

Super Fast Recovery Diode

RFN20NS6S

●Serise

Standard Fast Recovery

●Applications

General rectification

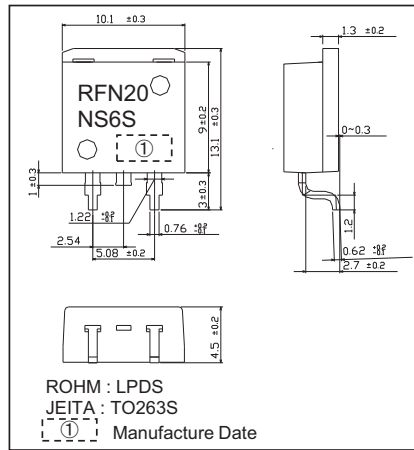
●Features

- 1)Low switching loss
- 2)High current overload capacity

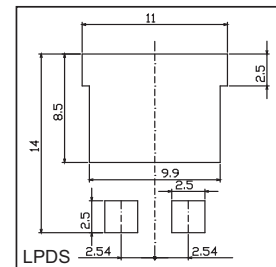
●Construction

Silicon epitaxial planer type

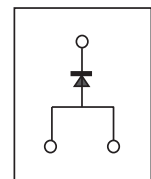
●Dimensions(Unit : mm)



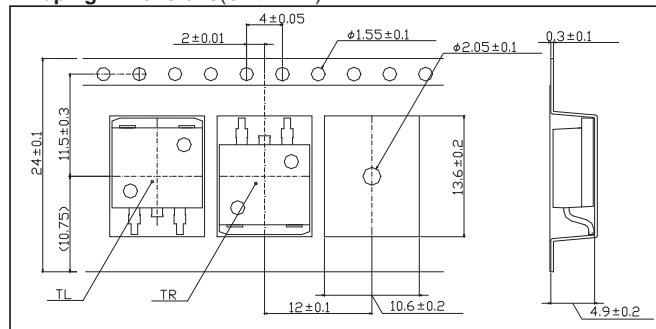
●Land Size Figure(Unit : mm)



●Structure



●Taping Dimensions(Unit : mm)



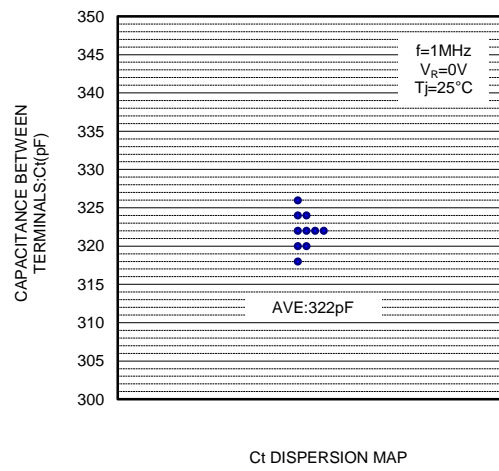
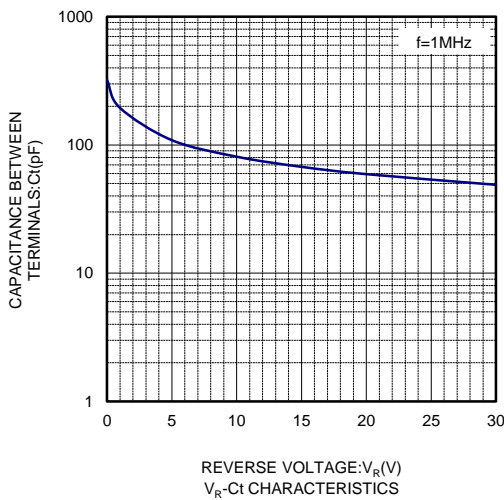
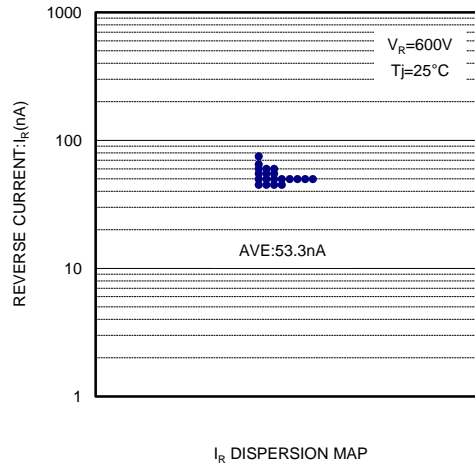
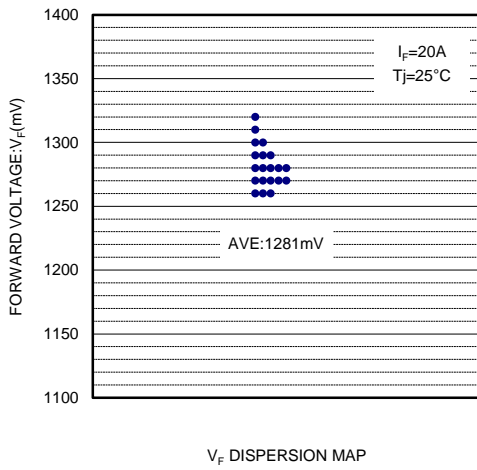
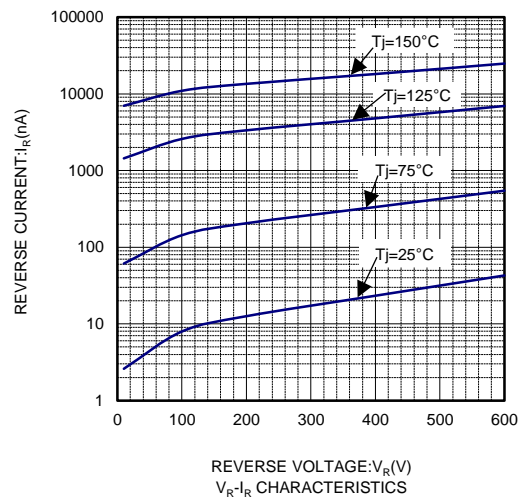
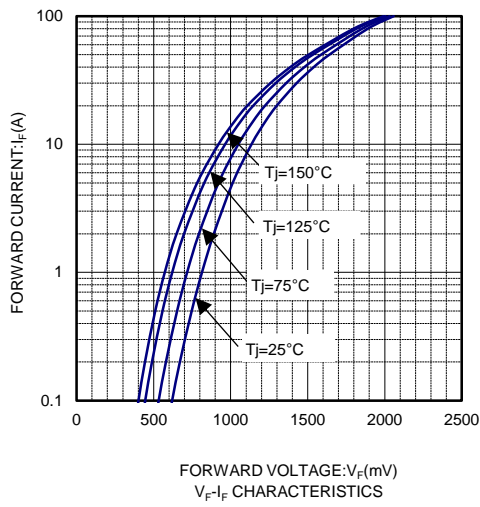
●Absolute Maximum Ratings(Tc=25°C)

