

# Fast Recovery Diode

## RF05VA1S

●Applications

General rectification

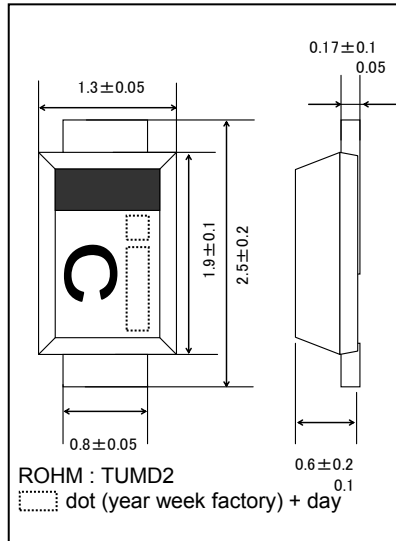
●Features

- 1) Small mold type. (TUMD2)
- 2) Ultra high switching speed
- 3) Low  $V_F$

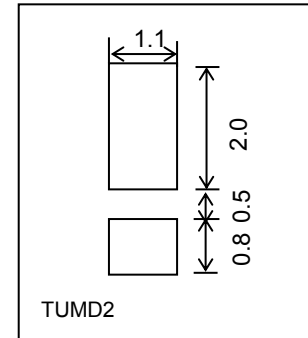
●Construction

Silicon epitaxial planer

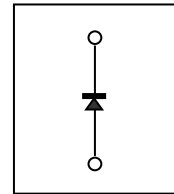
●Dimensions (Unit : mm)



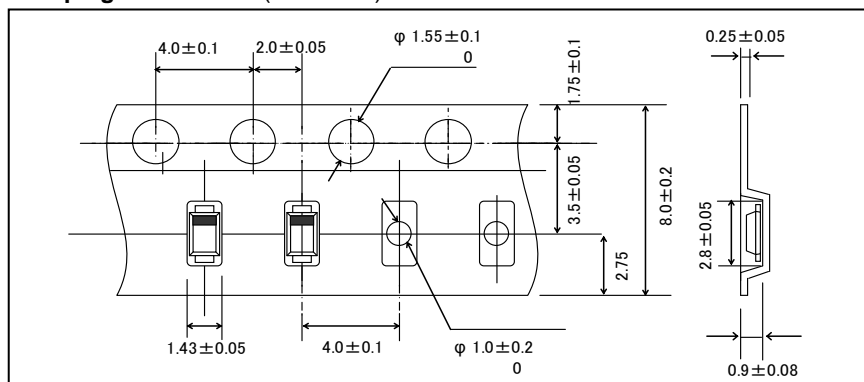
●Land size figure (Unit : mm)



●Structure



●Taping dimensions (Unit : mm)



