

# Super Fast Recovery Diode

RFN10B3S

●Serise

Standard Fast Recovery

●Applications

General rectification

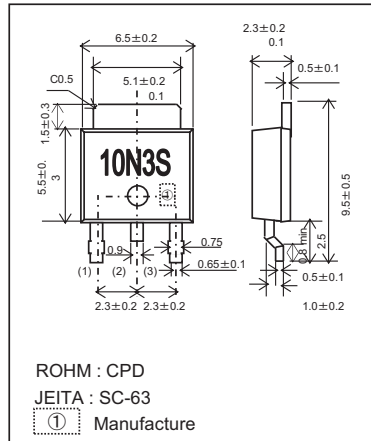
●Features

- 1)Power mold type(CPD)
- 2)Low switching loss
- 3)High current overload capacity

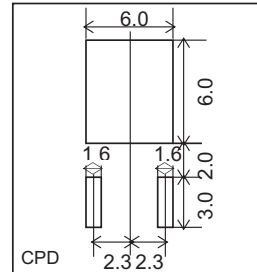
●Construction

Silicon epitaxial planer type

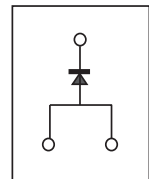
●Dimensions(Unit : mm)



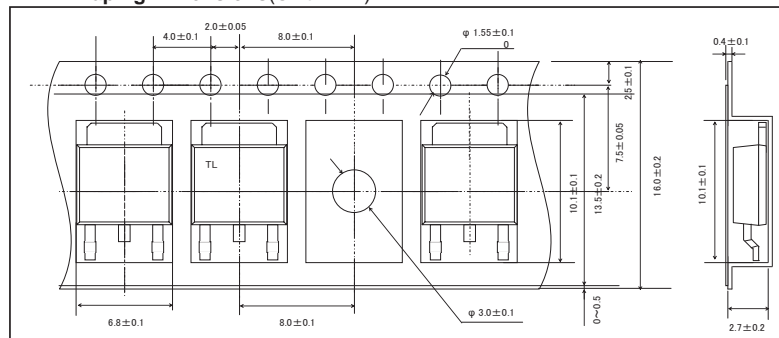
●Land Size Figure(Unit : mm)



●Structure



●Taping Dimensions(Unit : mm)



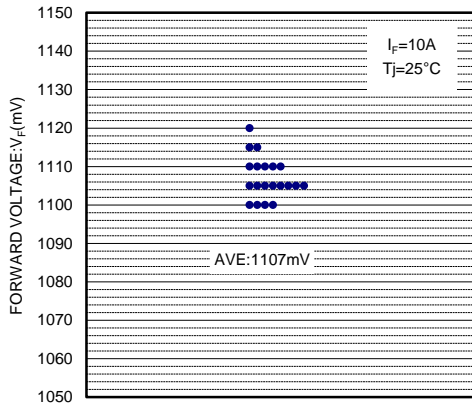
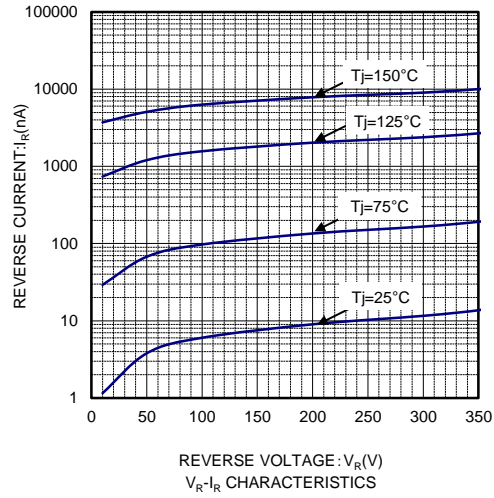
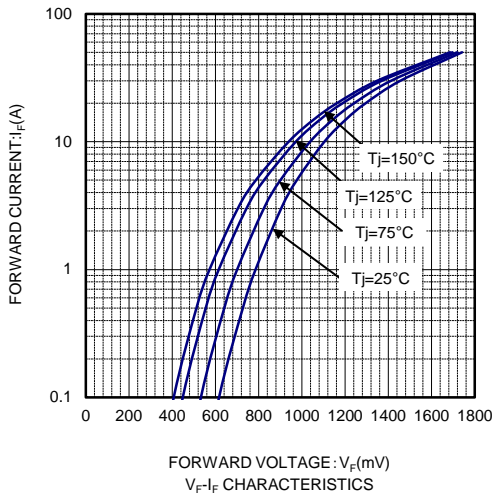
●Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq 0.5$	350	V
Reverse voltage	$V_R$	Direct voltage	350	V
Average rectified forward current	$I_o$	60Hz half sin wave , Resistive load   Tc=34°C	10	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave , Non-repetitive at Tj=25°C <sup>(*)</sup>	80	A
Junction temperature	Tj		150	°C
Storage temperature	Tstg		-55 to +150	°C