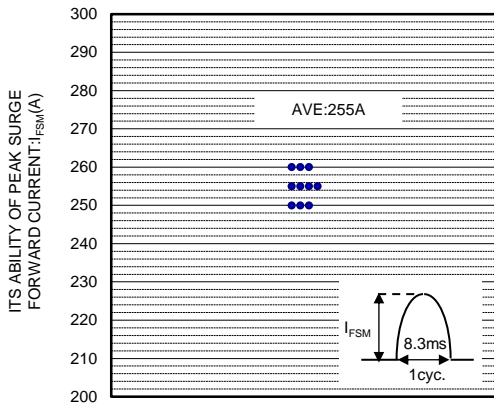
| Parameter | Symbol | Conditions | Limits | Unit |
|-----------------------------------|-----------|--|-------------|------|
| Repetitive peak reverse voltage | V_{RM} | Duty ≤ 0.5 | 600 | V |
| Reverse voltage | V_R | Direct voltage | 600 | V |
| Average rectified forward current | I_o | 60Hz half sin wave , Resistive load Tc=47°C | 20 | A |
| Forward current surge peak | I_{FSM} | 60Hz half sin wave , Non-repetitive at Tj=25°C (*) | 100 | A |
| Junction temperature | Tj | | 150 | °C |
| Storage temperature | Tstg | | -55 to +150 | °C |

(*) 1-3pin common circuit

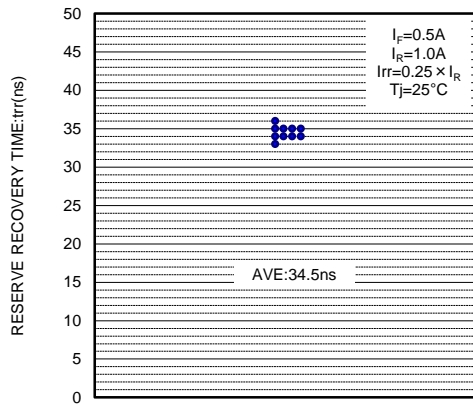
●Electrical Characteristics(Tj=25°C)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|-----------------------|----------|--|------|------|------|---------|
| Forward voltage | V_F | $I_F=20A$ | — | 1.25 | 1.55 | V |
| Reverse current | I_R | $V_R=600V$ | — | 0.05 | 10 | μA |
| Reverse recovery time | trr | $I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$ | — | 40 | 60 | ns |
| Thermal resistance | Rth(j-c) | Junction to case | — | — | 2.5 | °C/W |

