# Schottky barrier diode **RB731U**

## Applications

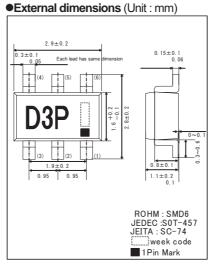
Low current rectification

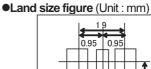
#### Features

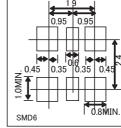
- 1) Small mold type. (SMD6)
- 2) Low IR
- 3) High reliability

### Construction

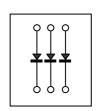
Silicon epitaxial planar



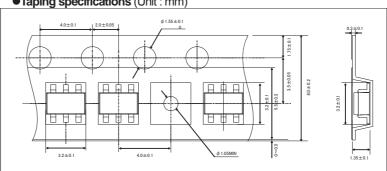




●Structure



● Taping specifications (Unit: mm)



#### ● Absolute maximum ratings (Ta=25°C)

CADSOIDE MEXIMUM ratings (12-25 0)							
Parameter	Symbol	ymbol Limits					
Reverse voltage (repetitive peak)	$V_{RM}$	40	V				
Reverse voltage (DC)	$V_R$	40	V				
Average rectified forward current (*1)	lo	30	mA				
Forward current surge peak (60Hz · 1cyc)	I <sub>FSM</sub>	200	mA				
Junction temperature	Tj	125	°C				
Storage temperature	Tstg	-40 to +125	°C				

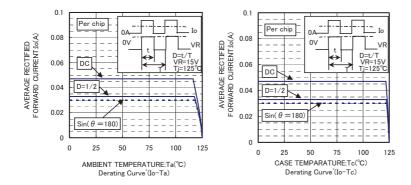
(\*1)Per chip: lo/3

# ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	$V_{F}$	-	-	0.37	V	I <sub>F</sub> =1mA
Reverseu current	I <sub>R</sub>	-	-	1	μA	V <sub>R</sub> =10V
Capacitance between terminals	Ct	-	2.0	-	pF	V <sub>R</sub> =1V , f=1MHz

#### ●Electrical characteristic curves (Ta=25°C) 10 f=1MHz 100 FORWARD CURRENT:IF(mA) REVERSE CURRENT:IR(uA) CAPACITANCE BETWEEN TERMINALS:Ot(pF) 10 0.1 0.1 0.01 0.01 0.001 0.1 0 10 0 15 20 30 FORWARD VOLTAGE: VF(mV) VF-IF CHARACTERISTICS REVERSE VOLTAGE: VR(V) VR-IR CHARACTERISTICS REVERSE VOLTAGE:VR(V) VR-Ct CHARACTERISTICS 300 Ta=25°C f=1MHz VR=0V Ta=25°C VR=10V 0.9 Ta=25°C FORWARD VOLTAGE:VF(mV) IF=1mA REVERSE CURRENT:IR(nA) 8.0 CAPACITANCE BETWEEN TERMINALS: Ct(pF) n=30pcs n=30pcs 0.7 6 280 0.6 5 0.5 4 0.4 270 3 0.3 260 0.2 AVE:2.52pF 1 0.1 250 0 VF DIPERSION MAP IR DISPERSION MAP Ct DISPERSION MAP 20 10 PEAK SURGE FORWARD CURRENT:IFSM(A) PEAK SURGE FORWARD CURRENT:IFSM(A) PEAK SURGE FORWARD CURRENT:IFSM(A) 15 10 3 5 2 AVE:7.30A 0 0 0 10 100 10 TIME:t(ms) NUMBER OF CYCLES IFSM DISPERSION MAP IFSM-CYCLE CHARACTERISTICS IFSM-t CHARACTERISTICS 0.003 1000 0.04 TRANSIENT THAERMAL IMPEDANCE:Rth (°C/W) FORWARD POWER DISSIPATION:Pf(W) 700 700 700 700 700 700 0.03 D=1/2 REVERSE POWER DISSIPATION:P<sub>R</sub> (W) 0.002 100 Rth(i-c $Sin(\theta = 180)$ DC 0.001 0.01 0.00 0 0.01 0.04 0.05 0.00 0.02 0.03 0 10 30 0.1 10 TIME:t(s) 10 Rth-t CHARACTERISTICS 0.001 1000 AVERAGE RECTIFIED FORWARD CURRENT Io(A) REVERSE VOLTAGE:VR(V) VR-P<sub>R</sub> CHARACTERISTICS Io-Pf CHARACTERISTICS





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