

# Shottky barrier diode

## RSX301L-30

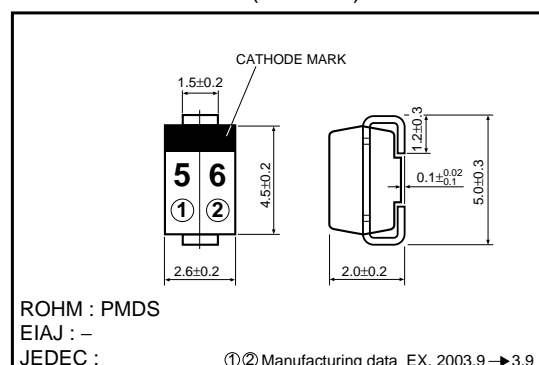
### ●Application

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	$\mu A$	$V_R=30V$
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)

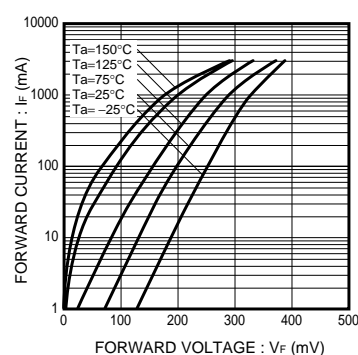


Fig.1 Forward Temperature Characteristics

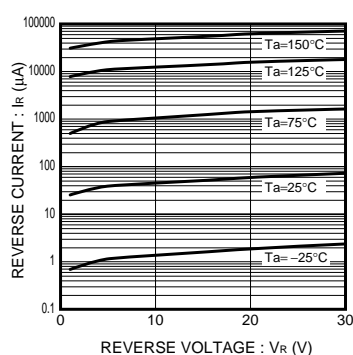


Fig.2 Reverse Temperature Characteristics

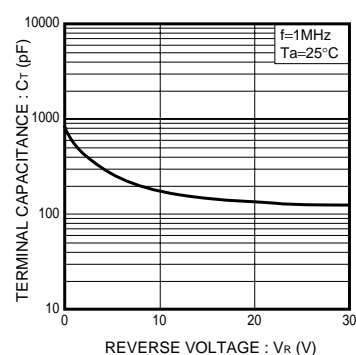


Fig.3 Capacitance Between Terminals Characteristics

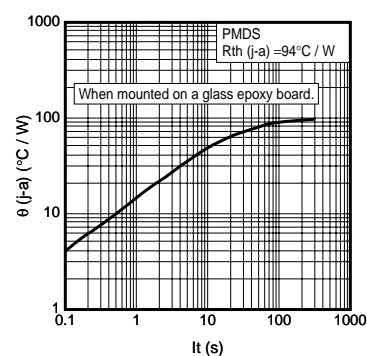


Fig.4 Thermal Resistance

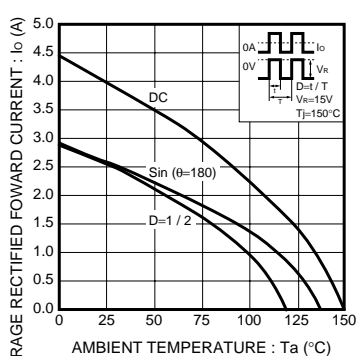


Fig.5 Derating Curve (Io-Ta)

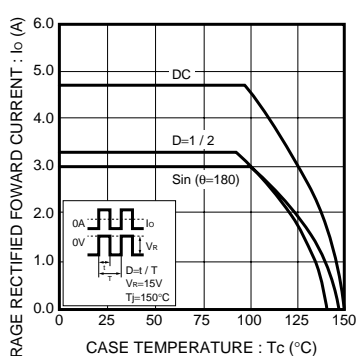


Fig.6 Derating Curve (Io-Tc)

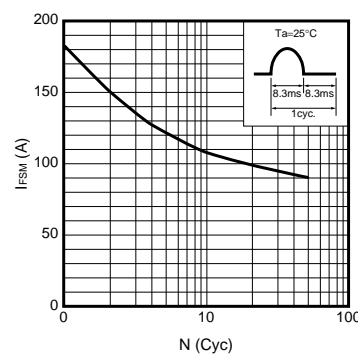


Fig.7 Forward peak surge current (Actual data)

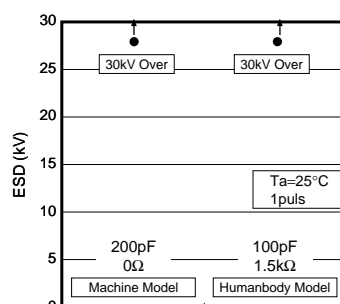


Fig.8 ESD resistance

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