



# SDS142WA

Switching Diode

## Features

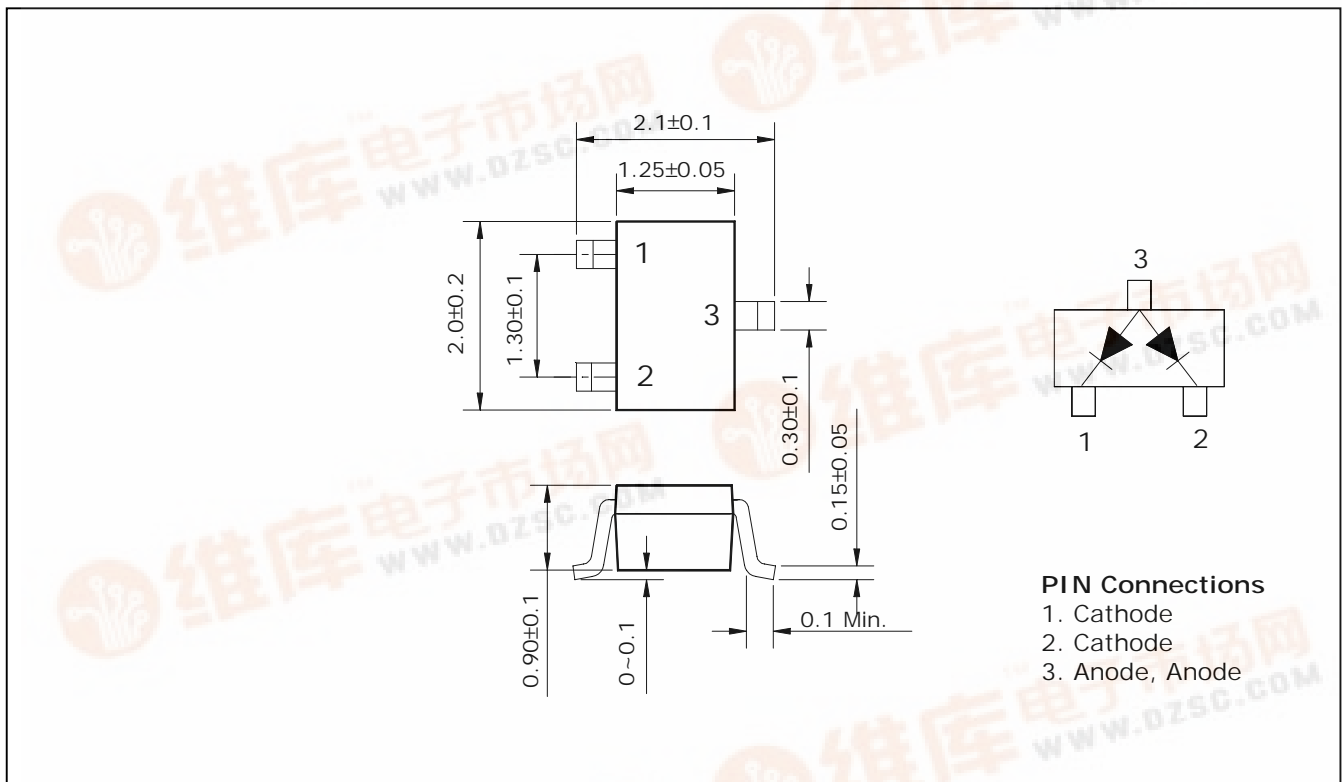
- SMD package : SOT-323
- Low forward voltage :  $V_F=0.9V$ (Typ.)
- Fast reverse recovery time :  $t_{rr}=1.6ns$ (Typ.)
- Small total capacitance :  $C_T=2.2pF$ (Typ.)
- Ultra high speed

## Ordering Information

Type No.	Marking	Package Code
SDS142WA	A2	SOT-323

## Outline Dimensions

unit : mm



## Absolute maximum ratings

Ta=25°C

Characteristic	Symbol	Ratings	Unit
Maximum(peak) reverse voltage	$V_{RM}$	85	V
Reverse voltage	$V_R$	80	V
Maximum(peak) forward current	$I_{FM}^*$	300	mA
Average forward current	$I_O^*$	100	mA
Surge current(10ms)	$I_{FSM}^*$	2	A
Power dissipation	$P_D$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ 150	°C

\* : Unit ratings. Total rating = Unit rating ×1.5

## Electrical Characteristics

Ta=25°C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage	$V_{F(1)}$	$I_F=1mA$	-	0.6	-	V
	$V_{F(2)}$	$I_F=10mA$	-	0.7	-	
	$V_{F(3)}$	$I_F=100mA$	-	0.9	1.2	
Reverse current	$I_R$	$V_R=80V$	-	-	0.5	μA
Total capacitance	$C_T$	$V_R=0, f=1MHz$	-	2.2	4.0	pF
Reverse recovery time	$t_{rr}$	$I_F=10mA$	-	1.6	4.0	ns

