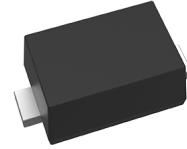


# Schottky Barrier Diode



Functional Diagram



## FEATURES

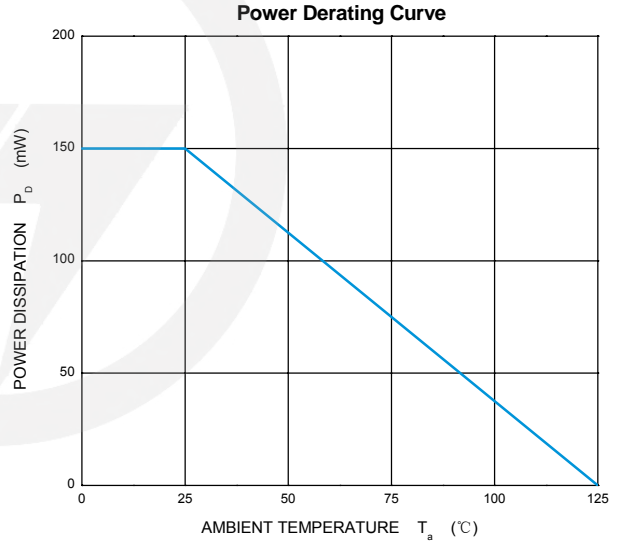
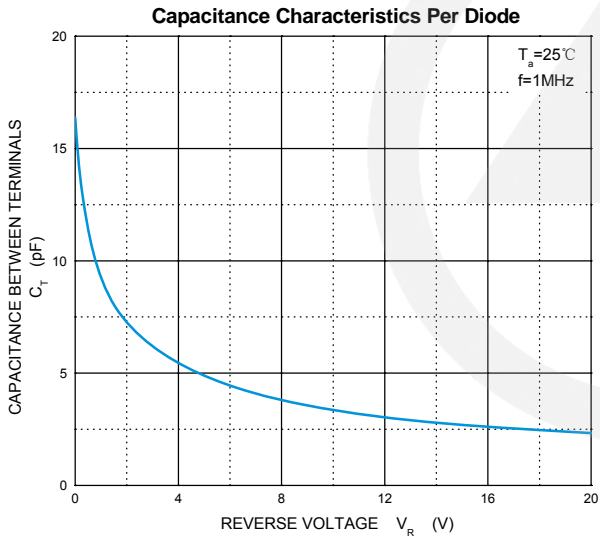
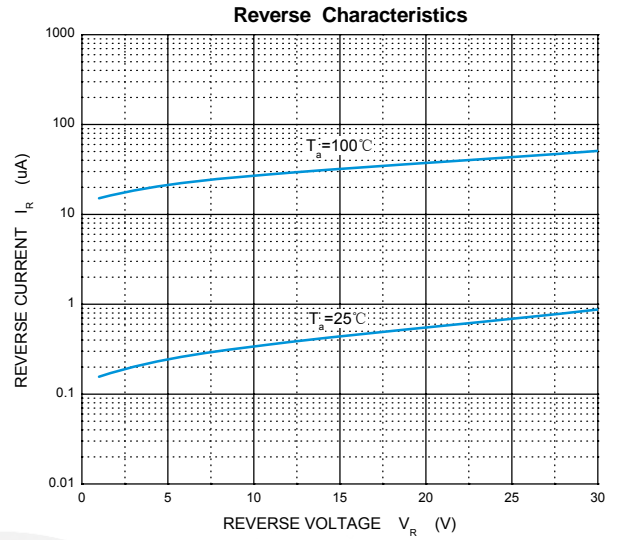
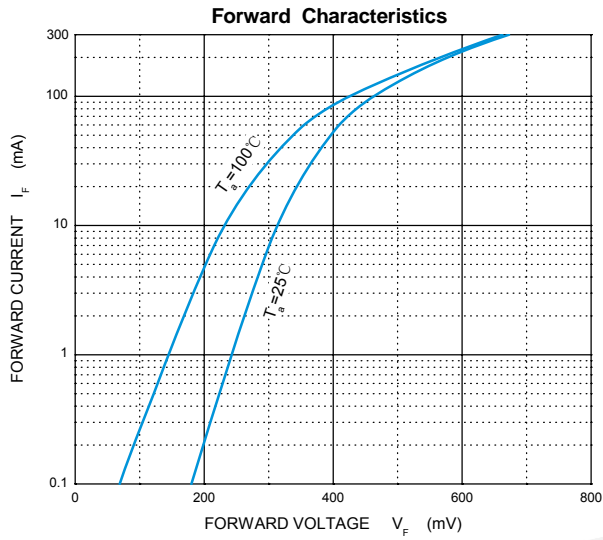
- Extremely Fast Switching Speed
- Low Forward Voltage
- MARKING: JV

## Maximum Ratings @Ta=25°C

Parameter	Symbol	Limit	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	30	V
DC blocking voltage	$V_R$	21	V
Average rectified output current	$I_o$	100	mA
Forward continuous current	$I_F$	200	mA
Repetitive peak forward current	$I_{FRM}$	300	mA
Forward surge current	$I_{FSM}$	600	mA
Power dissipation	$P_d$	150	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	667	°C/W
Junction temperature	$T_J$	125	°C
Storage temperature range	$T_{STG}$	-55~+150	°C

