

# Super Fast Recovery Diode

## RFU10TF6S

●Series

Ultra Fast Recovery

●Applications

General rectification

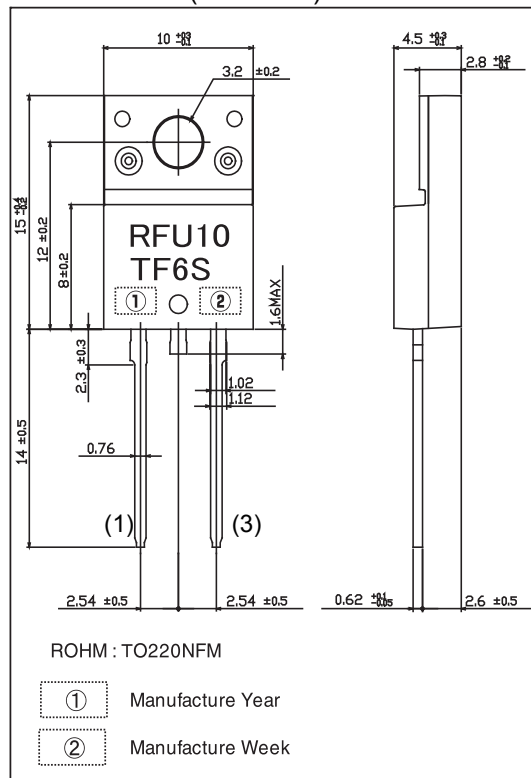
●Features

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

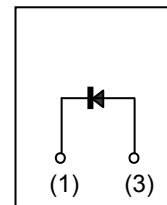
●Construction

Silicon epitaxial plnner

●Dimentions(Unit : mm)



●Structure



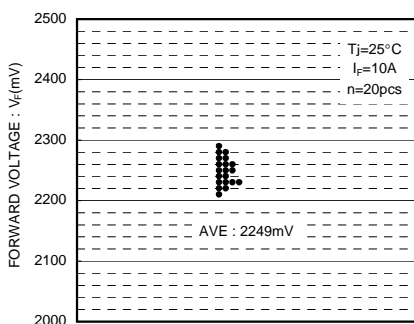
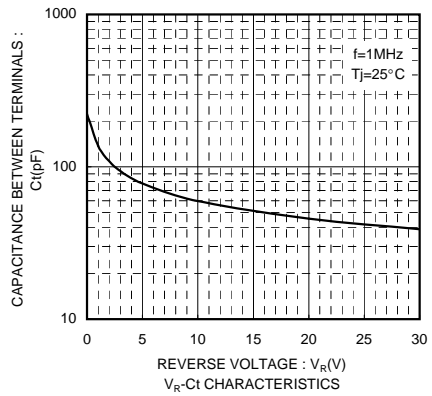
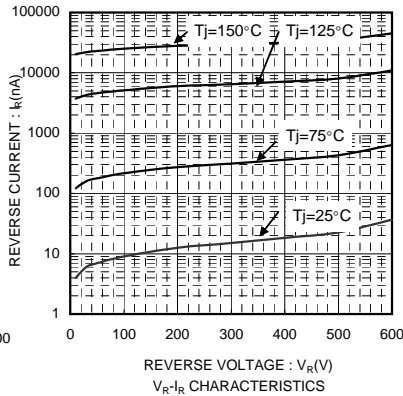
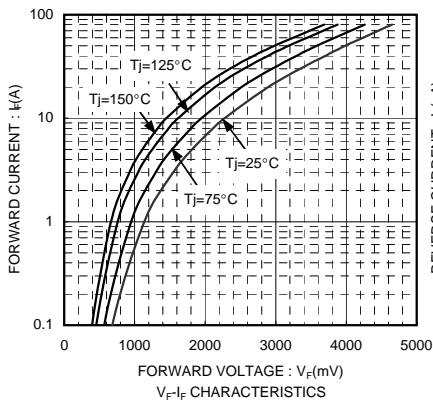
●Absolute maximum ratings(Tc=25°C)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq 0.5$	600	V
Reverse voltage	$V_R$	Direct voltage	600	V
Average rectified forward current	$I_O$	60Hz half sin wave, Resistance load, Tc=50°C	10	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave, Non-repetitive one cycle peak value, Tj=25°C	100	A
Junction temperature	Tj		150	°C
Storage temperature	Tstg		-55 to +150	°C

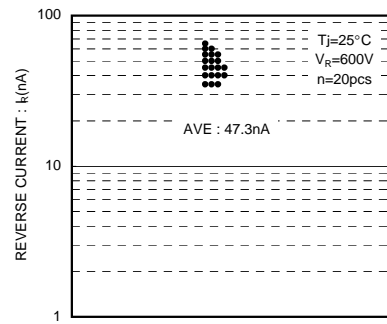
●Electrical characteristics(Tj=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=10A$	-	2.3	2.8	V
Reverse current	$I_R$	$V_R=600V$	-	0.03	10	$\mu A$
Reverse recovery time	trr	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$	-	16	25	ns
Thermal Resistance	Rth(j-c)	junction to case	-	-	3.5	°C / W

