

# Super Fast Recovery Diode

## RF04UA2D

● **Series**

Standard Fast Recovery

● **Applications**

High frequency rectifier

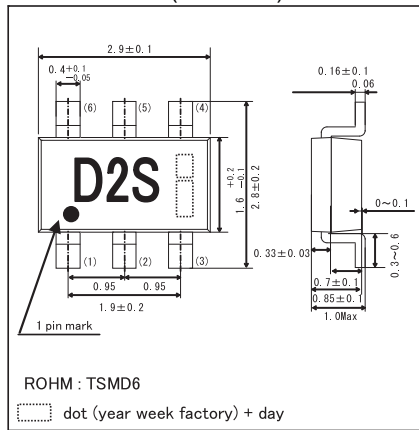
● **Features**

- 1) Surface mounting type (TSM6)
- 2) High reliability

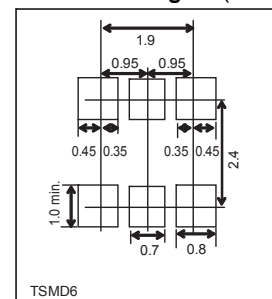
● **Construction**

Silicon epitaxial planer

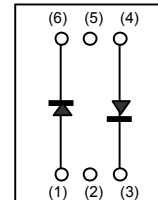
● **Dimensions (Unit : mm)**



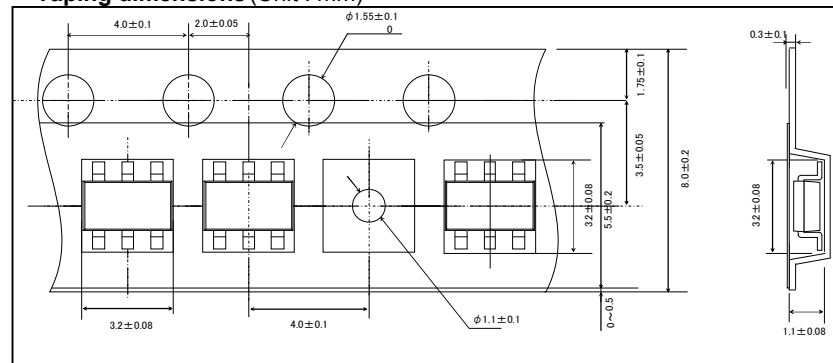
● **Land size figure (Unit : mm)**



● **Structure**



● **Taping dimensions (Unit : mm)**



● **Absolute maximum ratings (Ta=25°C)**

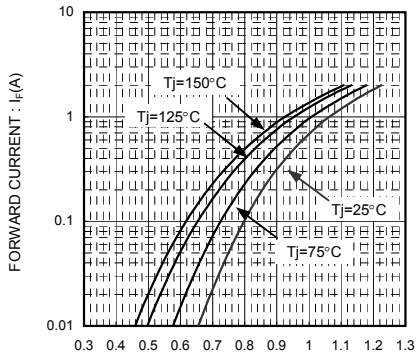
Parameter	Symbol	Conditions	Limits	Unit	
Repetitive peak Reverse voltage	$V_{RM}$		200	V	
Reverse voltage	$V_R$	Direct voltage	200	V	
Average rectified forward current	$I_{o/2}$	Glass epoxy substrate mounted 60Hz half sin wave, resistive load	$T_a=25^\circ C$ $T_c=130^\circ C$	0.4	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave, Non-repetitive one cycle peak value, $T_j=25^\circ C$	1	A	
Junction temperature	$T_j$		150	°C	
Storage temperature	$T_{stg}$		-40 to +150	°C	

(\* Standard of per diode)

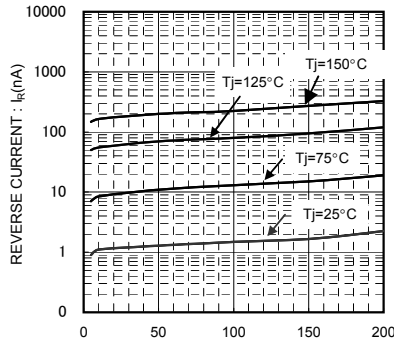
● **Electrical characteristics (Tj=25°C)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=0.2A$	—	0.86	0.98	V
Reverse current	$I_R$	$V_R=200V$	—	0.01	10	μA
Reverse recovery time	$t_{rr}$	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$	—	11	25	ns

