TOSHIBA Diode Silicon Epitaxial Planar Type

JDV3C11

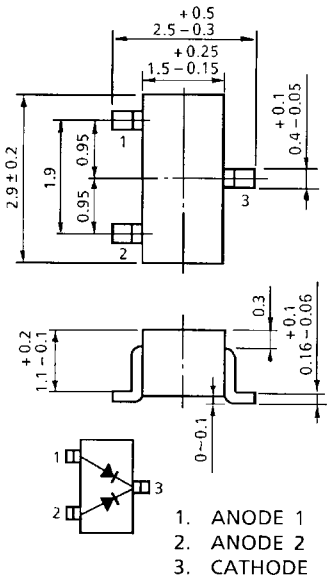
Electronic Tuning Applications of FM Receivers

- High capacitance ratio: $C_{1V}/C_{4.5V}$ = 5.3 (typ.)
- Low series resistance: r_s = 0.4 Ω (typ.)
- Two diodes in a single package

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	20	V
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°C

Unit: mm



JEDEC	—
JEITA	SC-59
TOSHIBA	1-3G1F

Weight: 0.013 g (typ.)

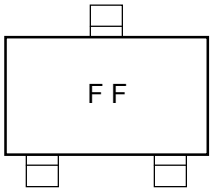
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	I_R = 1 μA	20	—	—	V
Reverse current	I_R	V_R = 20 V	—	—	10	nA
Capacitance	C_{1V}	V_R = 1 V, f = 1 MHz	65.8	—	74.2	pF
	$C_{4.5V}$	V_R = 4.5 V, f = 1 MHz	11.5	—	14.3	
Capacitance ratio	$C_{1V}/C_{4.5V}$	—	5	5.3	—	—
Series resistance	r_s	V_R = 1.5 V, f = 100 MHz	—	0.4	0.6	Ω

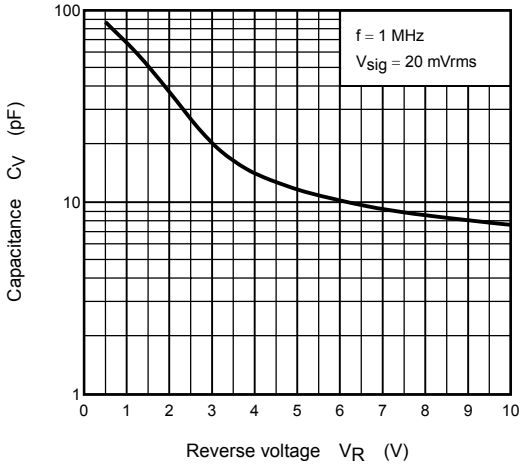
Note 1: Signal level when capacitance is measured. V_{sig} = 20 mVrms

Note 2: Electrical characteristics shown in the above are between anode 1 and cathode, between anode 2 and cathode.

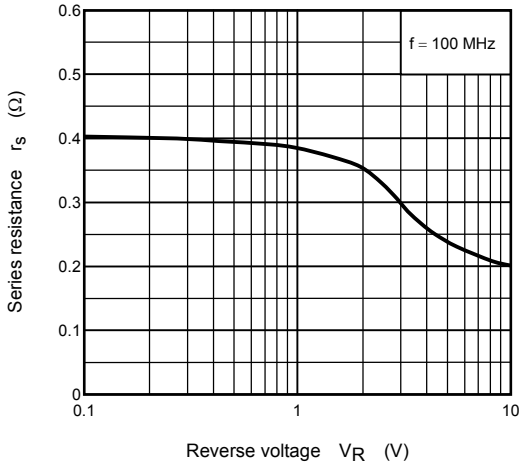
Marking



$C_V - V_R$


f = 1 MHz
Vsig = 20 mVrms
Capacitance CV (pF)
100
10
1
0 1 2 3 4 5 6 7 8 9 10
Reverse voltage VR (V)

$r_s - V_R$


f = 100 MHz
Series resistance rs (Ω)
0.6
0.5
0.4
0.3
0.2
0.1
0
0.1 1 10
Reverse voltage VR (V)

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000707EAA

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