

TOSHIBA Diode Silicon Epitaxial PIN Type

# JDP2S12CR

## UHF~VHF Band RF Switch Applications

- Suitable for high-density board assembly due to the use of a small surface-mount package, S-FLAT
- Low series resistance:  $r_s = 0.4 \Omega$  (typ.)
- Low capacitance:  $C_T = 1.0$  pF (typ.)

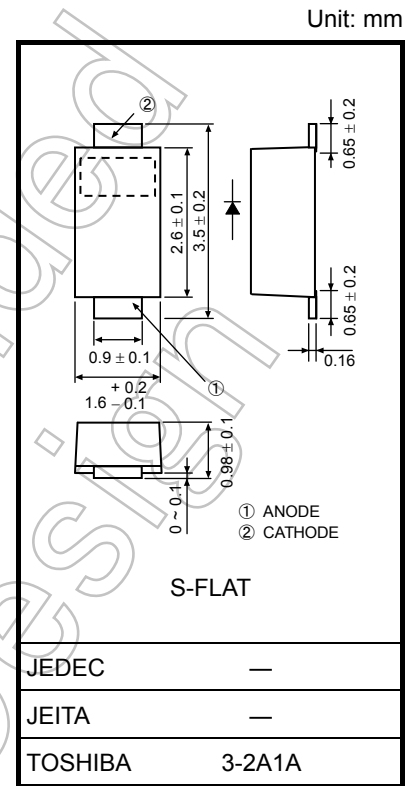
## Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_R$	180	V
Forward current	$I_F$	1	A
Power dissipation	$P_D$ (Note 1)	1	W
Junction temperature	$T_j$	175	°C
Storage temperature range	$T_{stg}$	-55 to 175	°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).

Note 1:  $T_c = 25^\circ\text{C}$  (When mounted on a 110.0mm×30.0mm×1.0mm glass epoxy PCB)



Weight: 13 mg

## Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse current	$I_R$	$V_R = 50$ V	—	—	10	$\mu\text{A}$
Forward voltage	$V_F$	$I_F = 50$ mA	—	0.8	1.0	V
Capacitance	$C_T$	$V_R = 40$ V, $f = 1$ MHz	—	1.0	1.3	pF
Series resistance	$r_s$	$I_F = 10$ mA, $f = 100$ MHz	—	0.4	0.7	$\Omega$

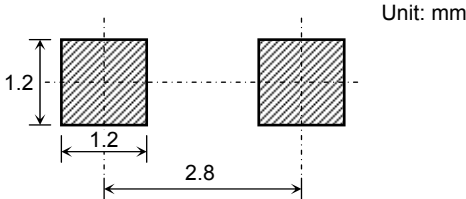
Note: Signal level when capacitance is measured.  $V_{sig} = 100$  mV<sub>rms</sub>

## Marking

Abbreviation Code	Part No.
P1	JDP2S12CR

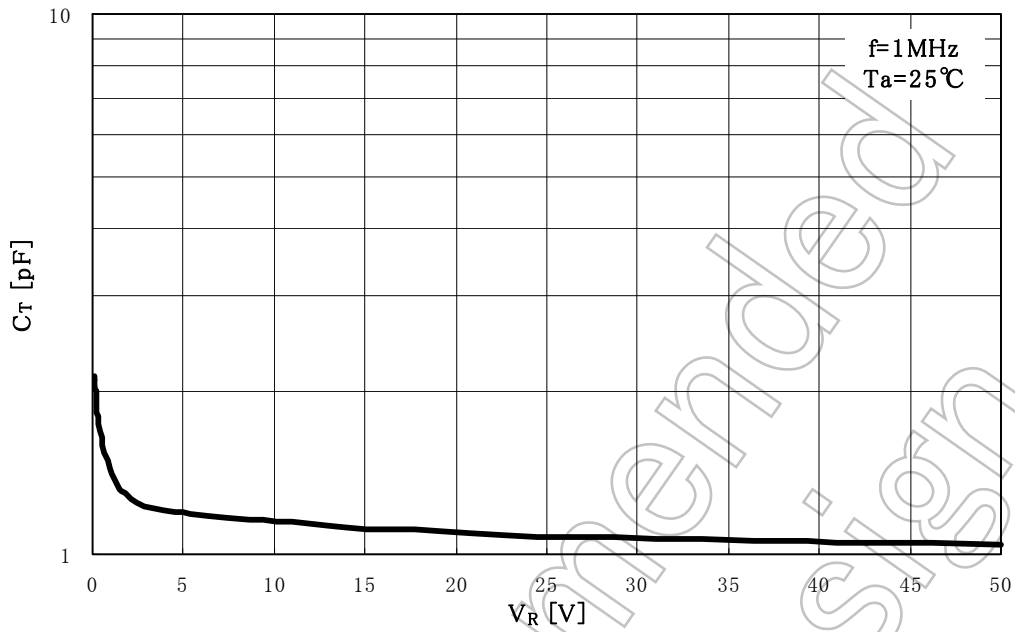
Start of commercial production  
2010-03

