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ROHM SEMICONDUCTOR

Data Sheet

Super Fast Recovery Diode

RFU5TF6S

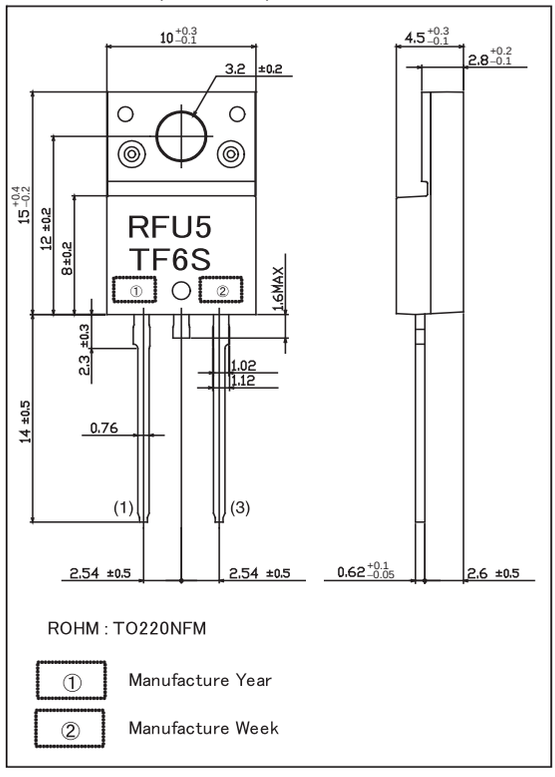
●Series
Ultra Fast Recovery

●Applications
General rectification

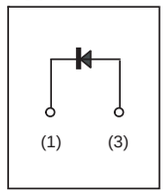
●Features
1)Single type.(TO-220)
2)Ultra high switching speed

●Construction
Silicon epitaxial planer

●Dimensions (Unit : mm)



●Structure



●Absolute maximum ratings (Tc=25°C)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty≤0.5	600	V
Reverse voltage	V_R	Direct voltage	600	V
Average rectified forward current	Io	60Hz half sin wave, Resistance load, Tc=93°C	5.0	A
Forward current surge peak	I_{FSM}	60Hz half sin wave, Non-repetitive one cycle peak value, Tj=25°C	60	A
Junction temperature	Tj		150	°C
Storage temperature	Tstg		−55 to +150	°C

●Electrical characteristics (Tj=25°C)

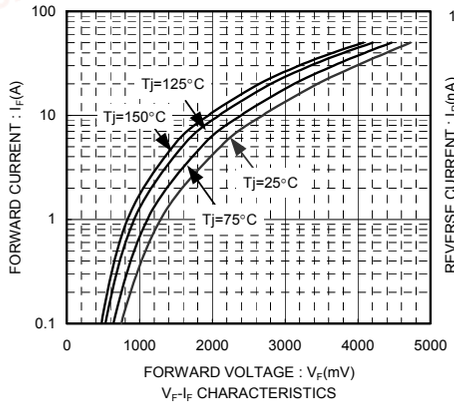
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F=5.0A	-	2.2	2.8	V
Reverse current	I_R	V_R=600V	-	0.02	10	μA
Reverse recovery time (*)	trr	I_F=0.5A,I_R=1A,Irr=0.25×I_R	-	15	25	ns
Thermal resistance(*)	Rth(j-c)	junction to case	-	-	4	°C/W

(*) : Design assurance without measurement.

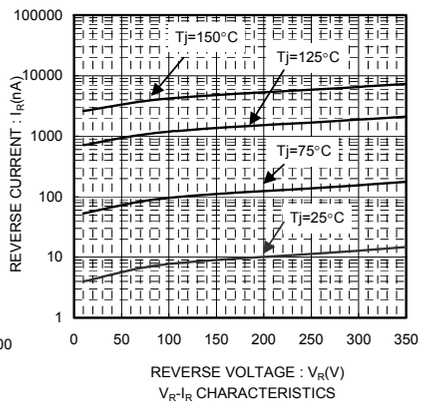
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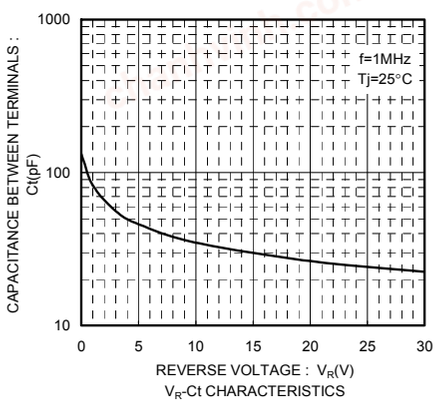
●Electrical characteristic curves



