TOSHIBA Diode Silicon Epitaxial Pin Type

# 1SV307

### VHF Tuner Band Switch Applications

Unit: mm

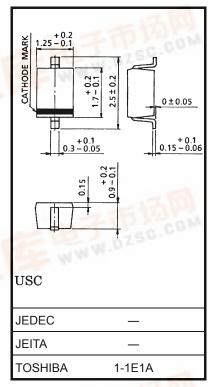
- Small package
- Low series resistance:  $r_s = 1.1 \Omega$  (typ.)
- Small total capacitance:  $C_T = 0.3 pF$  (typ.)

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

Characteristics	Symbol	Rating	Unit
Reverse voltage	V <sub>R</sub>	30	V
Forward current	lF	50	mA
Junction temperature	Tj	125	°C
Storage temperature range	T <sub>stg</sub>	-55~125	°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.)

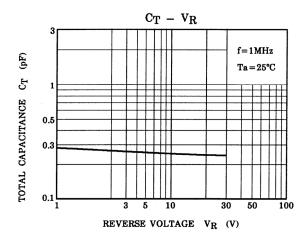
#### **Electrical Characteristics (Ta = 25°C)**

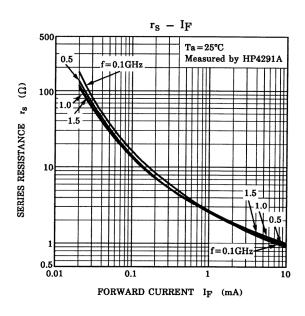
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Reverse voltage	$V_{R}$	I <sub>R</sub> = 10 μA	30	_	_	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 30 V	_	_	0.1	μА
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 50 mA	_	0.95	1.0	V
Total capacitance	C <sub>T</sub>	V <sub>R</sub> = 1 V, f = 1 MHz	1	0.3	0.5	pF
Series resistance 1	r <sub>s (1)</sub>	I <sub>F</sub> = 10 mA, f = 100 MHz		1.0	1.5	Ω
Series resistance 2	r <sub>s (2)</sub>	I <sub>F</sub> = 10 mA, f = 1.5 GHz		1.1	_	Ω

#### Marking









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20070701-EN GENERAL

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