Super Fast Recovery Diode

RFUS10TF4S

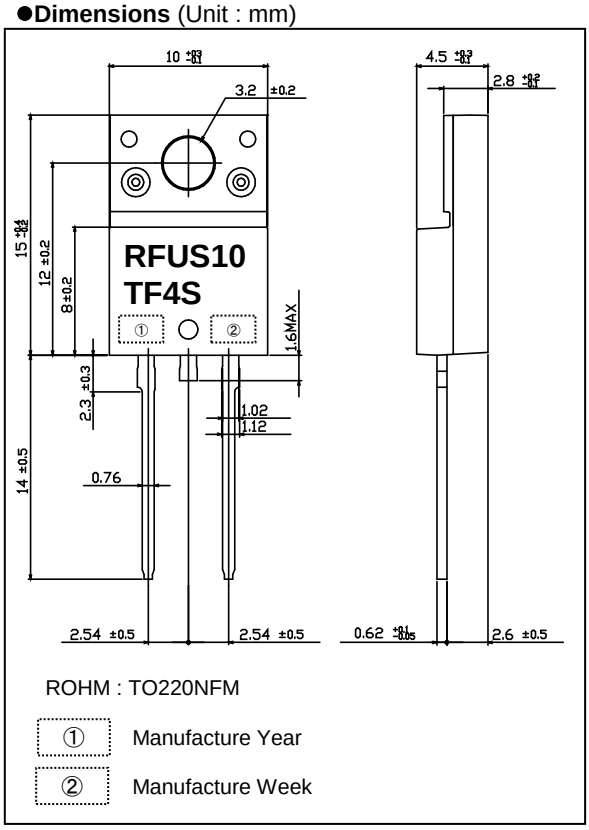
●Series
Standard Fast Recovery

●Applications
General rectification

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

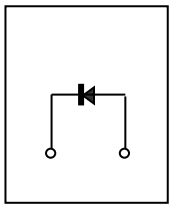
●Construction
Silicon epitaxial planer

●Dimensions (Unit : mm)



ROHM : TO220NFM
① Manufacture Year
② Manufacture Week

●Structure



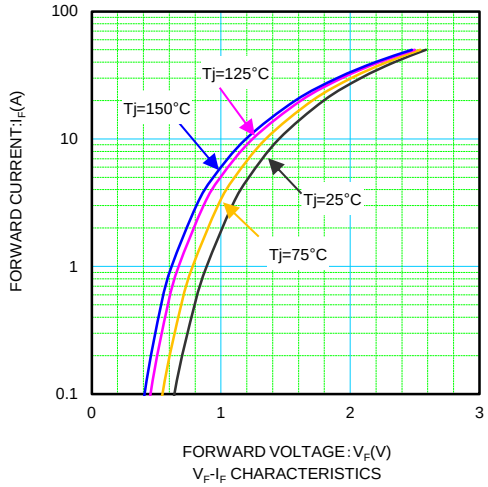
●Absolute maximum ratings (Tc=25°C)

Parameter	Symbol	Conditions		Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty≤0.5		430	V
Reverse voltage	V_R			430	V
Average rectified forward current	Io	60Hz half sin wave, Resistance load,	Tc=82°C	10	A
Forward current surge peak	I_{FSM}	60Hz half sin wave, Non-repetitive one cycle peak value, Tj=25°C		80	A
Junction temperature	Tj			150	°C
Storage temperature	Tstg			−55 to +150	°C

