

Shottky barrier diode

RSX301L-30

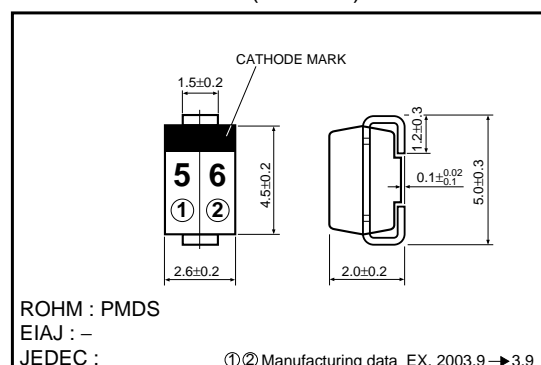
●Application

High efficient shottky barrier diode
Rectifier for power supply units
Battery protection against reversal current

●Features

- 1) Small mold type. (PMDS (4526))
- 2) High reliability.
(ESD resistance typ=30kV over (machine model))
- 3) Low V_F / Low I_R .
($V_F=0.38V$ at $3A$ / $I_R=90\mu A$ at $30V$)

●External dimensions (Unit : mm)



●Structure

Silicon Epitaxial Planer

●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-------------------------------------------|-----------|------------|------|
| Reverse voltage (repetitive peak) | V_{RM} | 30 | V |
| Reverse voltage (DC) | V_R | 30 | V |
| Average rectified forward current | I_O | 3 | A |
| Forward peak surge current (60Hz / 1cyc.) | I_{FSM} | 70 | A |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -40 to 150 | °C |

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-------------------------------------|--------|------|------|------|---------|-------------------------------|
| Forward voltage | V_F | - | 0.38 | 0.42 | V | $I_F=3A$ |
| Reverse current | I_R | - | 90 | 200 | μA | $V_R=30V$ |
| Capacitance between terminals | C_T | - | 180 | - | pF | $V_R=10V$, $f=1MHz$ |
| Electro static discharge resistance | ESD | - | 30 | - | kV | $C=200pF$, $R=0\Omega$ 1puls |

Diodes

●Electrical characteristic curves (Ta=25°C)

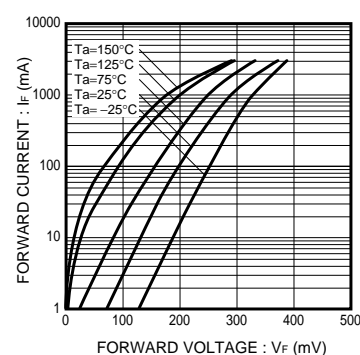


Fig.1 Forward Temperature Characteristics

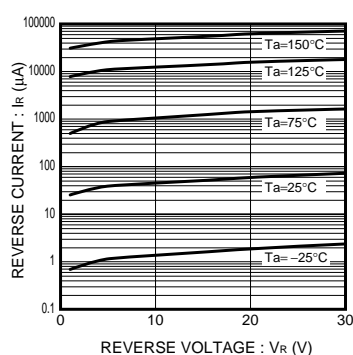


Fig.2 Reverse Temperature Characteristics

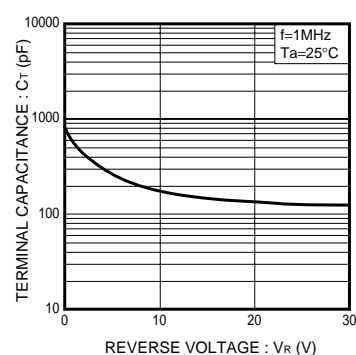


Fig.3 Capacitance Between Terminals Characteristics

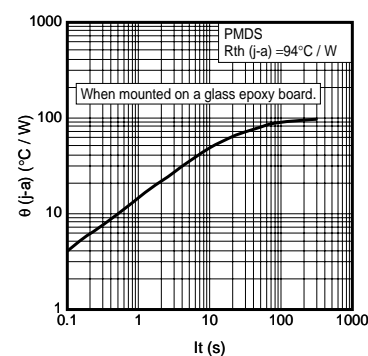


Fig.4 Thermal Resistance

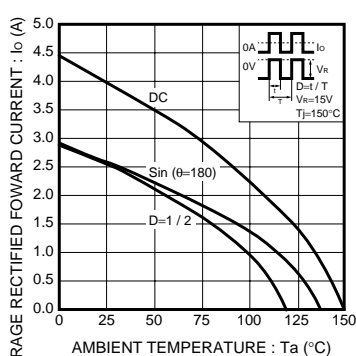


Fig.5 Derating Curve (Io-Ta)

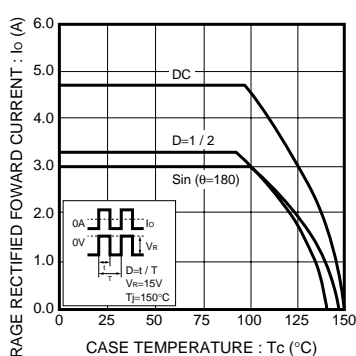


Fig.6 Derating Curve (Io-Tc)

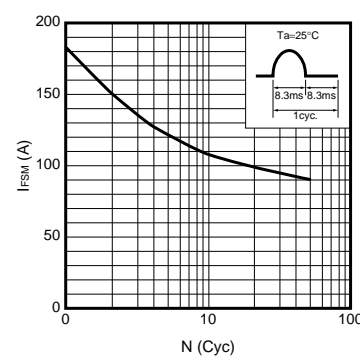


Fig.7 Forward peak surge current (Actual data)

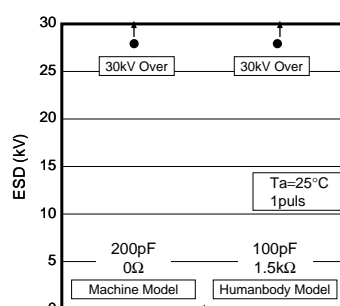


Fig.8 ESD resistance

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