

# Super Fast Recovery Diode

RFUH10TB4S

●Serise

Super Fast Recovery

●Applications

General rectification

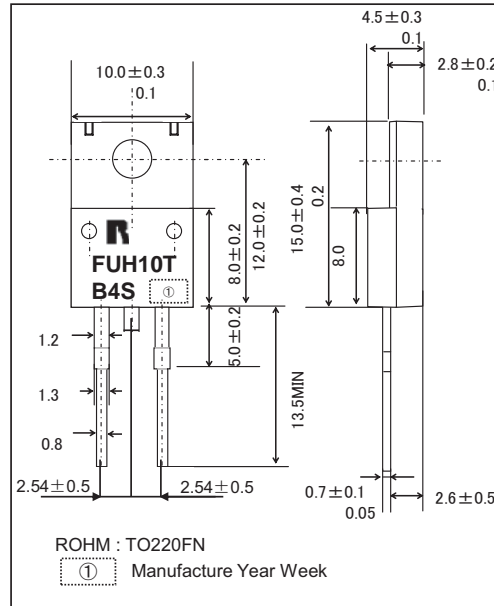
●Features

- 1) Ultra low switching loss
- 2) High current overload capacity

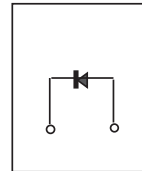
●Construction

Silicon epitaxial planer type

●Dimensions(Unit : mm)



●Structure

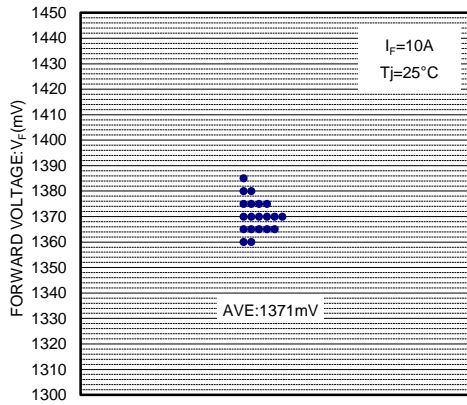
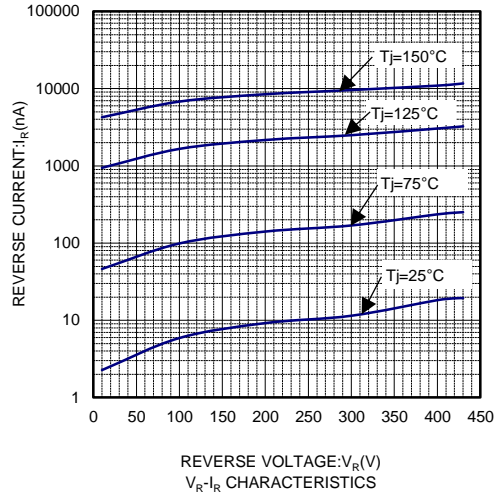
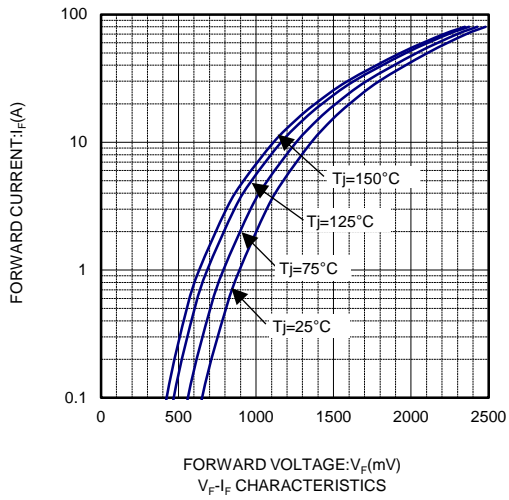


●Absolute Maximum Ratings(Tc=25°C)

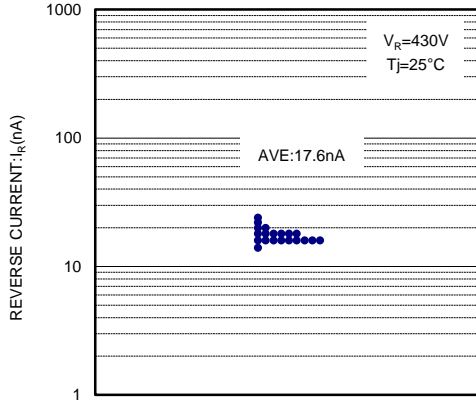
Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq 0.5$	430	V
Reverse voltage	$V_R$	Direct voltage	430	V
Average rectified forward current	$I_o$	60Hz half sin wave , Resistive load   Tc=90°C	10	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave , Non-repetitive at Tj=25°C	80	A
Junction temperature	Tj		150	°C
Storage temperature	Tstg		-55 to +150	°C

●Electrical Characteristics(Tj=25°C)

