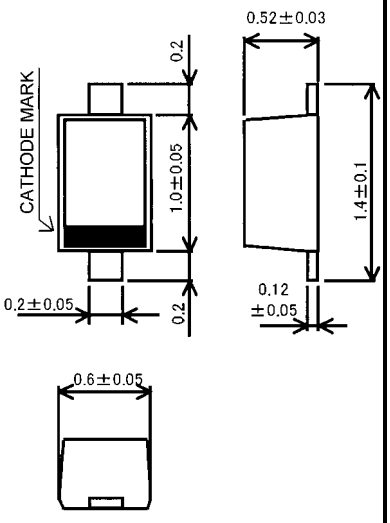
TOSHIBA Diode Silicon Epitaxial Planar Type

JDV2S05S

VCO for UHF band

Unit: mm

- High capacitance ratio: C_{1V}/C_{4V} = 1.9 (typ.)
- Low series resistance: r_s = 0.3 Ω (typ.)
- This device is suitable for use in a small-size tuner.



sESC

JEDEC	—
JEITA	—
TOSHIBA	1-1K1A

Weight: 0.0011 g (typ.)

Maximum Ratings (Ta = 25°C)

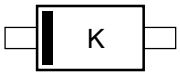
Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	10	V
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	−55~150	°C

Electrical Characteristics (Ta = 25°C)

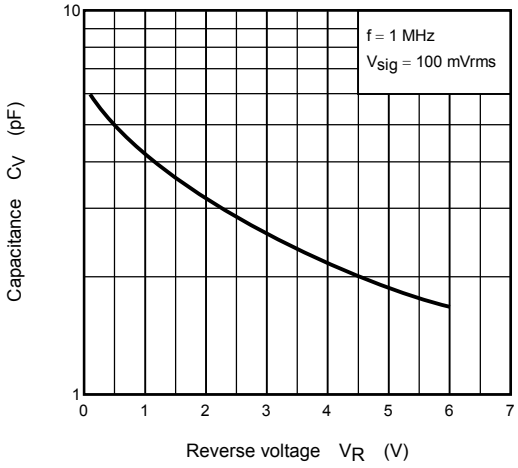
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	I_R = 1 μA	10	—	—	V
Reverse current	I_R	V_R = 10 V	—	—	3	nA
Capacitance	C_{1V}	V_R = 1 V, f = 1 MHz	3.85	4.2	4.55	pF
	C_{4V}	V_R = 4 V, f = 1 MHz	1.94	2.2	2.48	
Capacitance ratio	C_{1V}/C_{4V}	—	1.7	1.9	—	—
Series resistance	r_s	V_R = 1 V, f = 470 MHz	—	0.3	0.5	Ω

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

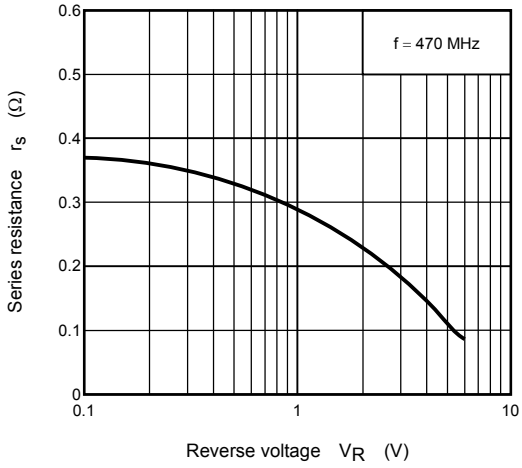
Marking



$C_V - V_R$


10
1
0
1
2
3
4
5
6
7
f = 1 MHz
Vsig = 100 mVrms
Capacitance CV (pF)
Reverse voltage VR (V)

$r_s - V_R$


0.6
0.5
0.4
0.3
0.2
0.1
0
0.1
1
10
f = 470 MHz
Series resistance rs (Ω)
Reverse voltage VR (V)

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000707EAA

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