

# Schottky barrier Diode

## RB530S-30

●Applications

General rectification

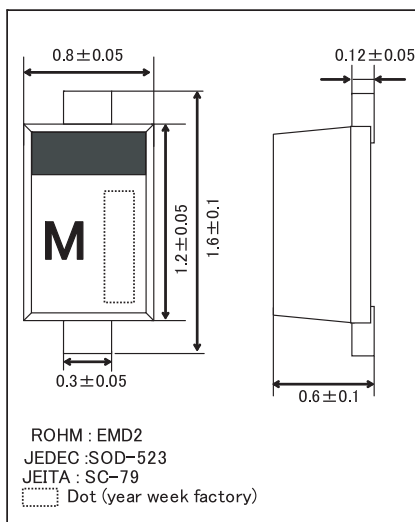
●Features

- 1) Ultra small mold type. (EMD2)
- 2) Low  $I_R$
- 3) High reliability

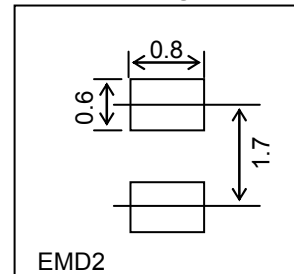
●Construction

Silicon epitaxial planer

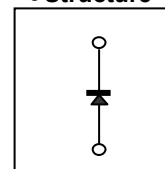
●Dimensions (Unit : mm)



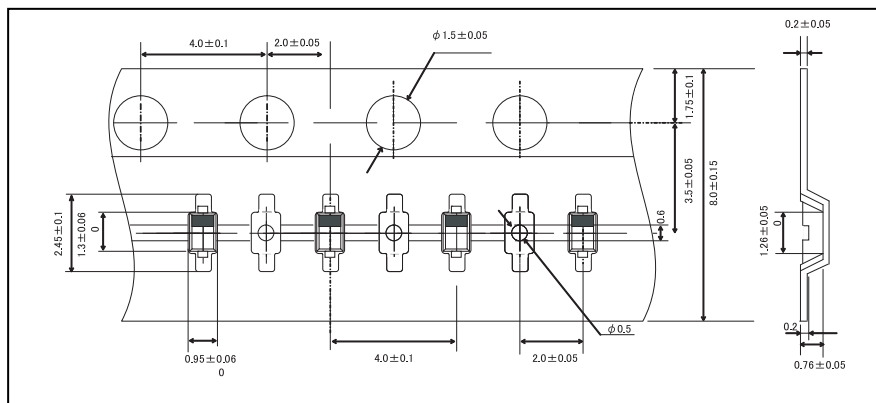
●Land size figure (Unit : mm)



●Structure



●Taping specifications (Unit : mm)



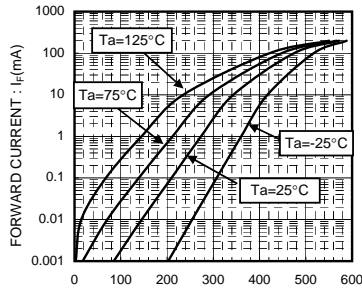
●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Reverse voltage (DC)	$V_R$	30	V
Average rectified forward current	$I_o$	100	mA
Forward current surge peak (60Hz/1cyc)	$I_{FSM}$	500	mA
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-40 to +125	°C

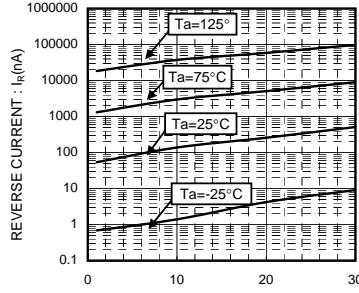
●Electical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	$V_F$	-	-	0.45	V	$I_F=10mA$
Reverse current	$I_R$	-	-	0.5	μA	$V_R=10V$

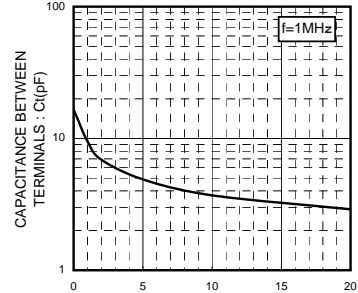
●Electical characteristics curves



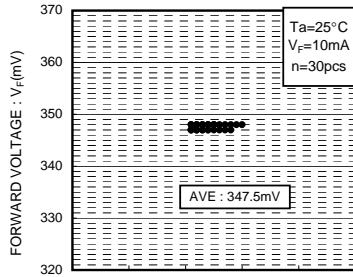
FORWARD VOLTAGE :  $V_F$ (mV)  
 $V_F$ - $I_F$  CHARACTERISTICS



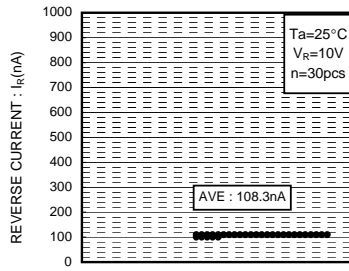
REVERSE VOLTAGE :  $V_R$ (V)  
 $V_R$ - $I_R$  CHARACTERISTICS