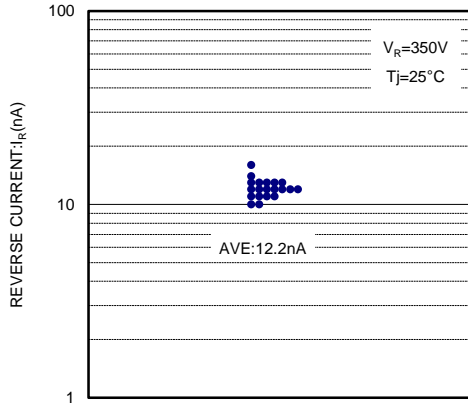
(\*) 1-3pin common circuit

●Electrical Characteristics(Tj=25°C)

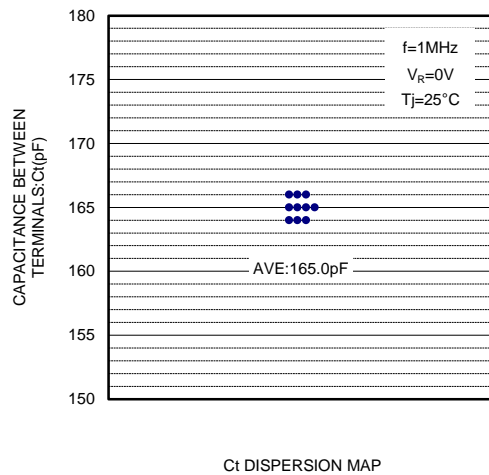
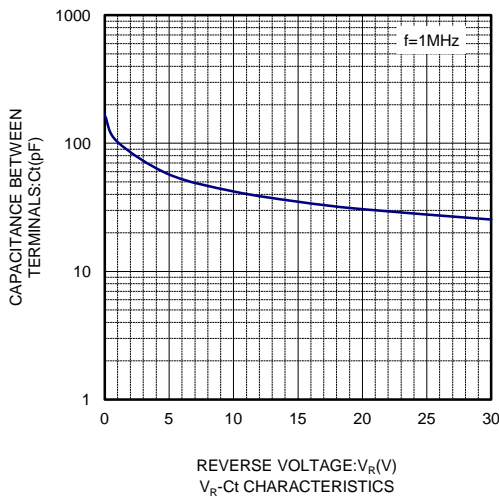
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=10A$	—	1.1	1.5	V
Reverse current	$I_R$	$V_R=350V$	—	0.05	10	$\mu A$
Reverse recovery time	trr	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$	—	20	30	ns
Thermal resistance	Rth(j-c)	Junction to case	—	—	6.0	°C/W



