICS

●Electrical characteristic curves



di/dt-V_{Fp} CHARACTERISTICS



di/dt-tfr CHARACTERISTICS

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