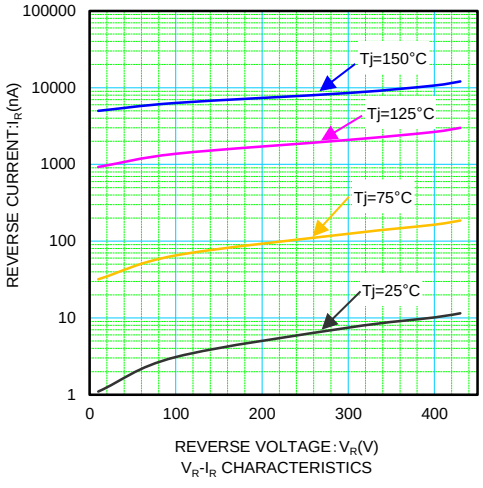
●Electrical characteristics (Tj=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F=10A	−	1.45	1.7	V
Reverse current	I_R	V_R=430V	−	0.05	10	μA
Reverse recovery time	trr	I_F=0.5A,I_R=1A,Irr=0.25×I_R	−	19	30	ns
Thermal resistance	Rth(j-c)	junction to case	−	−	3	°C/W

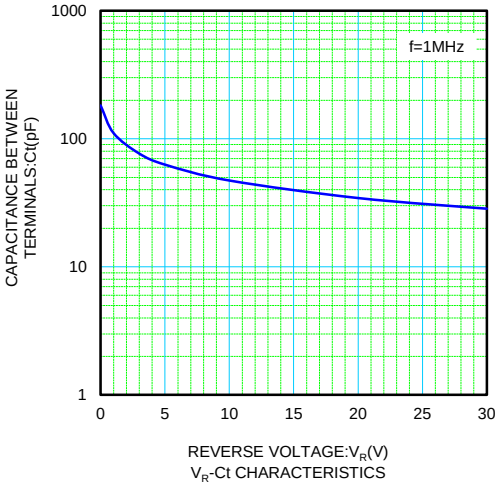
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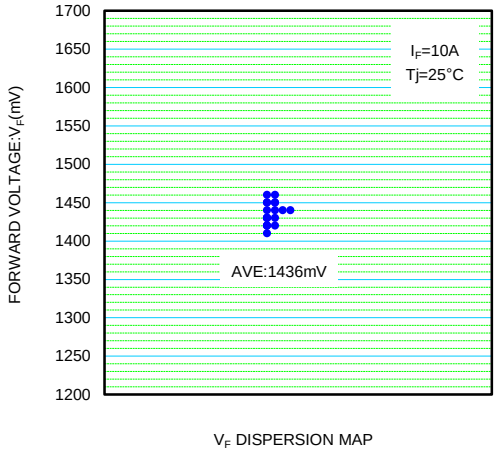
V_F-I_F CHARACTERISTICS