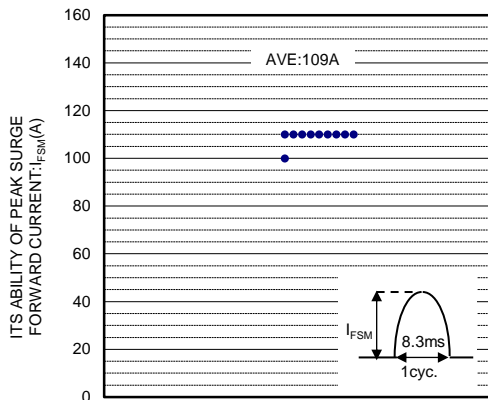
$V_F$  DISPERSION MAP



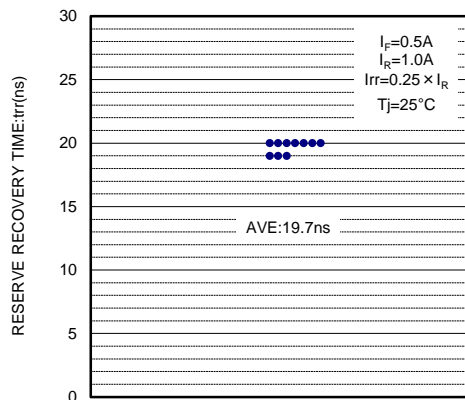
$I_R$  DISPERSION MAP



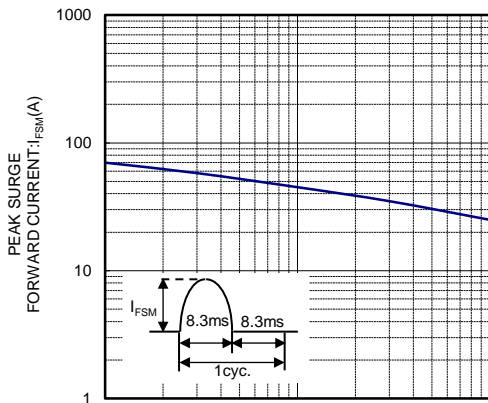
$C_t$  DISPERSION MAP



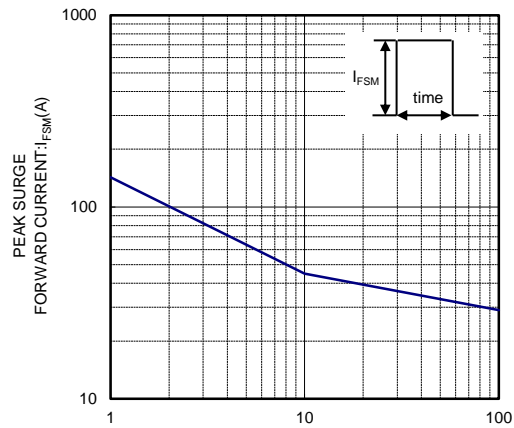
$I_{FSM}$  DISPERSION MAP



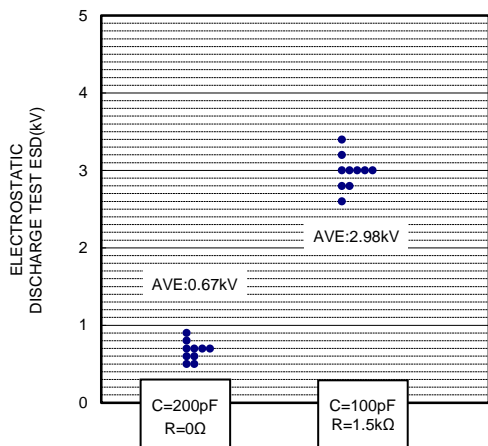
trr DISPERSION MAP



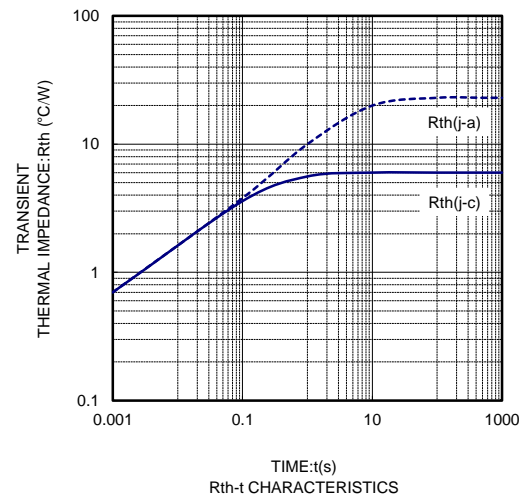
NUMBER OF CYCLES  
 $I_{FSM}$  CYCLE CHARACTERISTICS



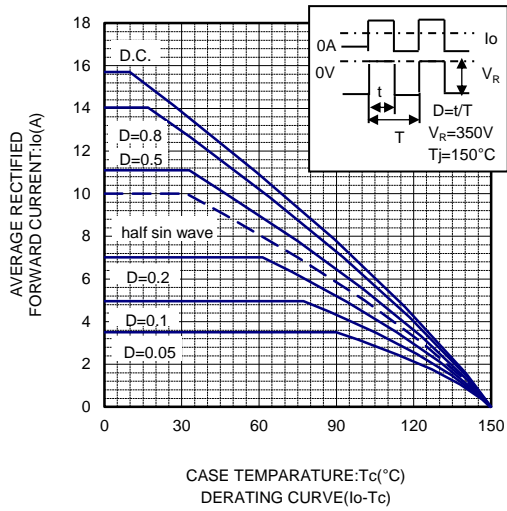
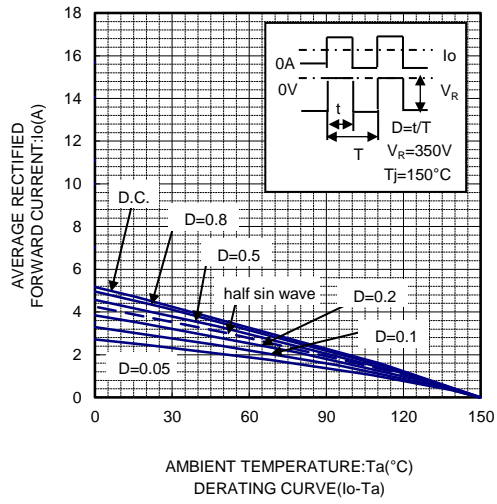
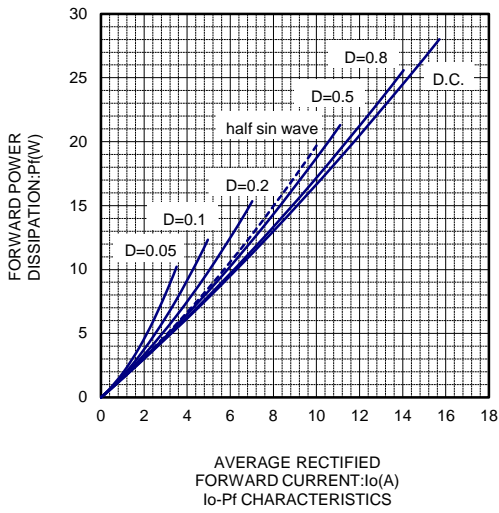
TIME: t(ms)  
 $I_{FSM}$ -t CHARACTERISTICS



ESD DISPERSION MAP



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



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