

Features

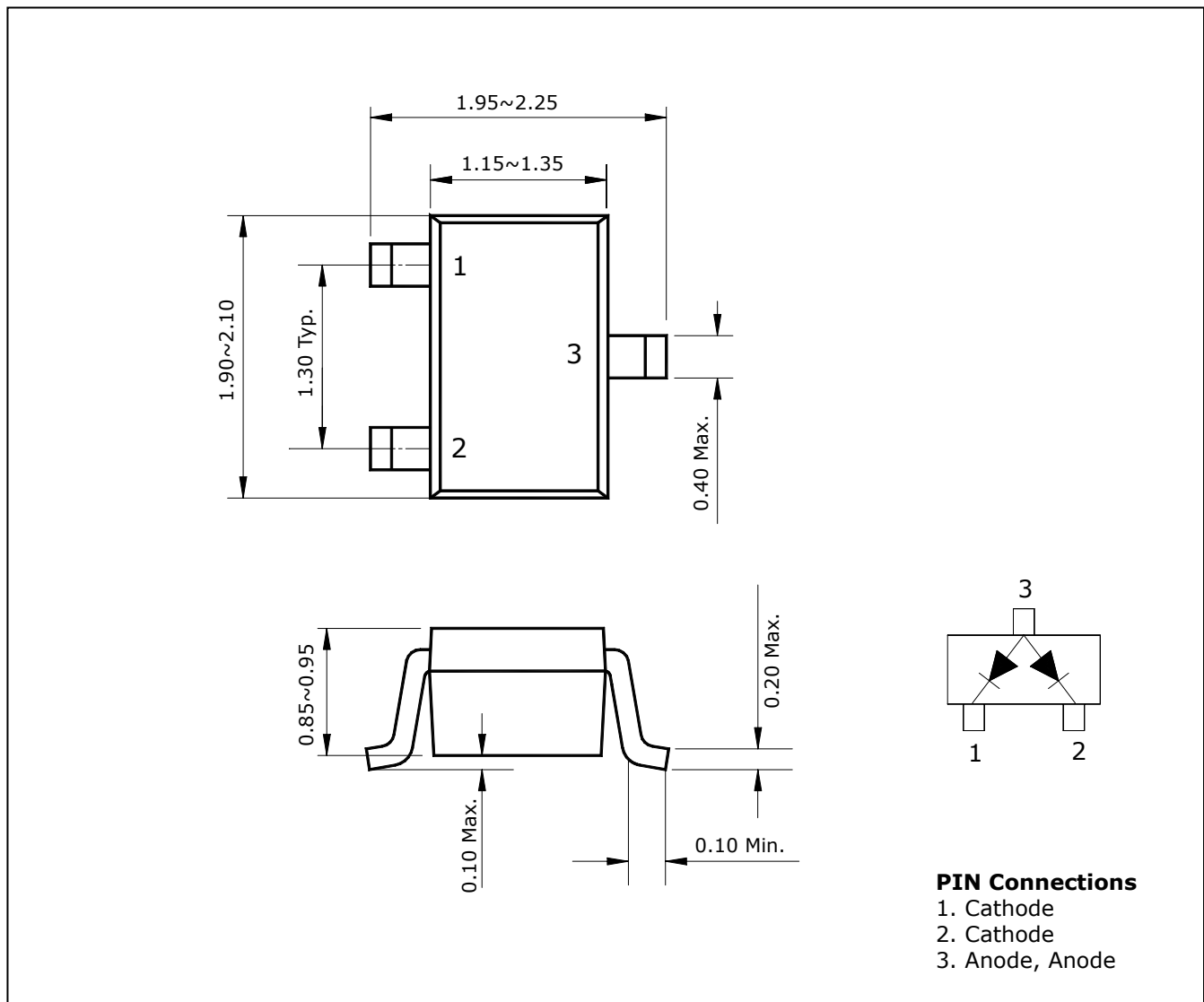
- SMD package : SOT-323
- Low forward voltage : $V_F=0.9V$ (Typ.)
- Fast reverse recovery time : $t_{rr}=1.6\text{ ns}$ (Typ.)
- Small total capacitance : $C_T=2.2\text{ pF}$ (Typ.)