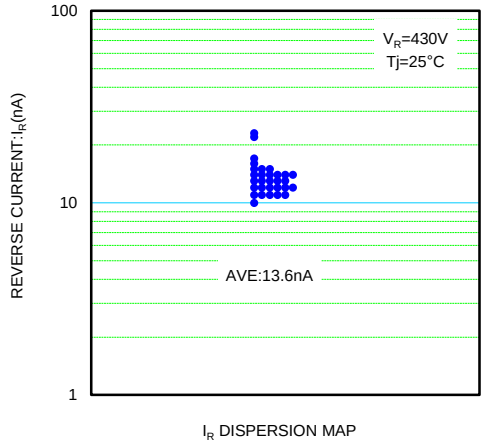
V_R-I_R CHARACTERISTICS



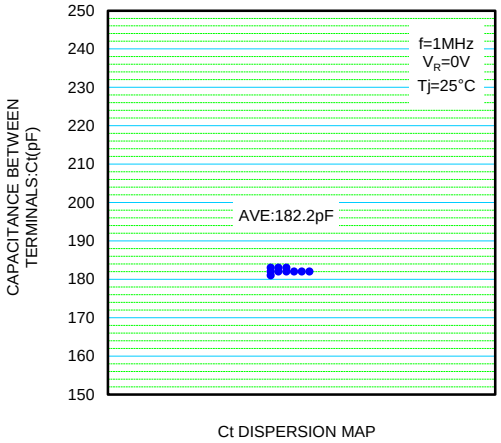
V_R-Ct CHARACTERISTICS



V_F DISPERSION MAP

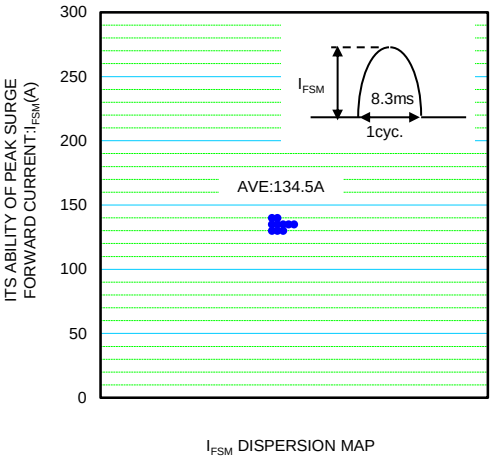


I_R DISPERSION MAP

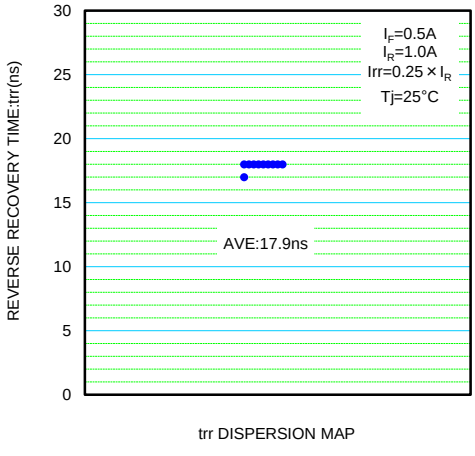


Ct DISPERSION MAP

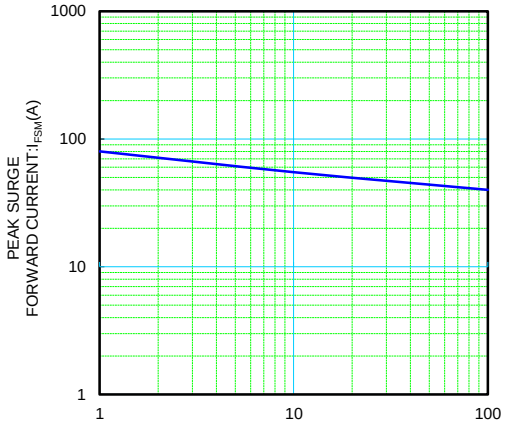
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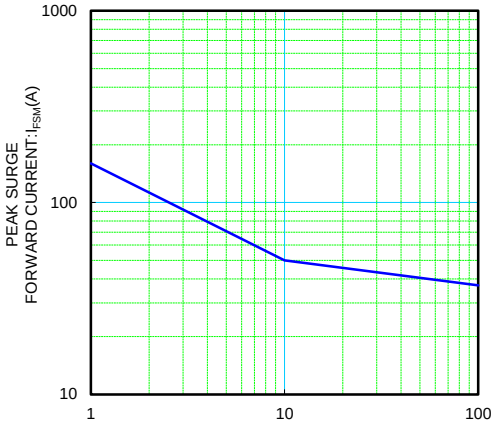
I_{FSM} DISPERSION MAP



