

TOSHIBA Diode Silicon Epitaxial Pin Type

# 1SV307

## VHF Tuner Band Switch Applications

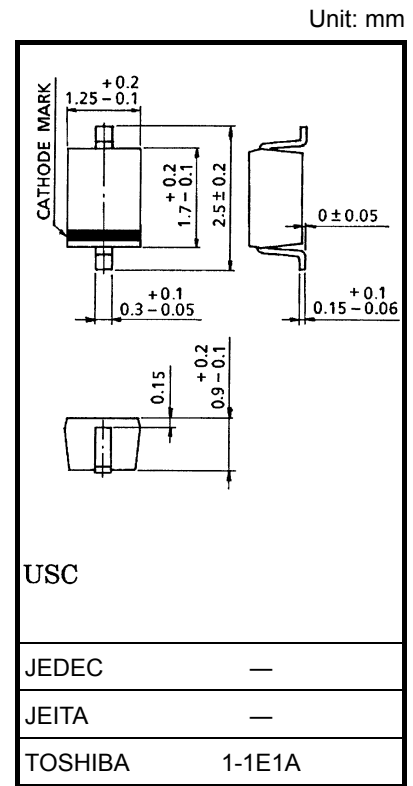
- Small package
- Low series resistance:  $r_s = 1.1 \Omega$  (typ.)
- Small total capacitance:  $C_T = 0.3 \text{ pF}$  (typ.)

### Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_R$	30	V
Forward current	$I_F$	50	mA
Junction temperature	$T_j$	125	°C
Storage temperature range	$T_{stg}$	-55 to 125	°C

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



Weight: 0.004 g (typ.)

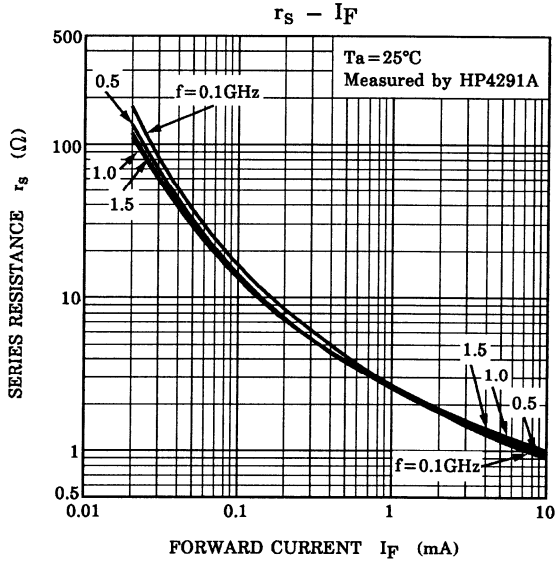
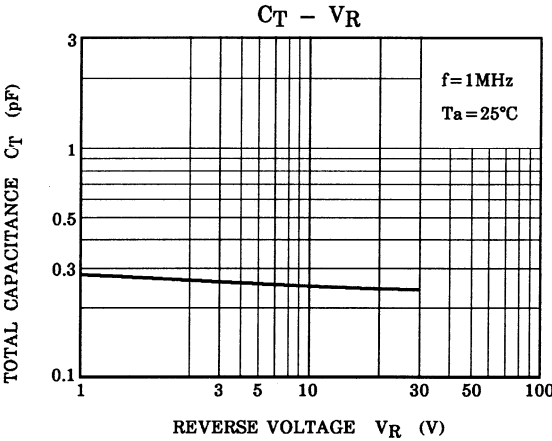
### Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	$V_R$	$I_R = 10 \mu\text{A}$	30	—	—	V
Reverse current	$I_R$	$V_R = 30 \text{ V}$	—	—	0.1	$\mu\text{A}$
Forward voltage	$V_F$	$I_F = 50 \text{ mA}$	—	0.95	1.0	V
Total capacitance	$C_T$	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	—	0.3	0.5	pF
Series resistance 1	$r_s (1)$	$I_F = 10 \text{ mA}, f = 100 \text{ MHz}$	—	1.0	1.5	$\Omega$
Series resistance 2	$r_s (2)$	$I_F = 10 \text{ mA}, f = 1.5 \text{ GHz}$	—	1.1	—	$\Omega$

### Marking



Start of commercial production  
1997-04



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