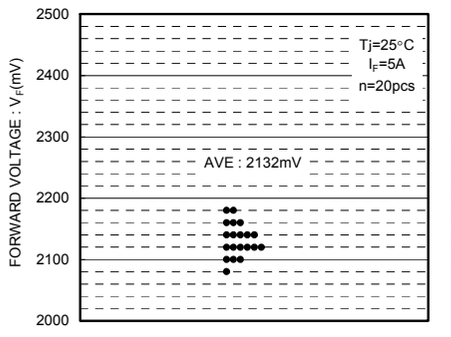
V_F-I_F CHARACTERISTICS



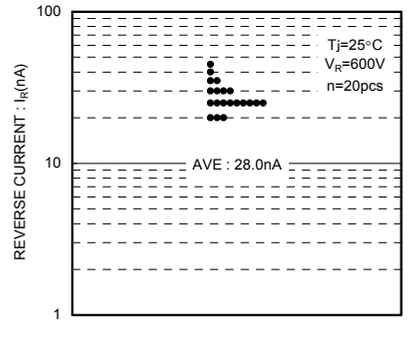
V_R-I_R CHARACTERISTICS



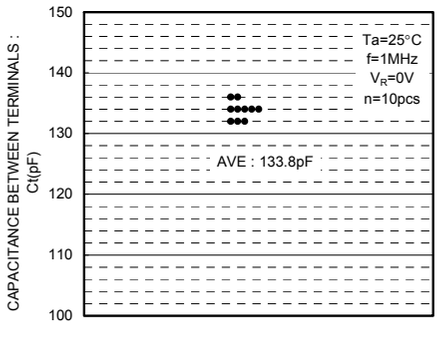
V_R-Ct CHARACTERISTICS



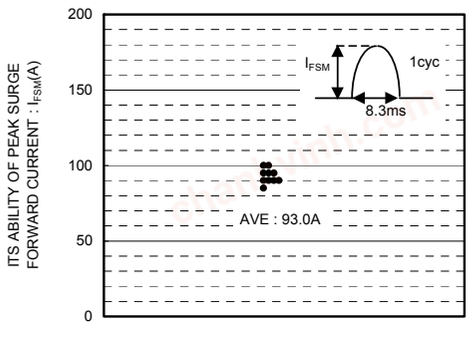
V_F DISPERSION MAP



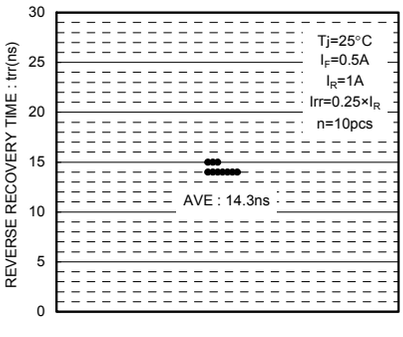
I_R DISPERSION MAP



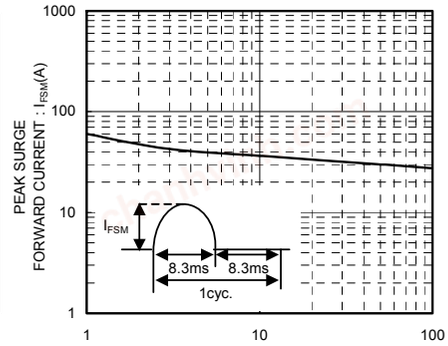
Ct DISPERSION MAP



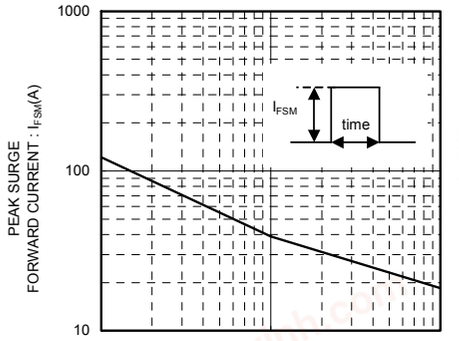
I_{FSM} DISRESION MAP



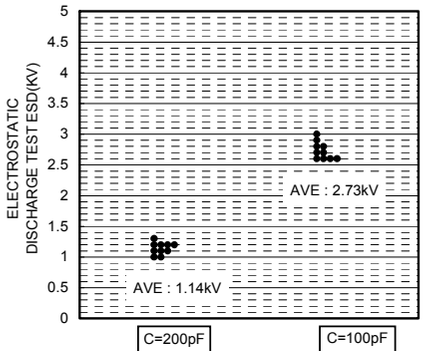
trr DISPERSION MAP



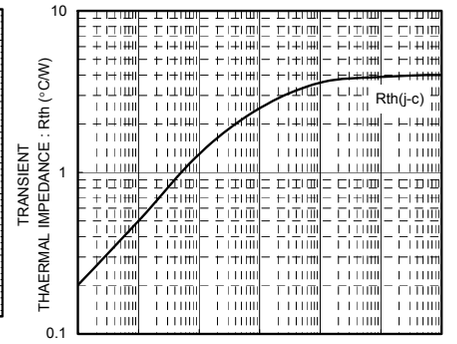
I_{FSM}-CYCLE CHARACTERISTICS



I_{FSM}-t CHARACTERISTICS



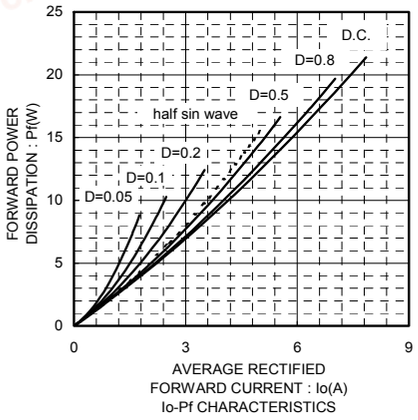
ESD DISPERSION MAP



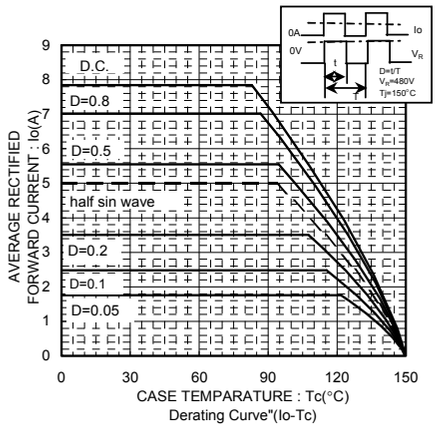
Rth-t CHARACTERISTICS

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Io-Pf CHARACTERISTICS



Derating Curve"(Io-Tc)

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