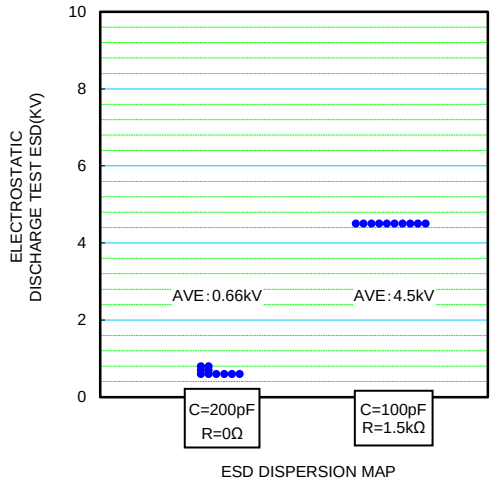
trr DISPERSION MAP



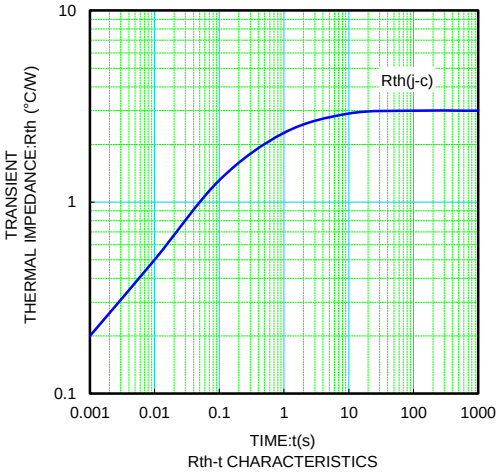
I_{FSM}-CYCLE CHARACTERISTICS



I_{FSM}-t CHARACTERISTICS

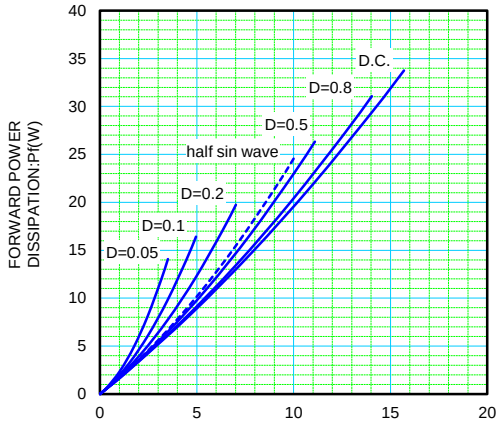


ESD DISPERSION MAP

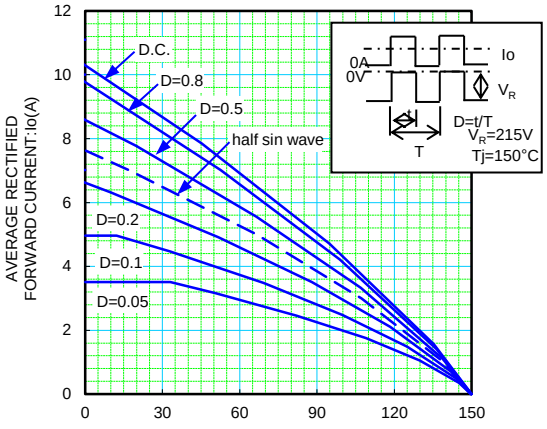


Rth-t CHARACTERISTICS

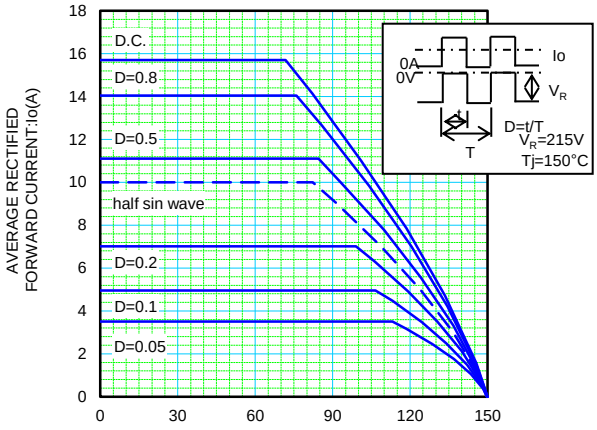
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AVERAGE RECTIFIED
FORWARD CURRENT：Io(A)
Io-Pf CHARACTERISTICS



AMBIENT TEMPERATURE:Ta(°C)
DERATING CURVE (Io-Ta)



CASE TEMPERATURE:Tc(°C)
DERATING CURVE (Io-Tc)

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