Electrical Characteristic Curves

Fig. 1  $I_F-V_F$

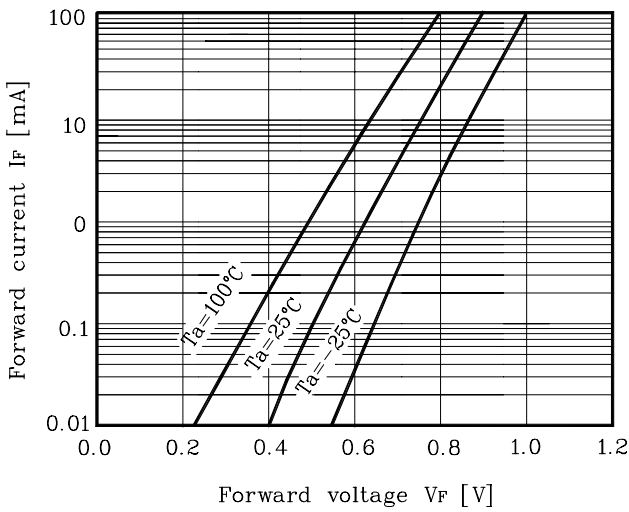


Fig. 2  $I_R-V_R$

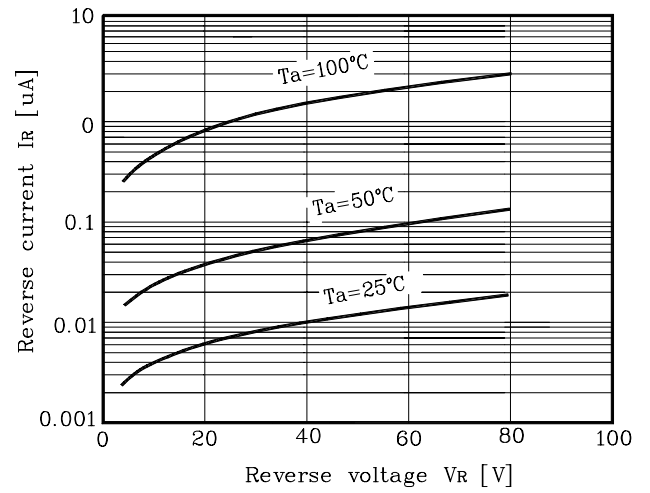


Fig. 3  $C_T-V_R$

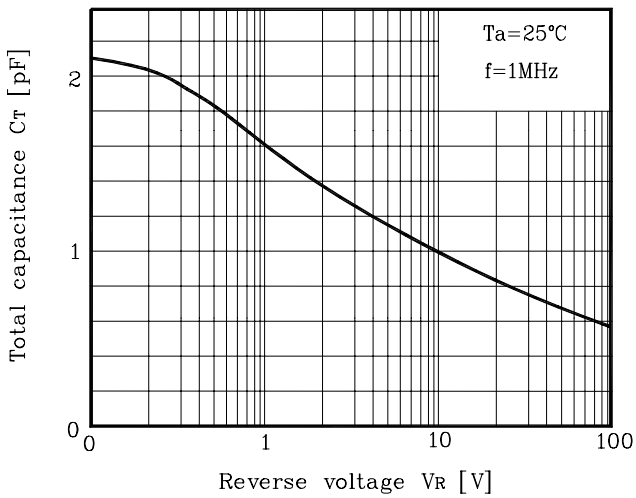


Fig. 4  $t_{rr}-I_F$

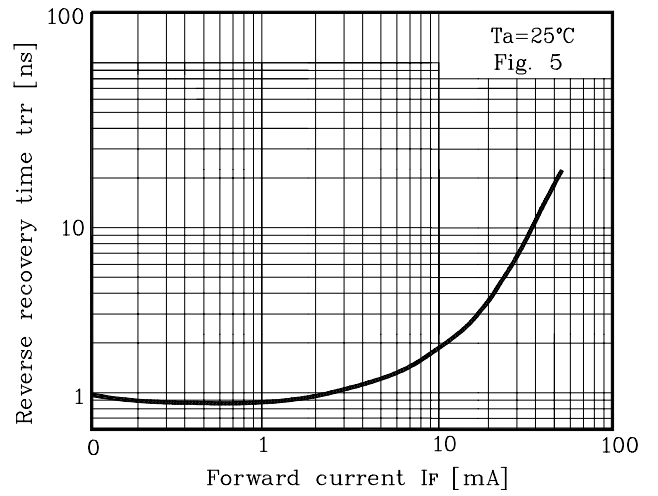


Fig. 5 Reverse recovery time( $t_{rr}$ ) test circuit