**Standard Soldering Pad**

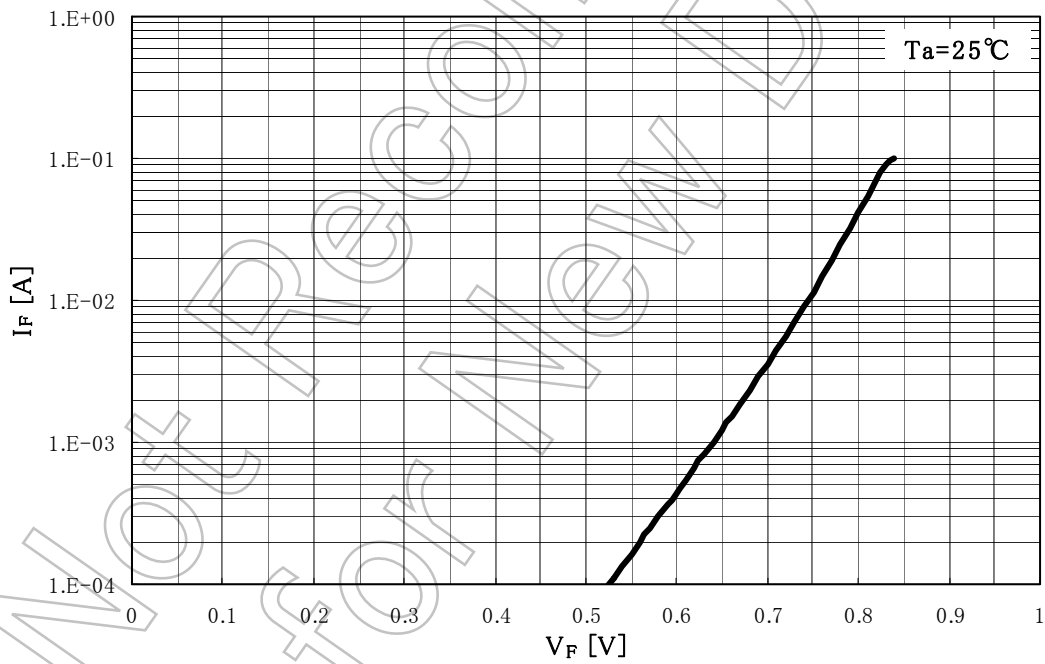


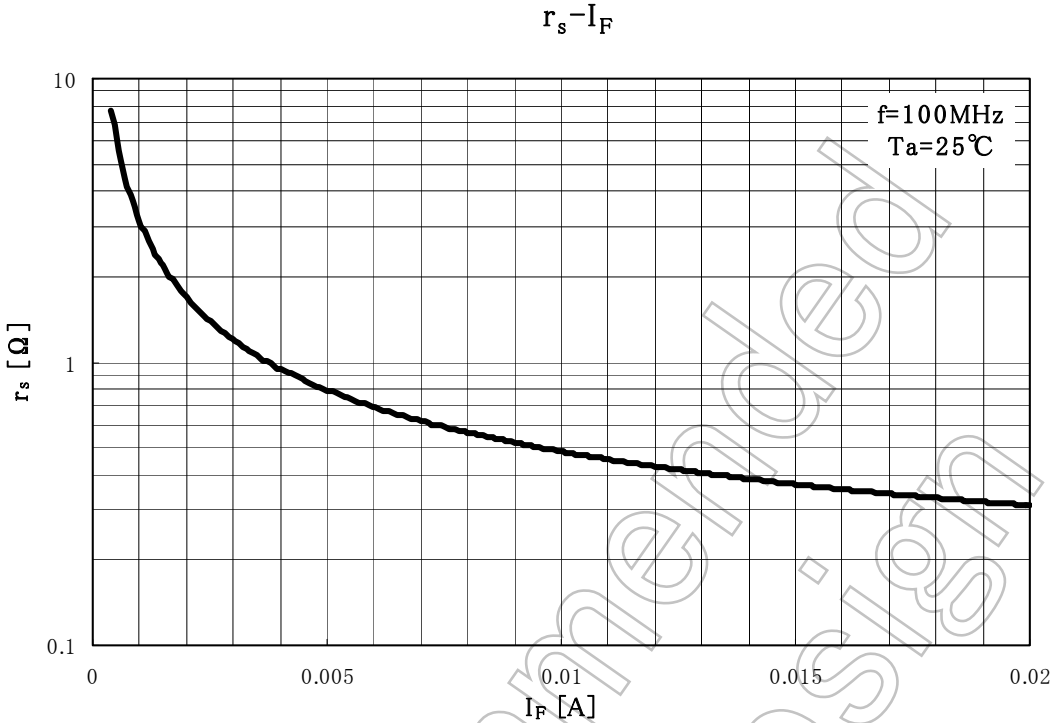
Not Recommended for New Design

$C_T-V_R$



$I_F-V_F$





Not Recommended for New Design

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