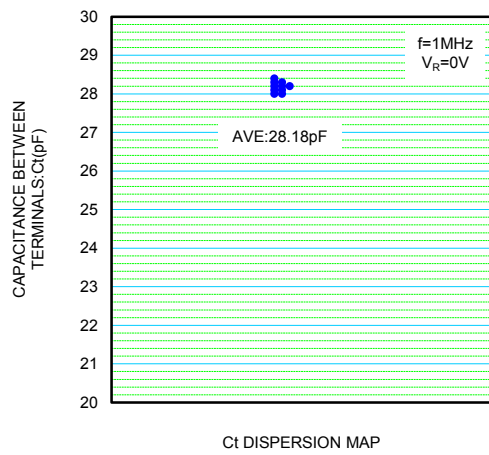
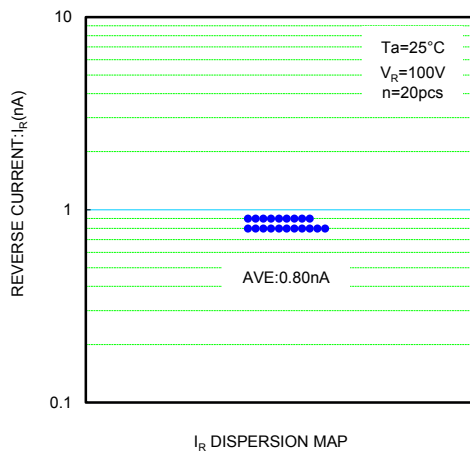
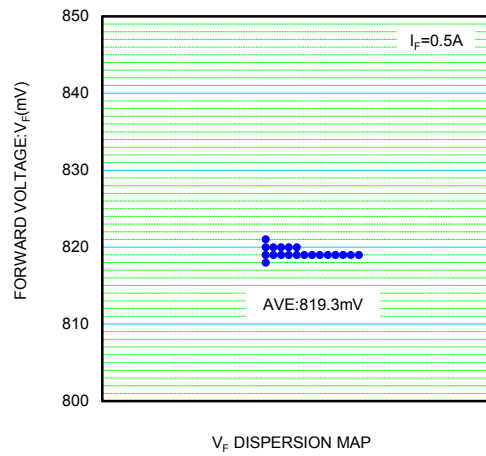
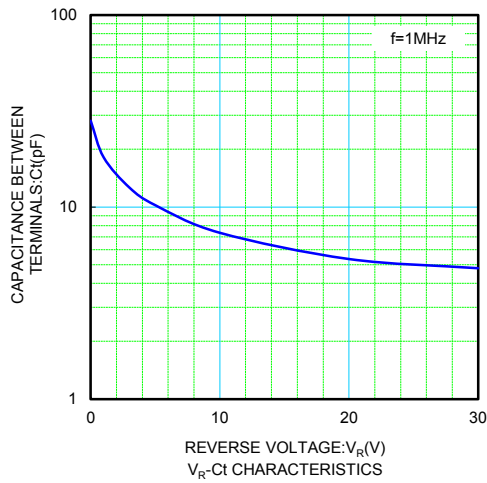
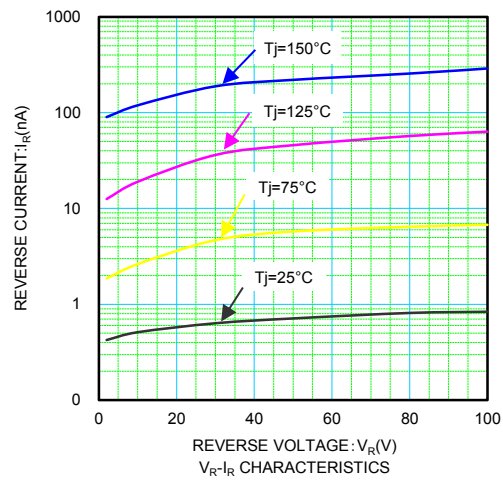
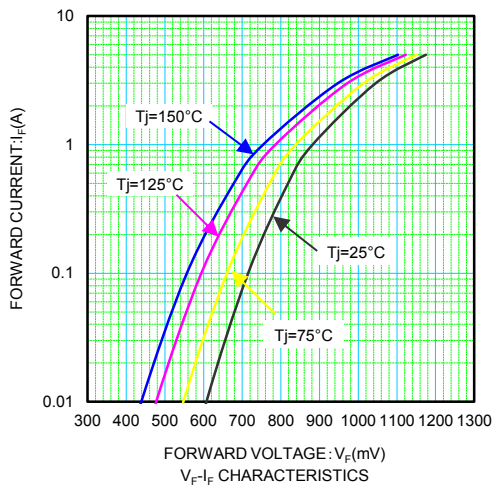
●Absolute maximum ratings (Ta=25°C)

