# Schottky barrier diode RSX301L-30

# Applications

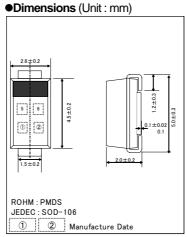
General rectification

#### Features

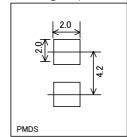
- 1) Small power mold type. (PMDS)
- 2) Low V<sub>F</sub>, Low I<sub>R</sub>.
- 3) High reliability.

#### Construction

Silicon epitaxial planar



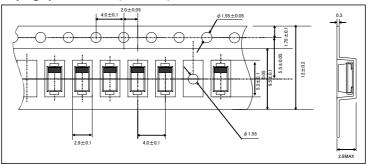
# • Land size figure (Unit : mm)











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

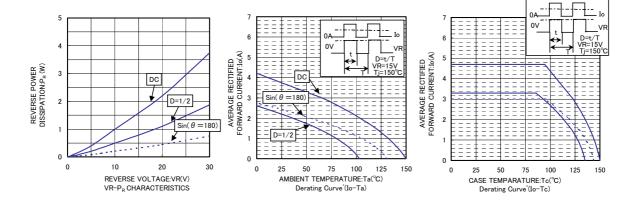
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	$V_{RM}$	30	V
Reverse voltage (DC)	$V_R$	30	V
Average rectified forward current	lo	3	Α
Forward current surge peak (60Hz · 1cyc)	I <sub>FSM</sub>	70	А
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-40 to +150	°C

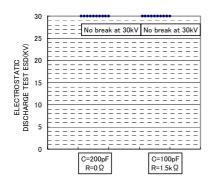
<sup>(\*1)</sup>Tc=90°Cmax Mounted on epoxy board. 180°Half sine wave

# ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	$V_{F}$	-	-	0.42	V	I <sub>F</sub> =3.0A
Reverse current	I <sub>R</sub> 1	-	-	90	μA	V <sub>R</sub> =15V
	I <sub>R</sub> 2	-	-	200	μA	V <sub>R</sub> =30V

#### ●Electrical characteristic curves (Ta=25°C) 1000 f=1MHz 100000 FORWARD CURRENT:IF(A) REVERSE CURRENT:IR(uA) CAPACITANCE BETWEEN TERMINALS:Ct(pF) 10000 0.1 1000 100 0.01 10 10 0.001 5 10 15 20 REVERSE VOLTAGE:VR(V) 0 400 500 600 0 5 10 15 20 25 REVERSE VOLTAGE: VR(V) FORWARD VOLTAGE: VF(mV) VR-IR CHARACTERISTICS VR-Ct CHARACTERISTICS VF-IF CHARACTERISTICS Ta=25°C Ta=25°C 900 840 IF=3A VR=30V FORWARD VOLTAGE:VF(mV) REVERSE CURRENT:IR(uA) 800 830 CAPACITANCE BETWEEN TERMINALS:Ct(pF) 700 820 380 810 800 370 400 AVE:66.90uA 300 360 AVE:800.8pF 100 VF DISPERSION MAP IR DISPERSION MAP Ct DISPERSION MAP 200 Ta=25°C RESERVE RECOVERY TIME:trr(ns) IF=0.5A PEAK SURGE FORWARD CURRENT:IFSM(A) PEAK SURGE FORWARD CURRENT:IFSM(A) 150 rr=0.25\*IR AVE:178.0A 20 1cyc 100 15 50 0 0 NUMBER OF CYCLES trr DISPERSION MAP IFSM DISPERSION MAP 250 € 0100 PEAK SURGE FORWARD CURRENT:IFSM(A) 200 D=1/2 TRANSIENT THAERMAL IMPEDANCE:Rth ( DC FORWARD POWER DISSIPATION:Pf(W) 150 10 100 50 0 0.1 0 0.01 0.1 1 TIME:t(s) 100 1000 0.001 10 TIME:t(ms) IFSM-t CHARACTERISTICS AVERAGE RECTIFIED FORWARD CURRENT: Io(A) Rth-t CHARACTERISTICS Io-Pf CHARACTERISTICS





ESD DISPERSION MAP

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