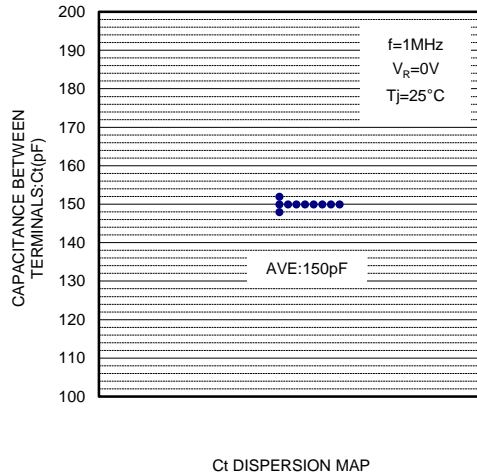
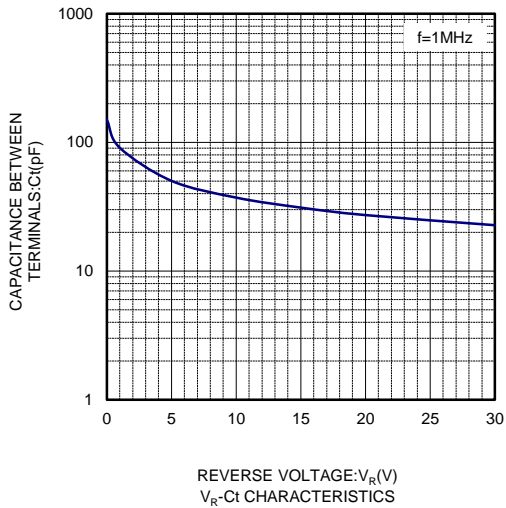
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=10A$	—	1.4	1.7	V
Reverse current	$I_R$	$V_R=430V$	—	0.05	10	$\mu A$
Reverse recovery time	trr	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$	—	15	25	ns
Thermal resistance	Rth(j-c)	Junction to case	—	—	3.0	°C/W