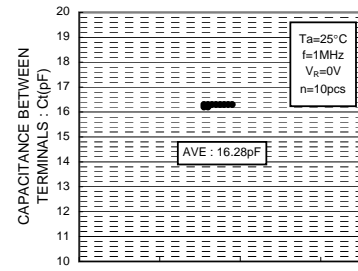
REVERSE VOLTAGE :  $V_R$ (V)  
 $V_R$ - $C_t$  CHARACTERISTICS



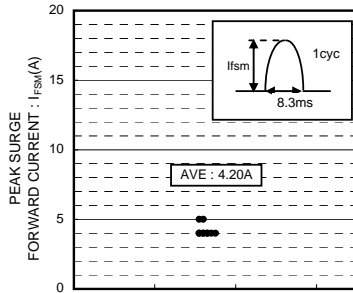
$V_F$  DISPERSION MAP



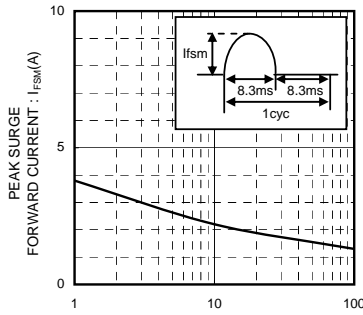
$I_R$  DISPERSION MAP



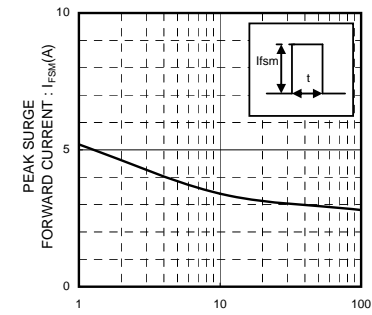
$C_t$  DISPERSION MAP



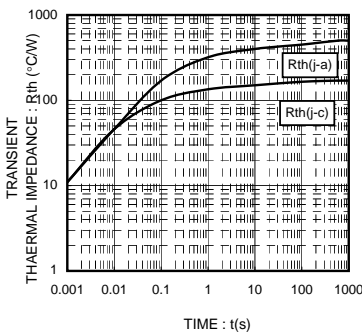
$I_{FSM}$  DISPERSION MAP



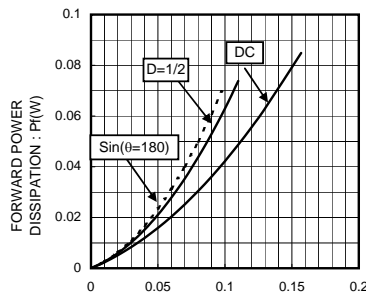
NUMBER OF CYCLES  
 $I_{FSM}$ -CYCLE CHARACTERISTICS



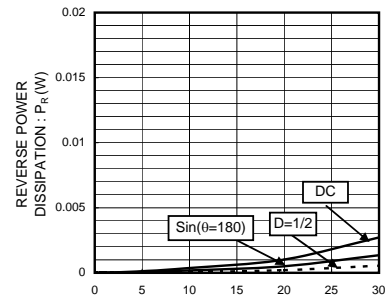
TIME :  $t$ (ms)  
 $I_{FSM}$ - $t$  CHARACTERISTICS



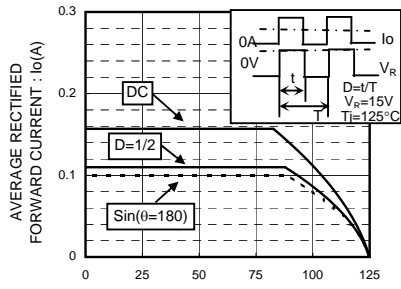
TIME :  $t$ (s)  
 $R_{th}$ - $t$  CHARACTERISTICS



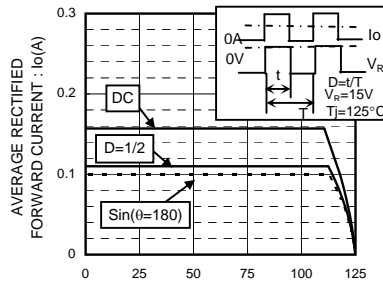
AVERAGE RECTIFIED  
FORWARD CURRENT :  $I_o$ (A)  
 $I_o$ - $P_R$  CHARACTERISTICS



REVERSE VOLTAGE :  $V_R$ (V)  
 $V_R$ - $P_R$  CHARACTERISTICS



AMBIENT TEMPERATURE :  $T_a(^{\circ}C)$   
Derating Curve\*( $I_o-T_a$ )



CASE TEMPERATURE :  $T_c(^{\circ}C)$   
Derating Curve\*( $I_o-T_c$ )

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