TOSHIBA Diode Silicon Epitaxial Pin Type

# 1SV172

## VHF~UHF Band RF Attenuator Applications

• Useful for small size tuner

• Small total capacitance: CT = 0.25 pF (typ.)

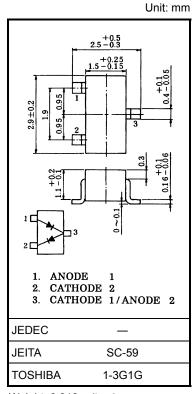
• Low series resistance:  $r_s = 3 \Omega$  (typ.)

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

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_{R}$	50	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).



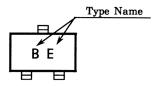
Weight: 0.013 g (typ.)

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

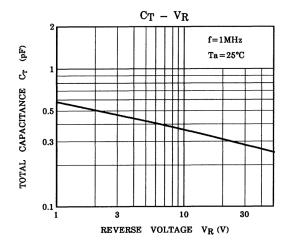
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Reverse voltage	V <sub>R</sub>	$I_R = 10 \mu A$	50	_	_	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 50 V	_	_	0.1	μА
Forward voltage	VF	I <sub>F</sub> = 50 mA	_	0.95	_	V
Total capacitance (Note)	C <sub>T</sub>	V <sub>R</sub> = 50 V, f = 1 MHz	_	0.25	_	pF
Series resistance	r <sub>S</sub>	I <sub>F</sub> = 10 mA, f = 100 MHz	_	3	_	Ω

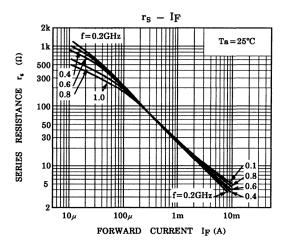
Note: C<sub>T</sub> is measured by 3 terminal method with capacitance bridge.

#### Marking



1 2007-11-01





2 2007-11-01

#### **RESTRICTIONS ON PRODUCT USE**

20070701-EN GENERAL

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