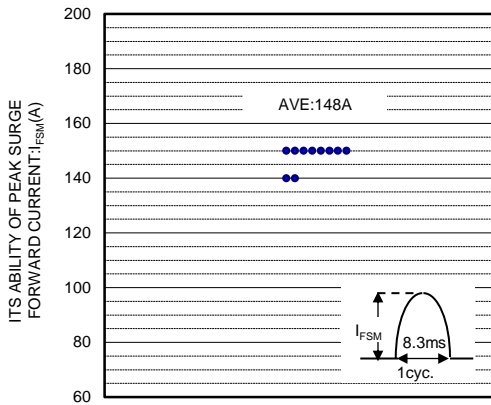
$V_F$  DISPERSION MAP



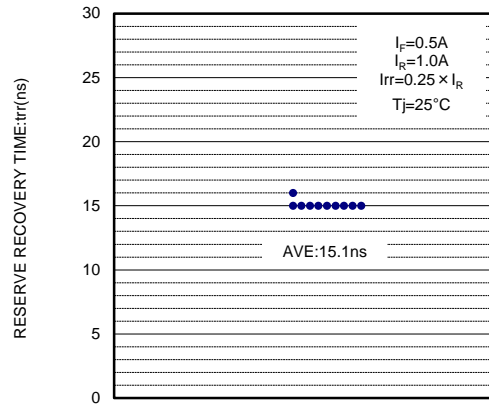
$I_R$  DISPERSION MAP



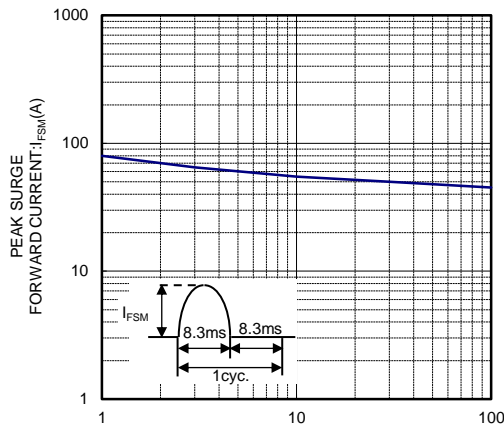
$C_t$  DISPERSION MAP



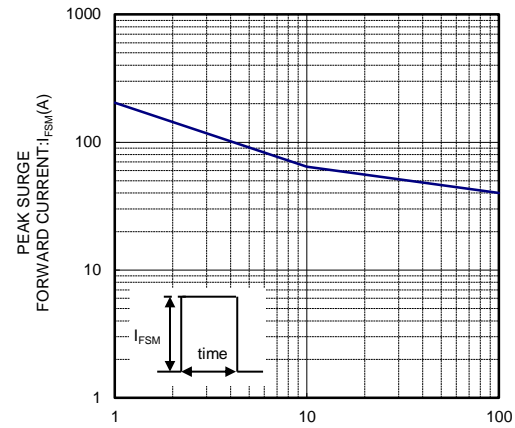
$I_{FSM}$  DISPERSION MAP



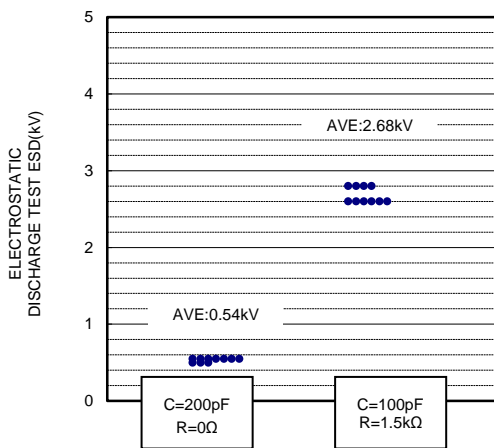
$t_{rr}$  DISPERSION MAP



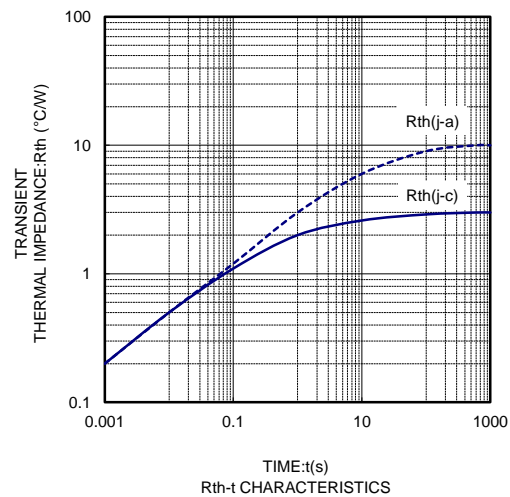
NUMBER OF CYCLES  
 $I_{FSM}$ -CYCLE CHARACTERISTICS



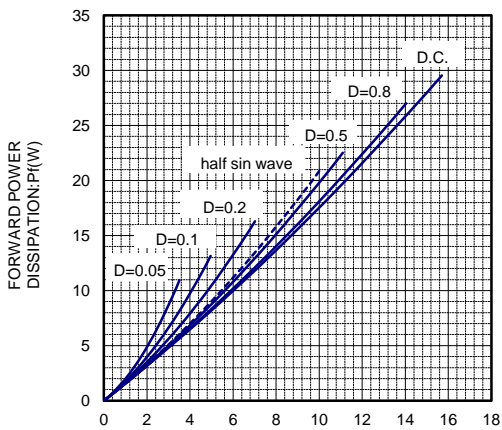
TIME:t(ms)  
 $I_{FSM}$ -t CHARACTERISTICS



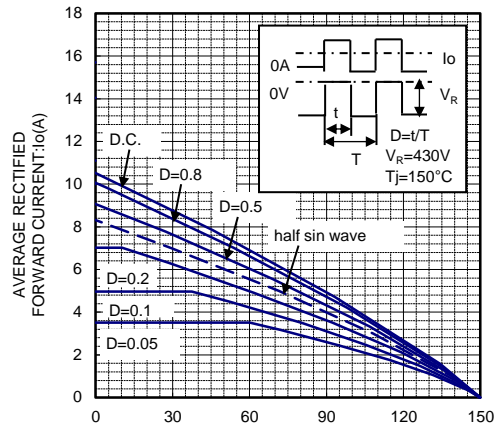
ESD DISPERSION MAP



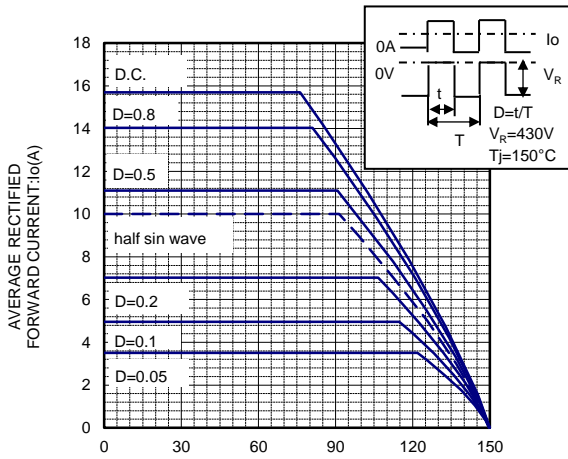
TIME:t(s)  
 $R_{th}$ -t CHARACTERISTICS



AVERAGE RECTIFIED FORWARD CURRENT:  $I_o$ (A)  
 $I_o$ -P<sub>F</sub> CHARACTERISTICS



AMBIENT TEMPERATURE:  $T_a$ (°C)  
 DERATING CURVE ( $I_o$ - $T_a$ )



CASE TEMPERATURE:  $T_c$ (°C)  
 DERATING CURVE ( $I_o$ - $T_c$ )

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