Ordering Information

Type No.	Marking	Package Code
SDS142WA	A2	SOT-323

Outline Dimensions

unit : mm



Absolute maximum ratings

Ta=25°C

Characteristic	Symbol	Rating	Unit
Peak reverse voltage	V_{RM}	85	V
Reverse voltage	V_R	80	V
Peak forward current	I_{FM}^*	300	mA
Average forward current	I_O^*	100	mA
Peak forward surge current(10ms)	I_{FSM}^*	2	A
Power dissipation	P_D	150	mW
Junction temperature	T_j	150	°C
Storage temperature range	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	$V_{F(1)}$	$I_F=1\text{ mA}$	-	0.6	-	V
	$V_{F(2)}$	$I_F=10\text{ mA}$	-	0.7	-	
	$V_{F(3)}$	$I_F=100\text{ mA}$	-	0.9	1.2	
Reverse current	I_R	$V_R=80\text{V}$	-	-	0.5	μA
Total capacitance	C_T	$V_R=0, f=1\text{ MHz}$	-	2.2	4.0	pF
Reverse recovery time	t_{rr}	$I_F=10\text{ mA}$ (Fig. 5)	-	1.6	4.0	ns

Electrical Characteristic Curves

Fig. 1 I_F - V_F

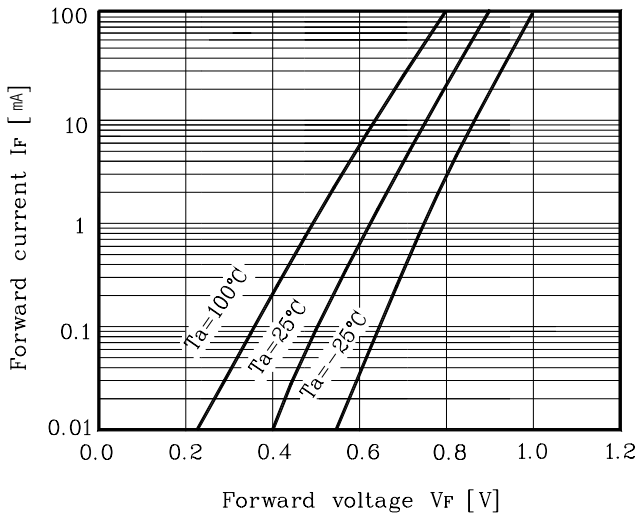


Fig. 2 I_R - V_R

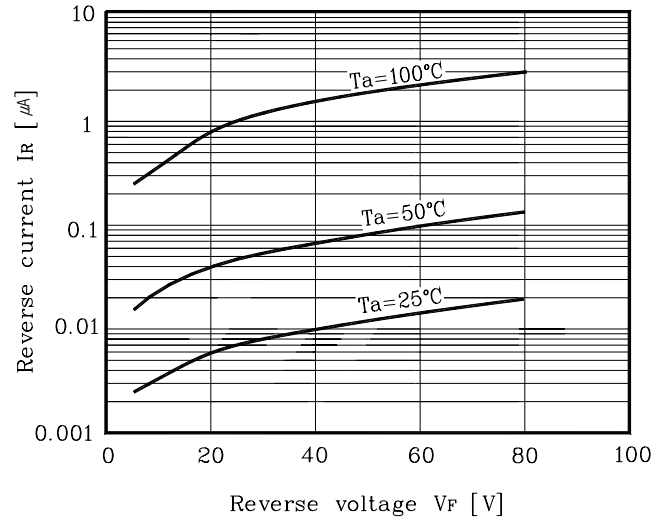


Fig. 3 C_T - V_R

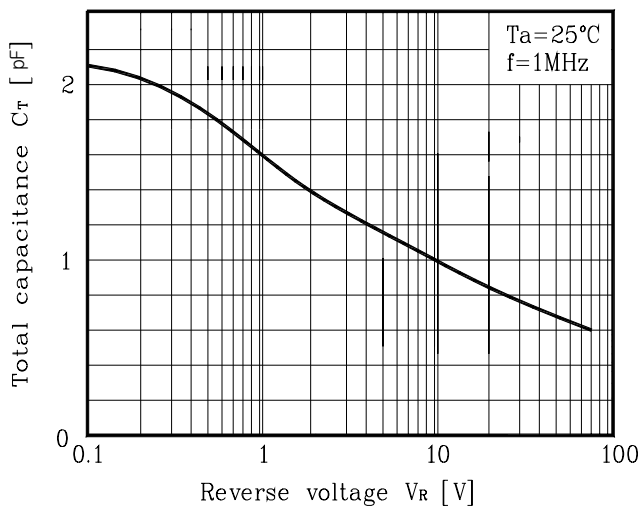


Fig. 4 t_{rr} - I_F

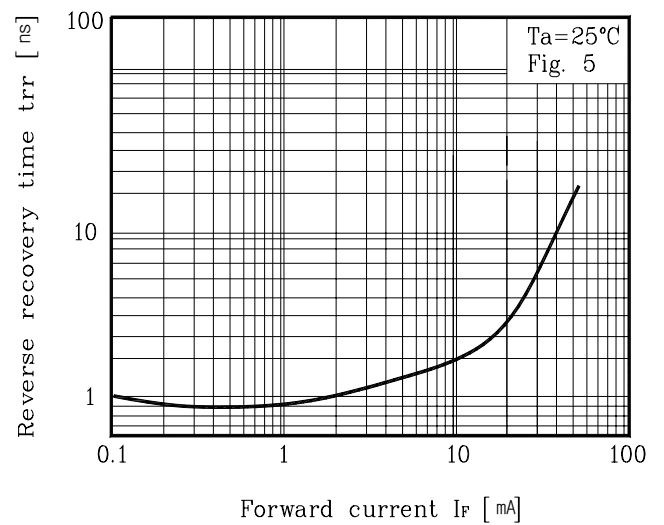
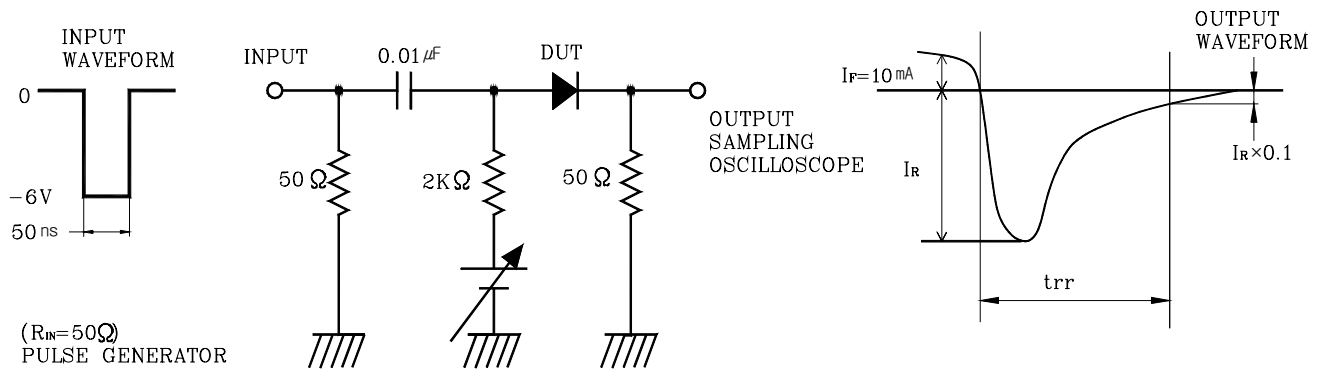


Fig. 5 Reverse recovery time(t_{rr}) test circuit



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