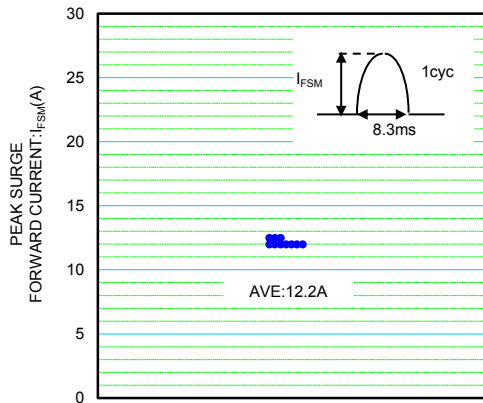
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive)	$V_{RM}$	100	V
Reverse voltage (DC)	$V_R$	100	V
Average rectified forward current (*1)	$I_o$	0.5	A
Forward current surge peak (60Hz · 1cyc)	$I_{FSM}$	6	A
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

(\*1)On the Glass epoxy substrate

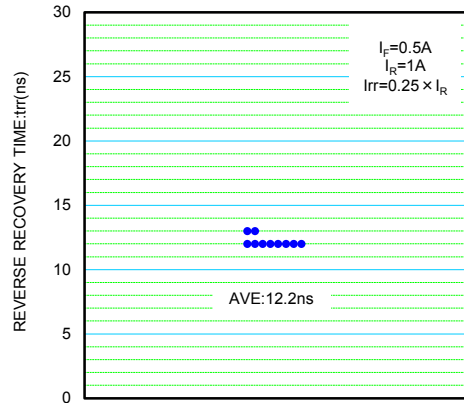
●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	$V_F$	-	-	0.98	V	$I_F=0.5A$
Reverse current	$I_R$	-	-	10	μA	$V_R=100V$
Reverse recovery time	$t_{rr}$	-	-	25	ns	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \cdot I_R$

