

TOSHIBA Diode Silicon Epitaxial Planar Type

# 1SS381

## VHF Tuner Band Switch Applications

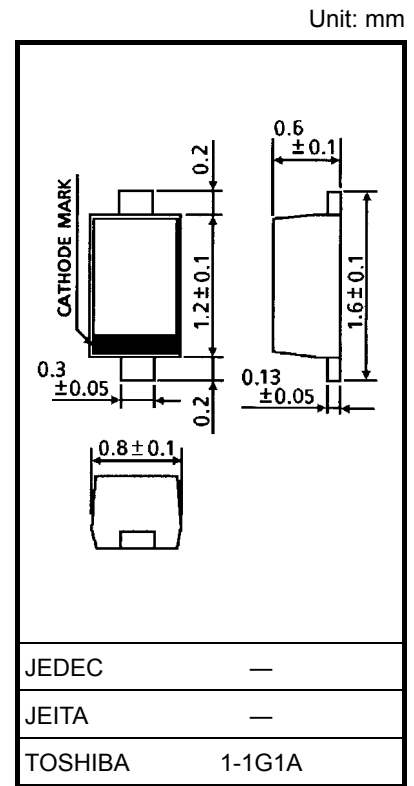
- Small package
- Small total capacitance:  $C_T = 1.2 \text{ pF}$  (max)
- Low series resistance:  $r_s = 0.6 \text{ } \Omega$  (typ.)

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_R$	30	V
Forward current	$I_F$	100	mA
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to 125	$^\circ\text{C}$

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: 0.0014 g (typ.)

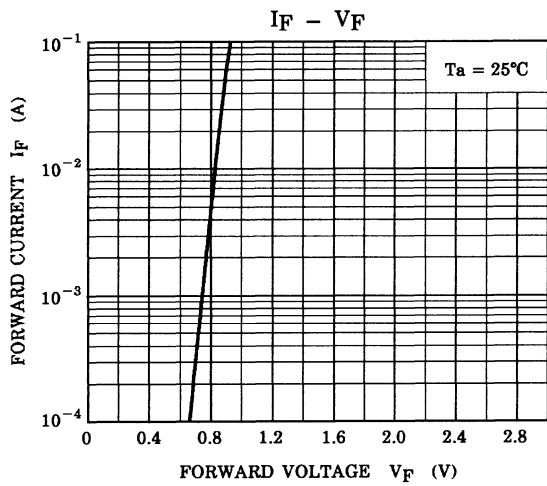
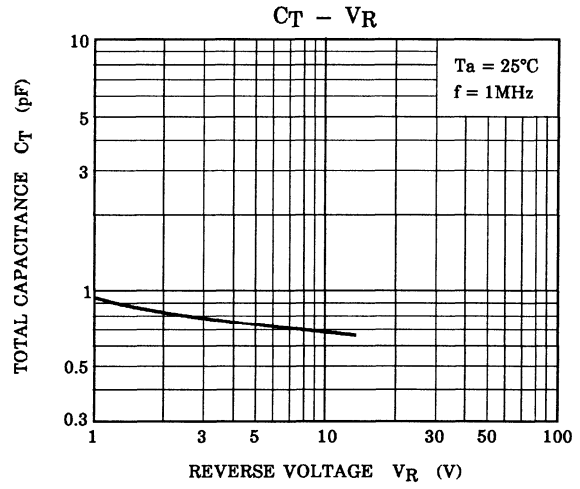
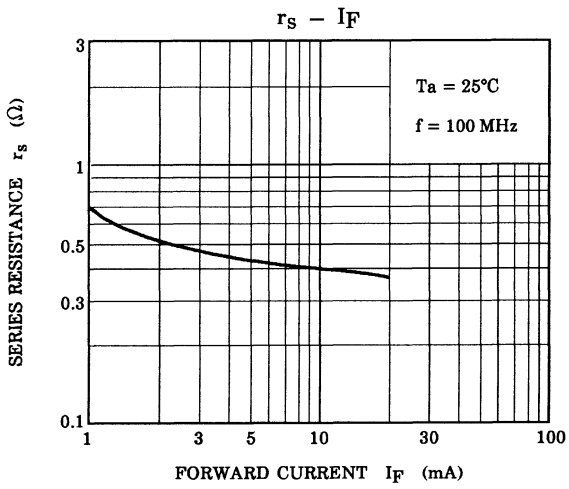
### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F$	$I_F = 2 \text{ mA}$	—	—	0.85	V
Reverse current	$I_R$	$V_R = 15 \text{ V}$	—	—	0.1	$\mu\text{A}$
Reverse voltage	$V_R$	$I_R = 1 \text{ } \mu\text{A}$	30	—	—	V
Total capacitance	$C_T$	$V_R = 6 \text{ V}, f = 1 \text{ MHz}$	—	0.7	1.2	pF
Series resistance	$r_s$	$I_F = 2 \text{ mA}, f = 100 \text{ MHz}$	—	0.6	0.9	$\Omega$

### Marking



Start of commercial production  
1994-07



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