Shottky barrier diode

RB425D

Application

Low current rectification

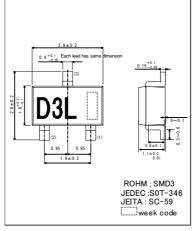
Features

- 1) Small mold type. (SMD3)
- 2) Low IR
- 3) High reliability.

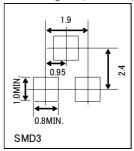
●Structure

Silicon epitaxial planar

$\textcolor{red}{\bullet \textbf{External dimensions}} \; (\textbf{Unit : mm})$



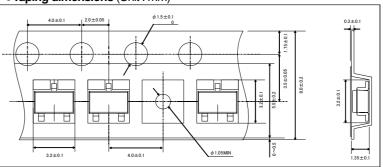
●Lead size figure (Unit : mm)



●Structure







● Absolute maximum ratings (Ta=25°C)

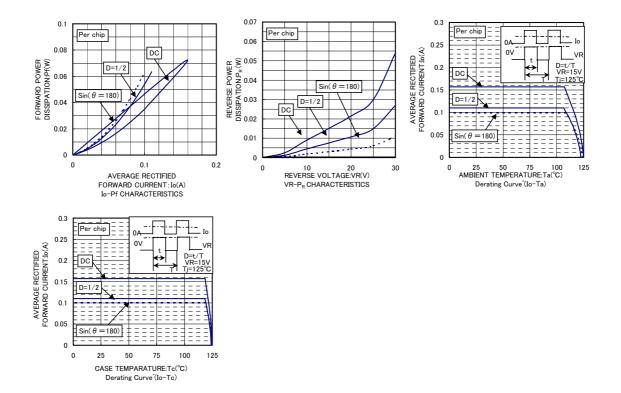
| Parameter | Symbol | Limits | Unit | |
|--|------------------|-------------|------|--|
| Reverse voltage (repetitive peak) | V_{RM} | 40 | V | |
| Reverse voltage (DC) | V_R | 40 | V | |
| Average rectified forward current (*1) | lo | 100 | mA | |
| Forward current surge peak (60Hz·1cyc)(*1) | I _{FSM} | 1 | Α | |
| Junction temperature | Tj | 125 | °C | |
| Storage temperature | Tstg | -40 to +125 | °C | |

^(*1)Rating of per diode

●Electrical characteristics (Ta=25°C)

| Liectifical characteristics (1a-23 C) | | | | | | |
|---------------------------------------|------------------|------|------|------|------|------------------------------|
| Parameter | Symbol | Min. | Тур. | Max. | Unit | Conditions |
| Forward voltage | V _F 1 | - | - | 0.55 | V | I _F =100mA |
| | V _F 2 | - | - | 0.34 | V | I _F =10mA |
| Reverse current | I _R 1 | - | 1 | 30 | μA | V _R =10V |
| Capacitance between terminals | Ct1 | - | 6 | 1 | pF | V _R =10V , f=1MHz |

●Electrical characteristic curves (Ta=25°C) f=1MHz FORWARD CURRENT:IF(mA) REVERSE CURRENT:IR(uA) CAPACITANCE BETWEEN TERMINALS:Ct(pF) 10 10 0.1 0.01 0 10 15 20 25 REVERSE VOLTAGE: VR(V) 0 REVERSE VOLTAGE:VR(V) VR-Ct CHARACTERISTICS FORWARD VOLTAGE: VF(mV) VF-IF CHARACTERISTICS VR-IR CHARACTERISTICS 470 310 Ta=25°C Ta=25°C IF=10mA Ta=25°C VR=10V IF=100m/ FORWARD VOLTAGE:VF(mV) FORWARD VOLTAGE:VF(mV) 460 CURRENT:IR(uA) n=30pcs n=30pc n=10pcs 450 15 440 REVERSE 10 AVE:2.548uA 430 270 AVE:281.5mV AVE:439.5mV 260 420 VF DISPERSION MAP VF DISPERSION MAP IR DISPERSION MAP 10 20 Ta=25°C RESERVE RECOVERY TIME:trr(ns) f=1MHz PEAK SURGE FORWARD CURRENT:IFSM(A) 25 VR=10V CAPACITANCE BETWEEN TERMINALS:Ct(pF) IR=1A 15 n=10pc: 20 n=10pcs 5 10 15 4 3 10 2 AVE:6.20ns 0 0 Ct DISPERSION MAP IFSM DISRESION MAP trr DISPERSION MAP F F II II TRANSIENT THAERMAL IMPEDANCE:Rth (°C/W) Rth(j-a) PEAK SURGE FORWARD CURRENT:IFSM(A) PEAK SURGE FORWARD CURRENT:IFSM(A) 100 10 Rth(i-c) 10 1 10 NUMBER OF CYCLES IFSM-CYCLE CHARACTERISTICS 0.1 10 TIME:t(s) Rth-t CHARACTERISTICS 0.1 0.1 TIME:t(ms) IFSM-t CHARACTERISTICS



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