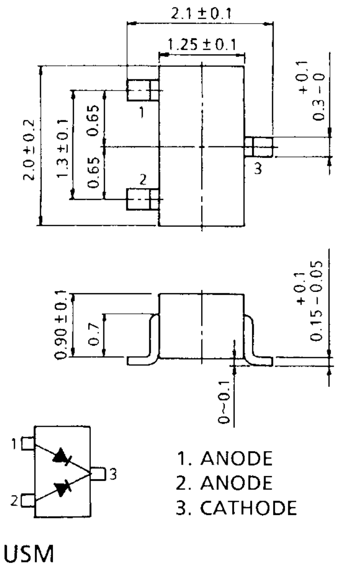
TOSHIBA Diode Silicon Epitaxial Planar Type

1SS301

Ultra High Speed Switching Applications

- Small package : SC-70
- Low forward voltage : $V_{F\ (3)} = 0.92$ V (typ.)
- Fast reverse recovery time : $t_{rr} = 1.6$ ns (typ.)
- Small total capacitance : $C_T = 0.9$ pF (typ.)

Unit: mm



JEDEC	—
JEITA	SC-70
TOSHIBA	1-2P1B

Weight: 0.006 g (typ.)

Maximum Ratings (Ta = 25°C)

Characteristic	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	°C
Storage temperature	T_{stg}	−55~125	°C

*: Unit rating. Total rating = unit rating × 1.5

Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_{F\ (1)}$	—	$I_F = 1$ mA	—	0.60	—	V
	$V_{F\ (2)}$	—	$I_F = 10$ mA	—	0.72	—	
	$V_{F\ (3)}$	—	$I_F = 100$ mA	—	0.90	1.20	
Reverse current	$I_{R\ (1)}$	—	$V_R = 30$ V	—	—	0.1	μA
	$I_{R\ (2)}$	—	$V_R = 80$ V	—	—	0.5	
Total capacitance	C_T	—	$V_R = 0$, f = 1 MHz	—	0.9	3.0	pF
Reverse recovery time	t_{rr}	—	$I_F = 10$ mA, Fig.1	—	1.6	4.0	ns