

# SCHOTTKY BARRIER DIODE

## Dimensions SOD-523

### ●Applications

Low current rectification and high speed switching

### ●Features

Extremely small surface mounting type. (SOD523)

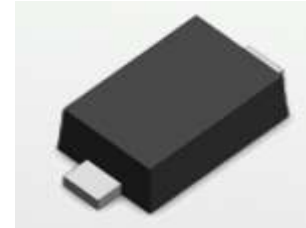
$I_O=200\text{mA}$  guaranteed despite the size.

Low  $V_F$ .

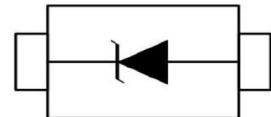
### ●Construction

Silicon epitaxial planar

- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



## Pin Configuration



### Ordering Information

Device	Marking	Shipping
RB520S-40	S	3000/Tape&Reel

### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ )

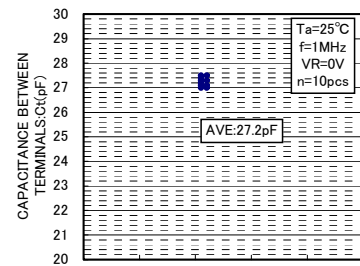
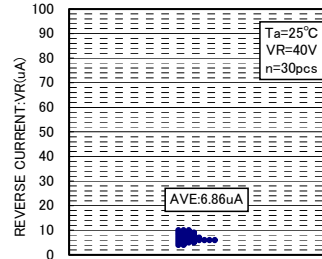
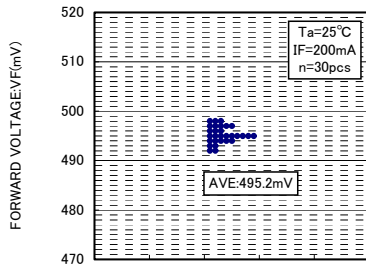
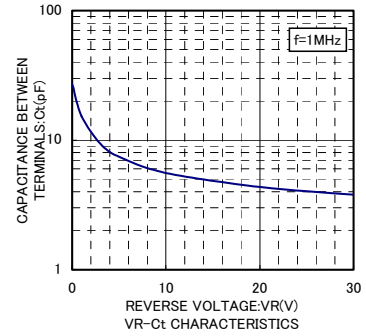
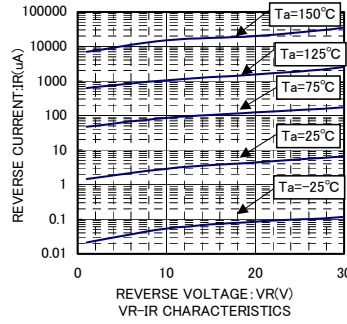
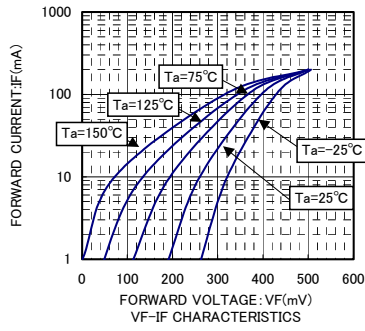
Parameter	Symbol	Limits	Unit
DC reverse voltage	$V_R$	40	V
Mean rectifying current	$I_O$	200	mA
Peak forward surge current*	$I_{FSM}$	4	A
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{sg}$	-55~+125	$^\circ\text{C}$

\*60Hz for 1

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Min.	Max.	Unit	Conditions
Forward voltage	$V_F$	0.16	0.30	V	$I_F=10\text{mA}$
Forward voltage	$V_F$	0.31	0.45	V	$I_F=100\text{mA}$
Forward voltage	$V_F$	0.37	0.52	V	$I_F=200\text{mA}$
Reverse current	$I_R$	-	20	$\mu\text{A}$	$V_R=10\text{V}$
Reverse current	$I_R$	-	90	$\mu\text{A}$	$V_R=40\text{V}$
ESD break down voltage	ESD	8	-	KV	$C=100\text{pF}$ , $R=1.5\text{K}\ \Omega$ forward and reverse: 1 time

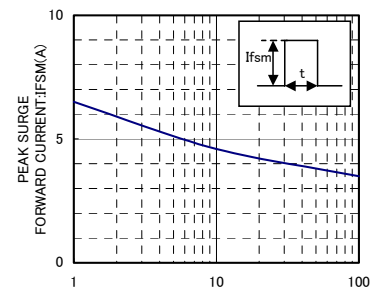
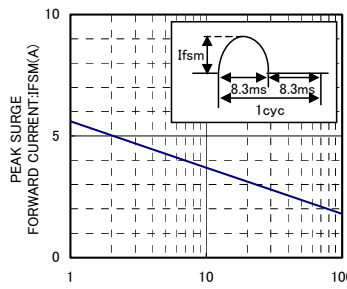
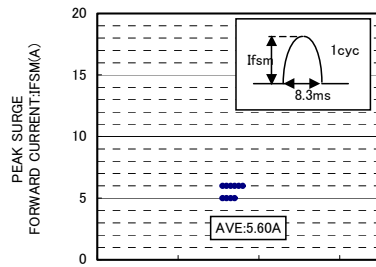
● Electrical characteristic curves