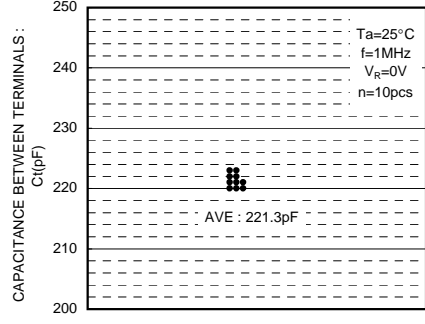
●Electrical characteristics curves



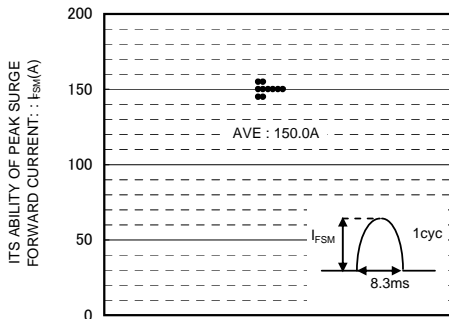
$V_F$  DISPERSION MAP



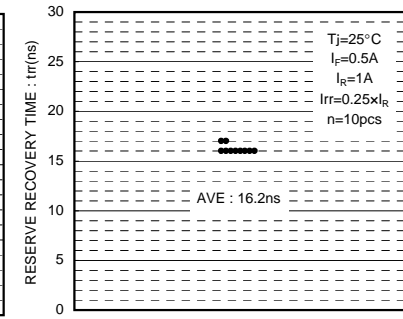
$I_R$  DISPERSION MAP



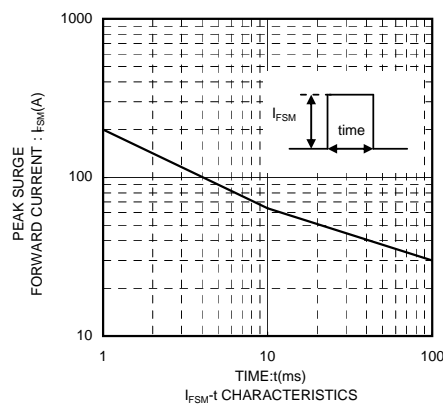
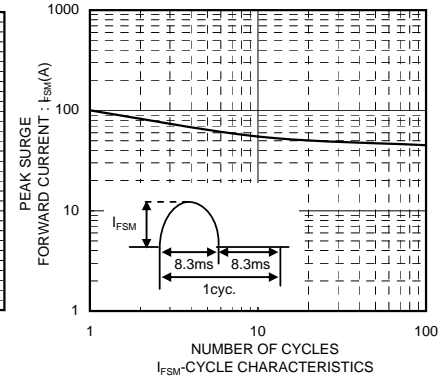
$C_t$  DISPERSION MAP



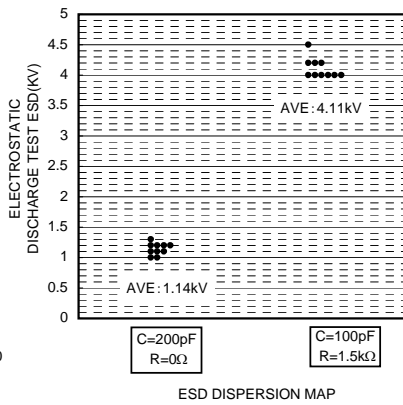
$I_{FSM}$  DISERSION MAP



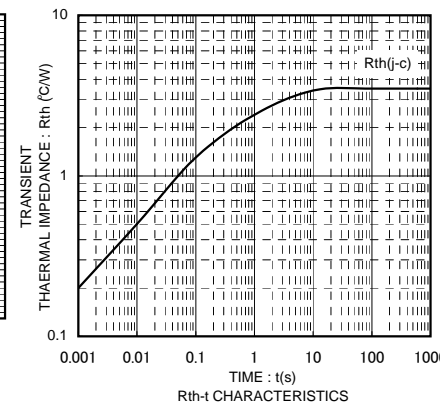
$t_{rr}$  DISPERSION MAP



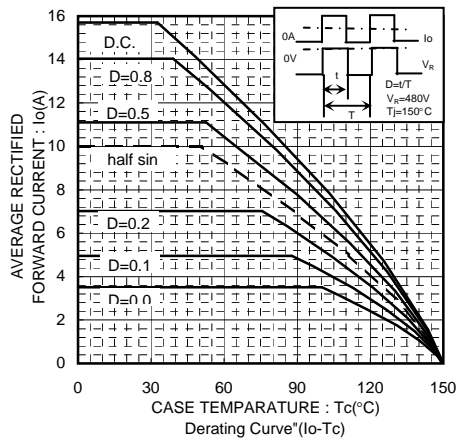
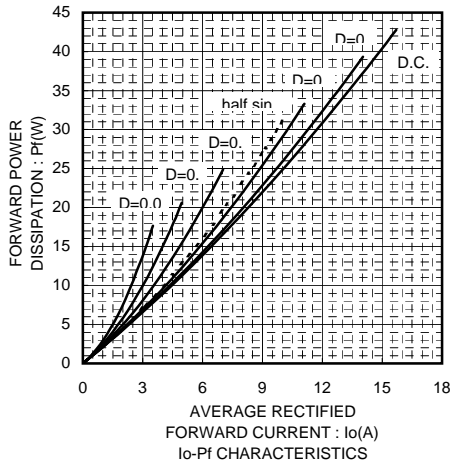
$I_{FSM}$ - $t$  CHARACTERISTICS



ESD DISPERSION MAP



$R_{th}$ - $t$  CHARACTERISTICS



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