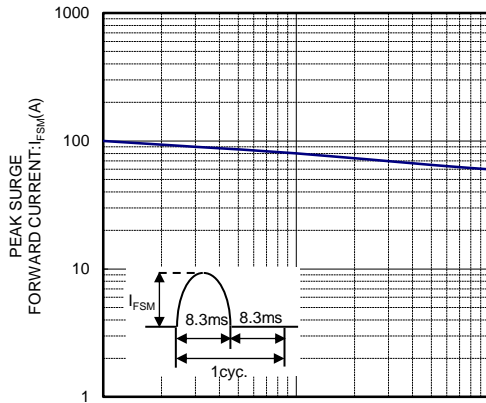




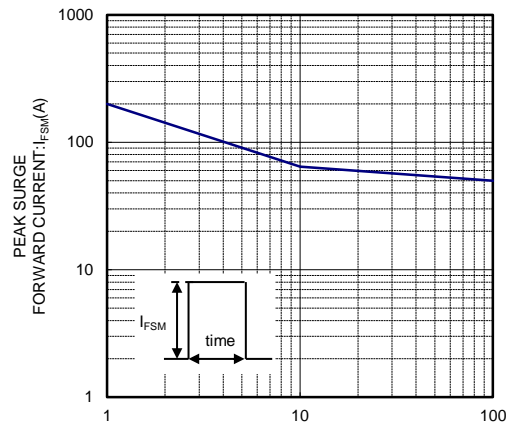
I_{FSM} DISPERSION MAP



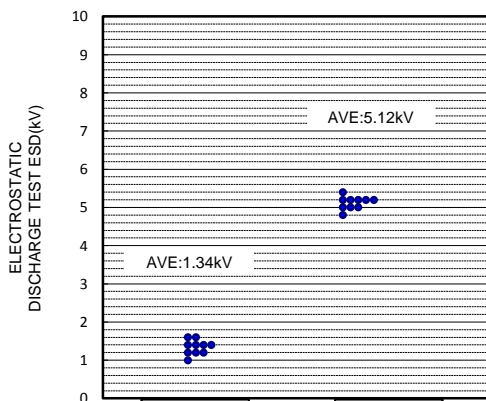
t_{rr} DISPERSION MAP



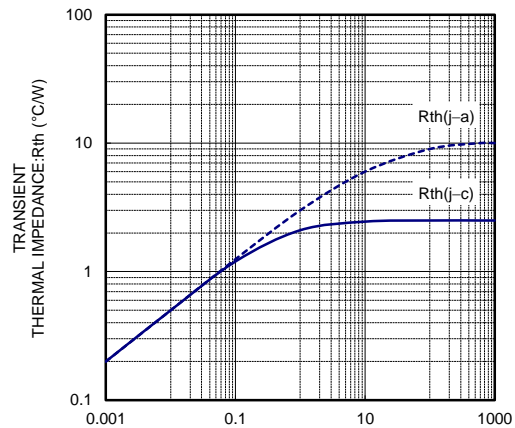
NUMBER OF CYCLES
 I_{FSM} -CYCLE CHARACTERISTICS



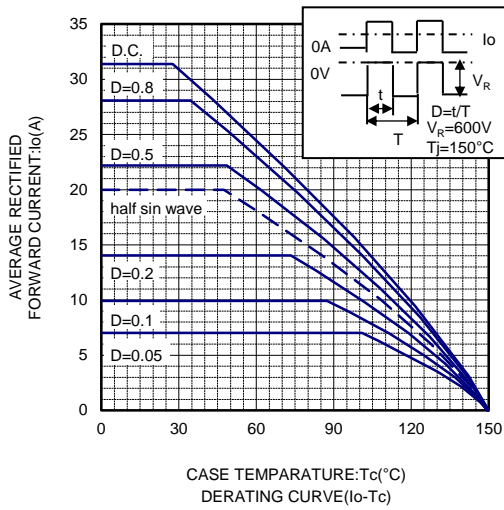
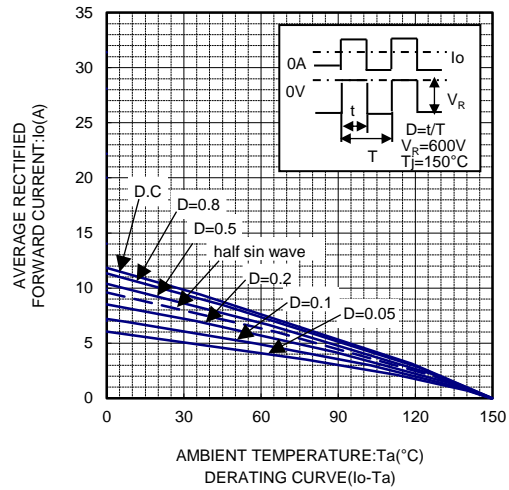
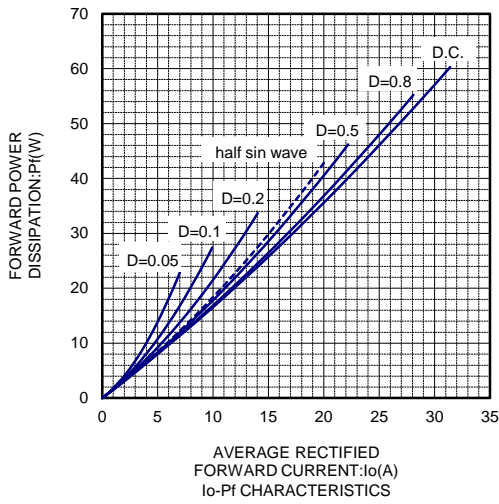
TIME:t(ms)
 I_{FSM} -t CHARACTERISTICS



ESD DISPERSION MAP



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



Notes

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