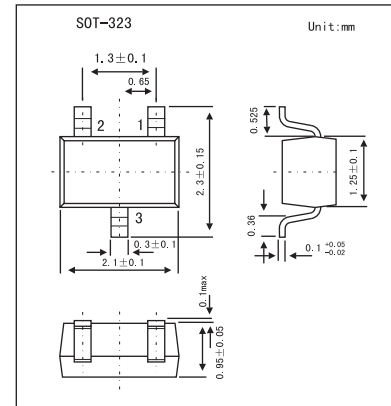


## ULTRA HIGH SPEED SWITCHING APPLICATIONS

## 1SS301

## ■ Features

- Low forward voltage:  $V_{F(3)} = 0.90 \text{ V(Typ)}$
- Fast reverse recovery time:  $t_{rr} = 1.6 \text{ ns (Typ)}$
- Small total capacitance:  $C_T = 0.9 \text{ pF(Typ)}$

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	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 (10 ms)	$I_{FSM}$	2(*)	A
Power dissipation	$P$	100	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

(\*) Unit rating.Total rating = Unit rating  $\times$  1.5

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward voltage	$V_{F(1)}$	$I_F = 1 \text{ mA}$		0.60		V
	$V_{F(2)}$	$I_F = 10 \text{ mA}$		0.72		
	$V_{F(3)}$	$I_F = 100 \text{ mA}$		0.90	1.2	
Reverse current	$I_{R(1)}$	$V_R = 30 \text{ V}$			0.1	$\mu\text{A}$
	$I_{R(2)}$	$V_R = 80 \text{ V}$			0.5	
Total capacitance	$C_t$	$V_R = 0, f = 1.0 \text{ MHz}$		0.9	3.0	pF
Reverse recovery time	$t_{rr}$	$I_F = 10 \text{ mA}$		1.6	4.0	ns

## ■ Marking

Marking	B3
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