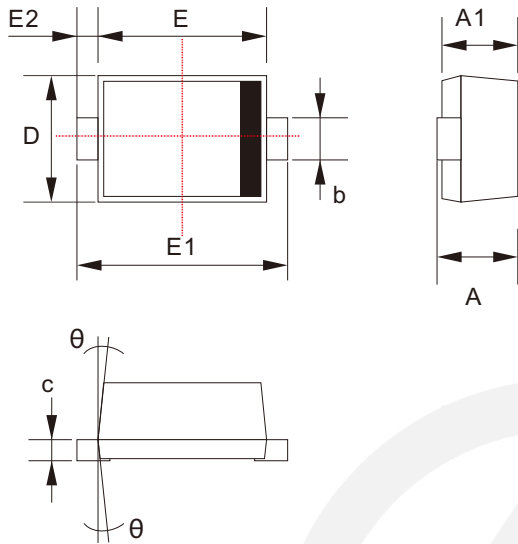
## ELECTRICAL CHARACTERISTICS @Ta=25°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu A$	30			V
Forward voltage	$V_{F1}$	$I_F=0.1mA$			240	mV
	$V_{F2}$	$I_F=1.0mA$			320	mV
	$V_{F3}$	$I_F=10mA$			400	mV
	$V_{F4}$	$I_F=30mA$			500	mV
	$V_{F5}$	$I_F=100mA$			1000	mV
Reverse current	$I_R$	$V_R=25V$			2.0	$\mu A$
Reverse recovery time	$t_{rr}$	$I_F=10mA, I_R=10mA \text{ to } 1mA, R_L=100\Omega$			5.0	ns
Capacitance between terminals	$C_T$	$V_R=1V, f=1MHz$			10	pF



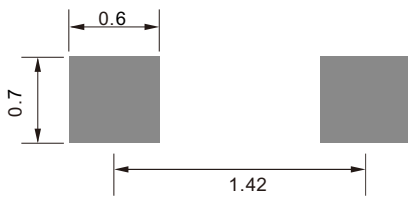
## SOD-523 PACKAGE OUTLINE

Unit: mm



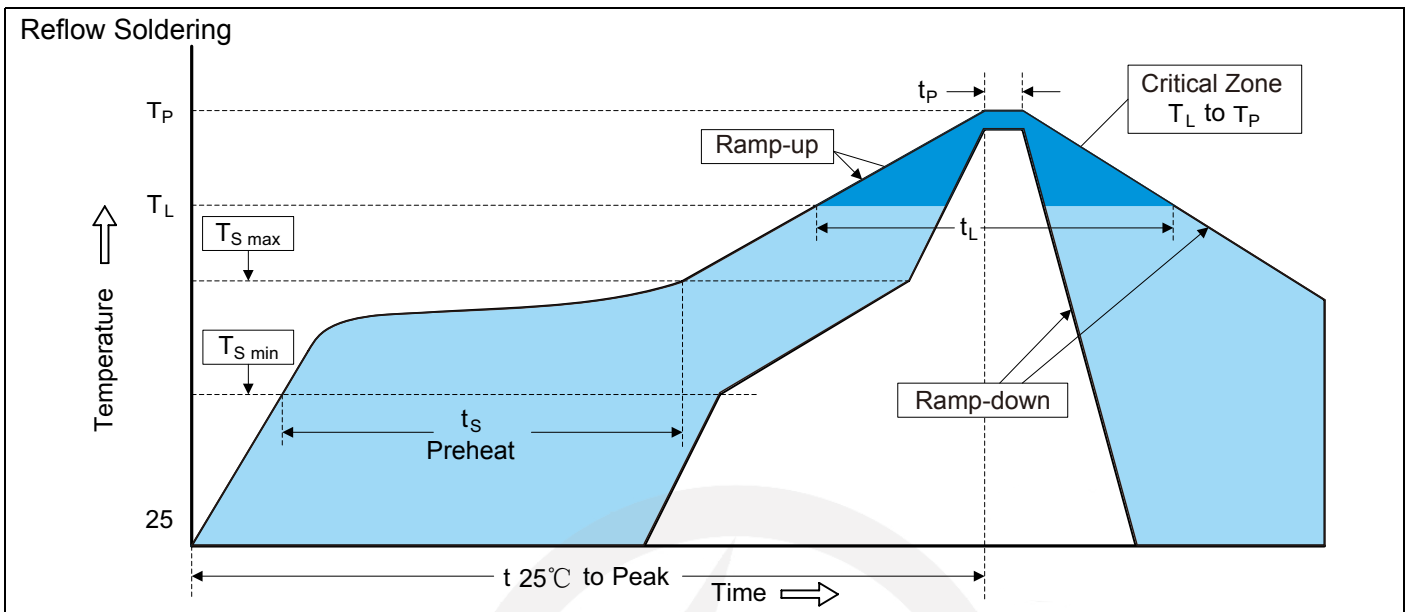
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.500	0.770
A1	0.500	0.700
b	0.250	0.380
c	0.070	0.200
D	0.700	0.900
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
θ	7° REF	

## Recommended Solder Pad Footprint



Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

**Recommended Soldering Conditions**

**Recommended Conditions**

Profile Feature	Pb-Free Assembly
Average ramp-up rate ( $T_L$ to $T_P$ )	3°C/second max.
Preheat -Temperature Min ( $T_{S\ min}$ ) -Temperature Max ( $T_{S\ max}$ ) -Time (min to max) ( $t_s$ )	150°C 200°C 60-180 seconds
$T_{S\ max}$ to $T_L$ -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature ( $T_L$ ) -Time ( $t_L$ )	217°C 60-150 seconds
Peak Temperature ( $T_P$ )	260°C
Time within 5°C of actual Peak Temperature ( $t_P$ )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

**7" Reel**


D2	$\Phi 178.0 \pm 2.0$
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D3	$\Phi 50.0 \text{ Min.}$
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D4	$\Phi 13.0 \pm 0.5$
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W1	$16.0 \pm 2.0$
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Quantity: 8000PCS