TOSHIBA Diode Silicon Epitaxial PIN Type

# JDP2S05CT

### UHF~VHF Band RF Switch Applications

- Suitable for reducing set's size as a result from enabling high-density mounting due to 2-pin small packages.
- Low series resistance:  $r_S = 1.5 \Omega$  (typ.)
- Low capacitance: C<sub>T</sub> = 0.32 pF (typ.)

# Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_{R}$	20	V
Forward current	lF	50	mA
Junction temperature	Tj	150	°C
Storage temperature range	T <sub>stg</sub>	<b>−55~150</b>	°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.

Weight: 0.00077 g(Typ.)

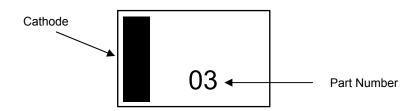
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

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

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Reverse voltage	V <sub>R</sub>	I <sub>R</sub> = 0.1 μA	20	_	_	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 20 V			0.1	μΑ
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 50 mA	_	_	0.94	V
Capacitance(Note2)	C <sub>T</sub>	V <sub>R</sub> = 1 V, f = 1 MHz	0.21	0.32	0.42	pF
Series resistance	r <sub>s</sub>	I <sub>F</sub> = 1 mA, f = 100 MHz		1.5	2.2	Ω

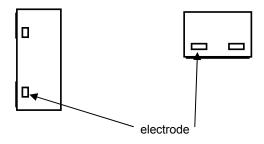
Note1: Signal level when capacitance is measured.  $V_{sig}$  = 100 mVrms

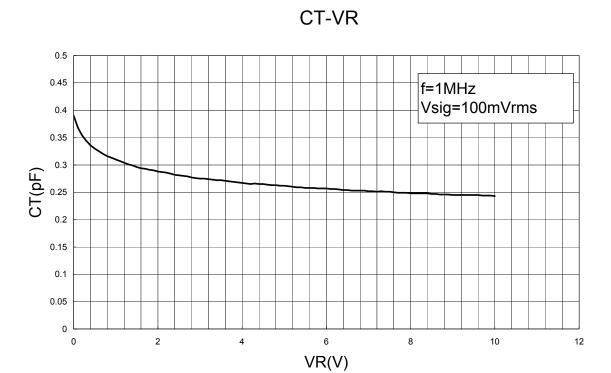
#### Marking



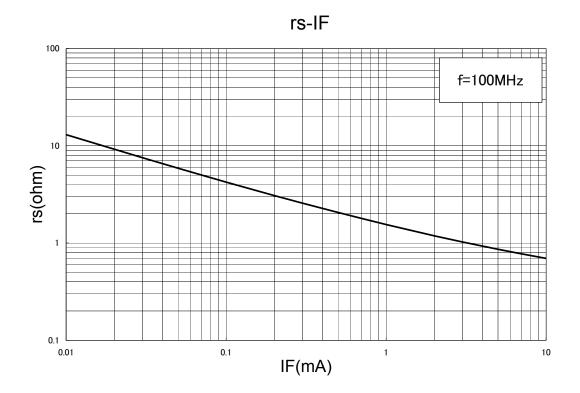
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Note2: This package has 2 exposed electrodes on each side because of the manufacturing process





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20070701-EN GENERAL

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