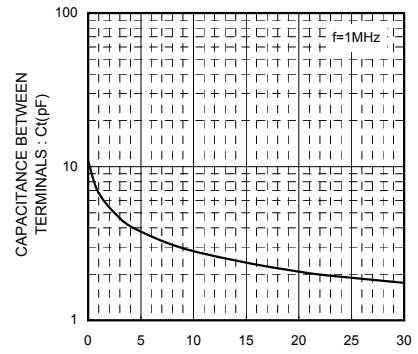
●Electrical characteristics curves



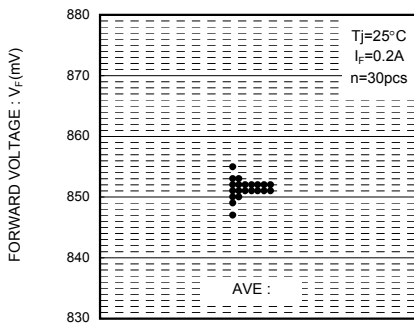
FORWARD VOLTAGE :  $V_f$  (V)  
 $V_f$ - $I_f$  CHARACTERISTICS



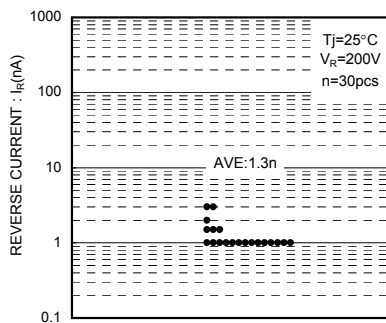
REVERSE VOLTAGE :  $V_r$  (V)  
 $V_r$ - $I_r$  CHARACTERISTICS



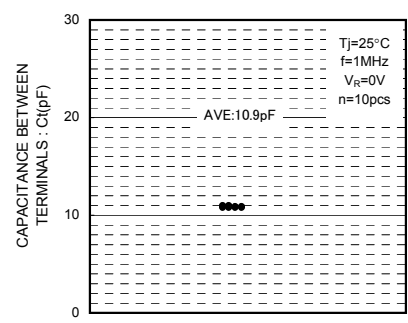
REVERSE VOLTAGE :  $V_r$  (V)  
 $V_r$ - $C_t$  CHARACTERISTICS