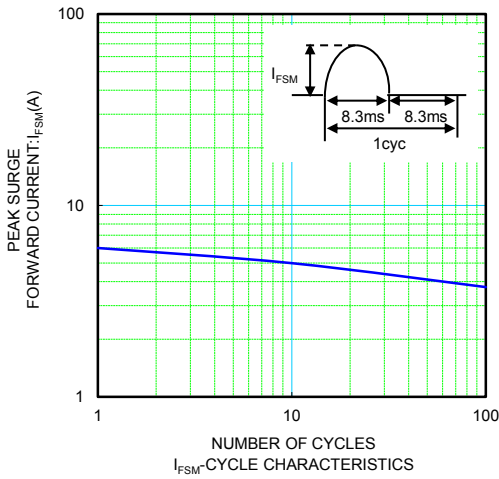




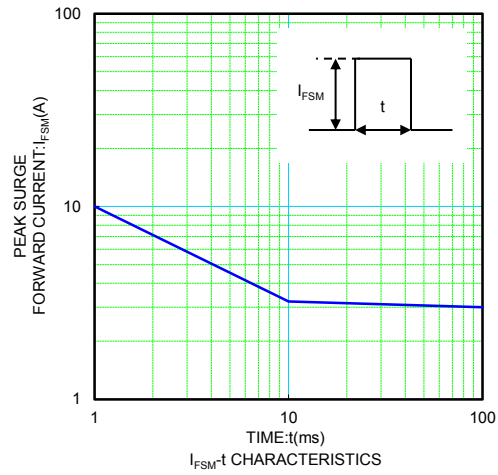
$I_{FSM}$  DISPERSION MAP



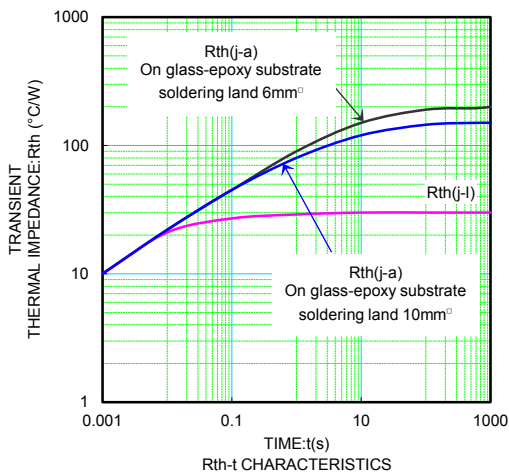
$t_{rr}$  DISPERSION MAP



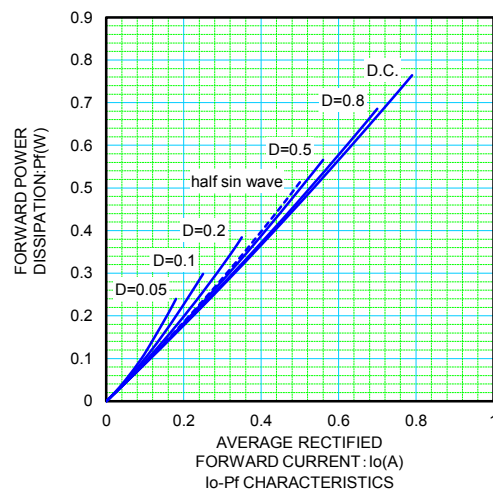
$I_{FSM}$ -CYCLE CHARACTERISTICS



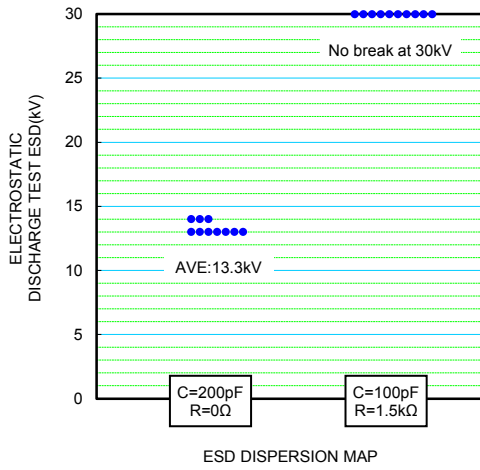
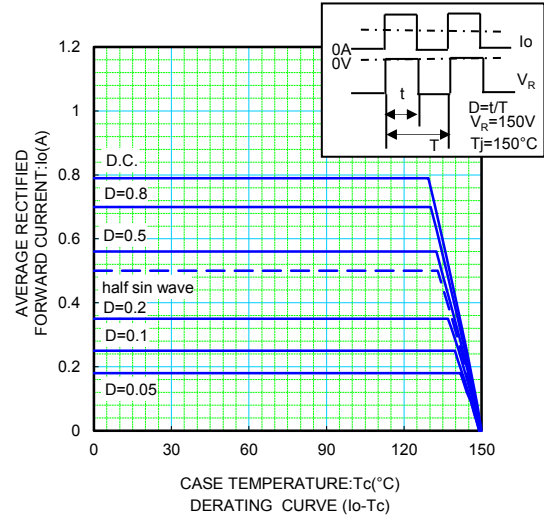
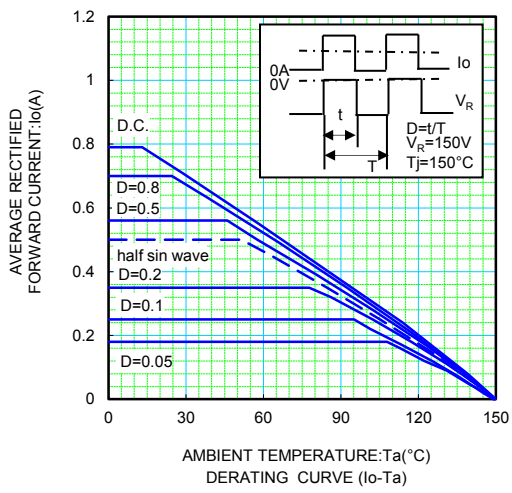
$I_{FSM}$ - $t$  CHARACTERISTICS



$R_{th}$ - $t$  CHARACTERISTICS



$I_o$ - $P_f$  CHARACTERISTICS



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