VF DISPERSION MAP

IR DISPERSION MAP

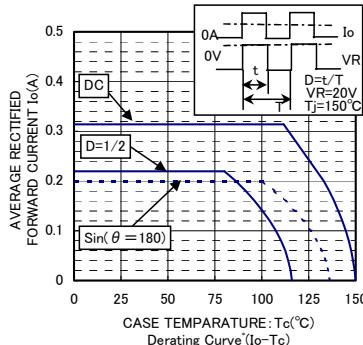
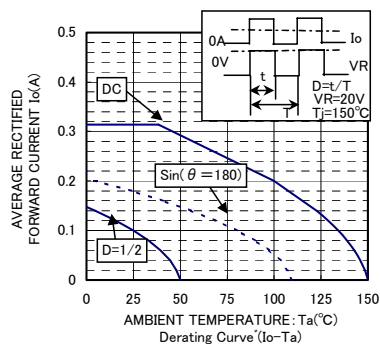
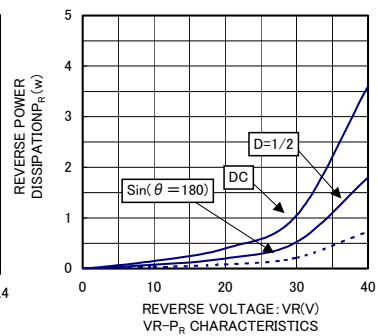
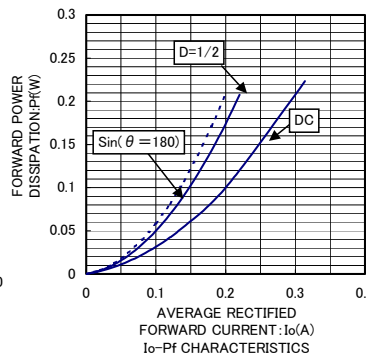
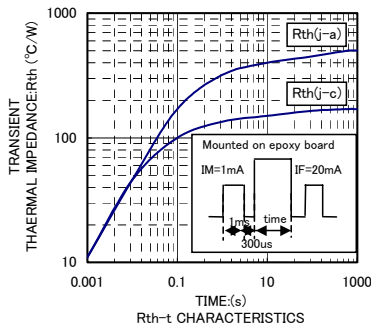
Ct DISPERSION MAP



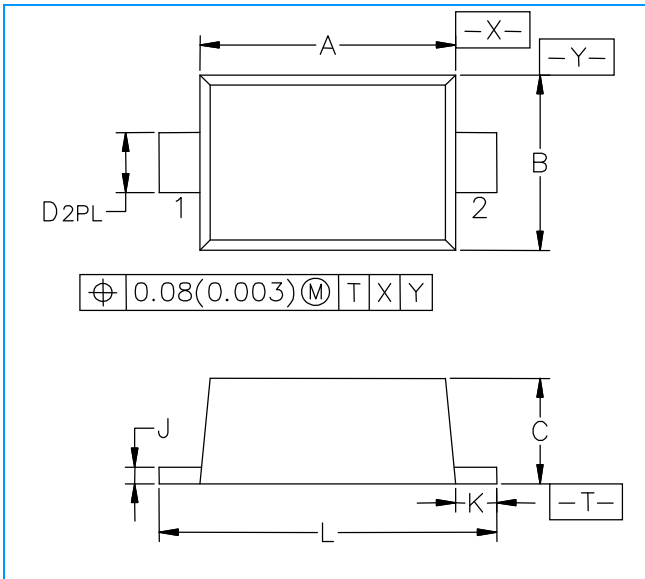
IFSM DISPERSION MAP

NUMBER OF CYCLES  
IFSM-CYCLE CHARACTERISTICS

TIME: t (ms)  
IFSM-t CHARACTERISTICS

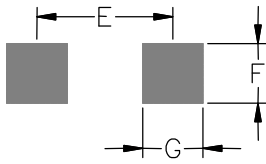


## SOD-523 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
<b>A</b>	1.10	1.20	1.30	0.043	0.047	0.051
<b>B</b>	0.70	0.80	0.90	0.028	0.032	0.035
<b>C</b>	0.50	0.60	0.70	0.020	0.024	0.028
<b>D</b>	0.25	0.30	0.35	0.010	0.012	0.014
<b>J</b>	0.07	0.14	0.20	0.0028	0.0055	0.0079
<b>K</b>	0.15	0.20	0.25	0.006	0.008	0.010
<b>S</b>	1.50	1.60	1.70	0.059	0.063	0.067

### Soldering Footprint



Symbol	Millimeters	Inches
<b>E</b>	1.40	0.0547
<b>F</b>	0.40	0.0157
<b>G</b>	0.40	0.0157