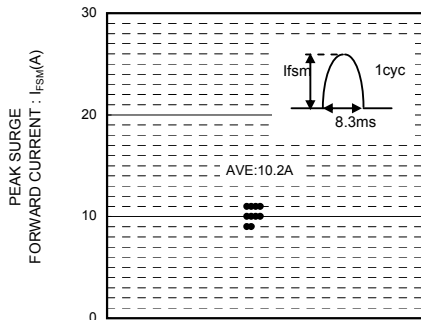
$V_f$  DISPERSION MAP



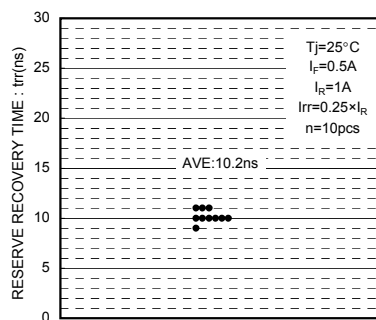
$I_r$  DISPERSION MAP



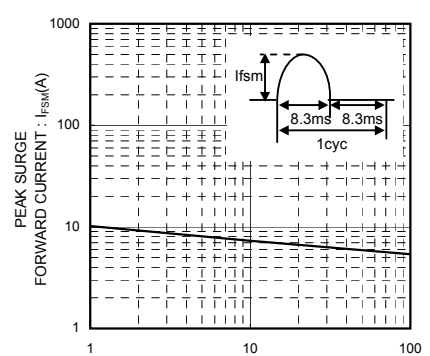
$C_t$  DISPERSION MAP



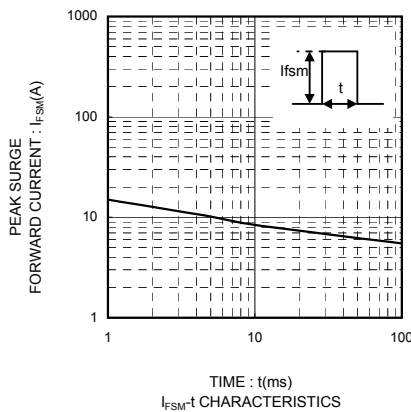
$I_{FSM}$  DISPERSION MAP



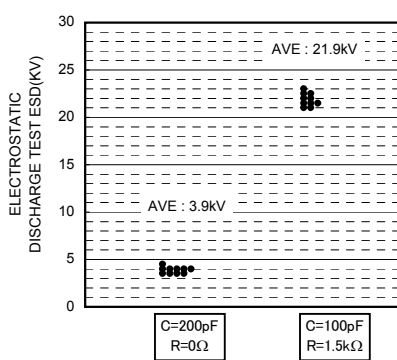
$t_{rr}$  DISPERSION MAP



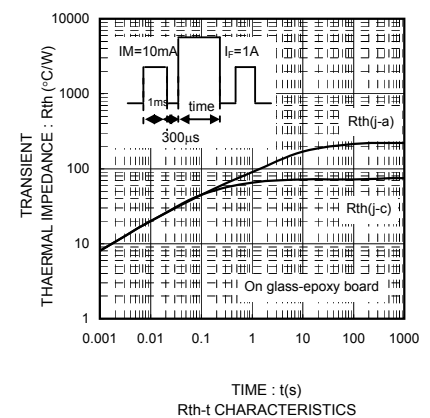
NUMBER OF CYCLES  
 $I_{FSM}$ -CYCLE CHARACTERISTICS



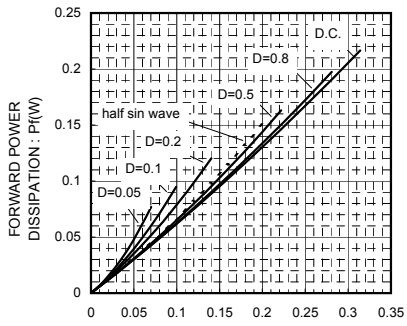
TIME :  $t$  (ms)  
 $I_{FSM}$ - $t$  CHARACTERISTICS



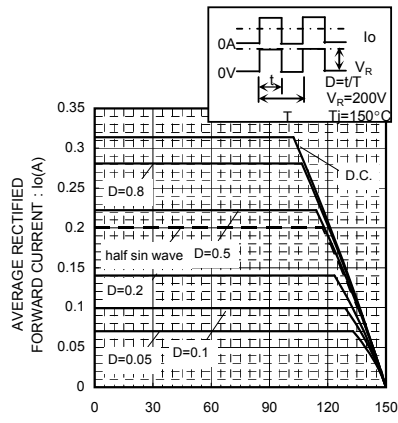
ESD DISPERSION MAP



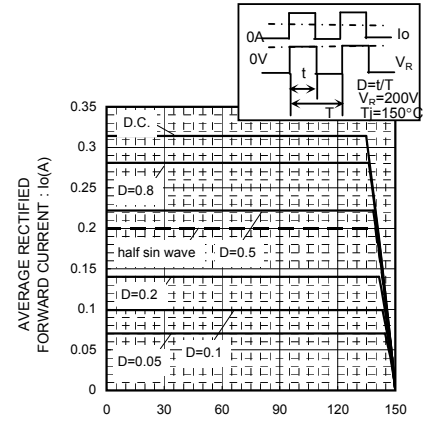
TIME :  $t$  (s)  
 $R_{th}$ - $t$  CHARACTERISTICS



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



AMBIENT TEMPERATURE : T<sub>a</sub>(°C)  
Derating Curve\*(I<sub>o</sub>-T<sub>a</sub>)



CASE TEMPERATURE : T<sub>c</sub>(°C)  
Derating Curve(I<sub>o</sub>-T<sub>c</sub>)

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