# Shottky barrier diode

## **RB425D**

#### Application

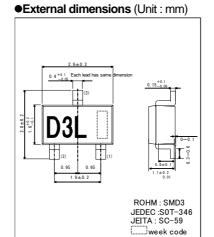
Low current rectification

#### Features

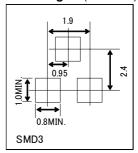
- 1) Small mold type. (SMD3)
- 2) Low IR
- 3) High reliability.

#### ●Structure

Silicon epitaxial planar



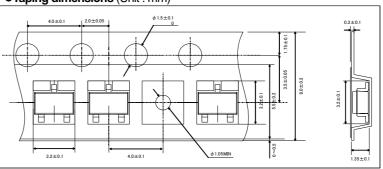
●Lead size figure (Unit : mm)



Structure



● Taping dimensions (Unit: mm)



#### ● 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 <sub>FSM</sub>	1	Α	
Junction temperature	Tj	125	°C	
Storage temperature	Tstg	-40 to +125	°C	

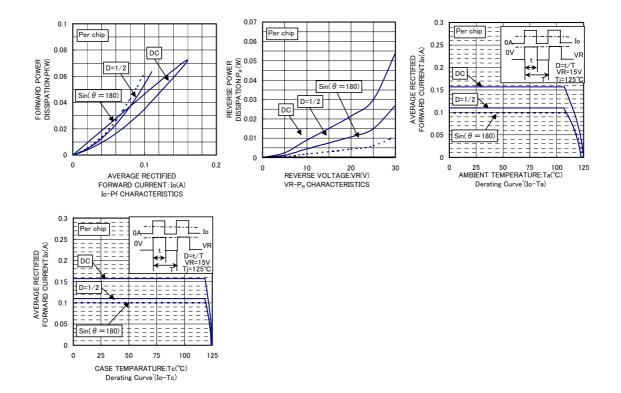
<sup>(\*1)</sup>Rating of per diode

### ● Electrical characteristics (Ta=25°C)

Liectifical characteristics (1a-25 C)						
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	V <sub>F</sub> 1	-	-	0.55	V	I <sub>F</sub> =100mA
	V <sub>F</sub> 2	-	-	0.34	V	I <sub>F</sub> =10mA
Reverse current	I <sub>R</sub> 1	-	-	30	μΑ	V <sub>R</sub> =10V
Capacitance between terminals	Ct1	-	6	-	pF	V <sub>R</sub> =10V , f=1MHz

Rev.A

#### ●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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