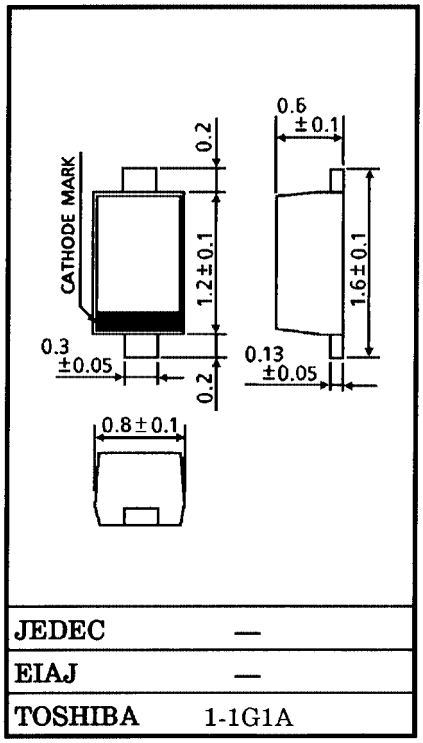
TOSHIBA Diode Silicon Epitaxial Planar Type

J D V 2 S 1 4 E

Useful for VCO/TCXO

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	1-1G1A

Weight: 0.0014 g

- Small Package
- High Capacitance Ratio: $C_{1V}/C_{2.5V}$ = 2.15 (typ.)
- Low Series Resistance : r_s = 0.4 Ω (typ.)

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	10	V
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°C

000707EAA1

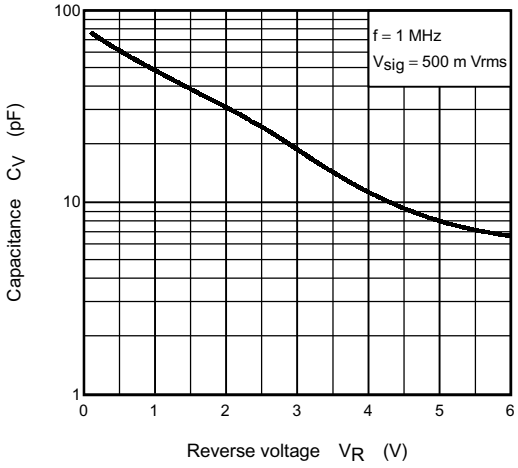
Electrical Characteristics (Ta = 25°C)

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	$C_{0.5V}$	V_R = 0.5 V, f = 1 MHz	56.3	—	64.7	pF
	C_{1V}	V_R = 1 V, f = 1 MHz	44	—	49.5	
	$C_{2.5V}$	V_R = 2.5 V, f = 1 MHz	19	—	26.5	
	C_{4V}	V_R = 4 V, f = 1 MHz	9.2	—	12	
Capacitance ratio	$C_{0.5V}/C_{1V}$	—	1.25	—	1.35	—
	$C_{1V}/C_{2.5V}$	—	1.99	2.15	2.3	
Series resistance	r_s	V_R = 4 V, f = 100 MHz	—	0.4	0.8	Ω

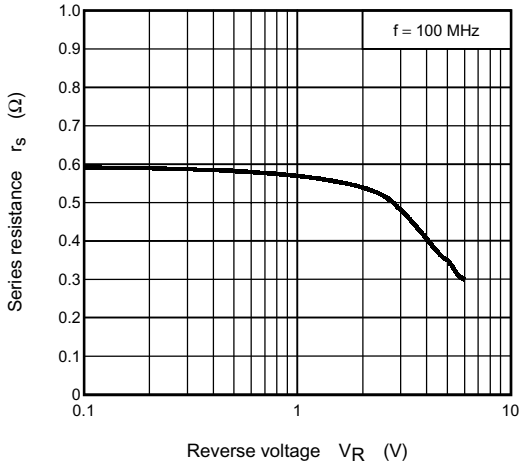
Note: Signal level when capacitance is measured. V_{sig} = 500 mV_{rms}

Marking

$C_V - V_R$


100
10
1
0
1
2
3
4
5
6
f = 1 MHz
Vsig = 500 m Vrms
Capacitance CV (pF)
Reverse voltage VR (V)

$r_s - V_R$


1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.1
1
10
f = 100 MHz
Series resistance rs (Ω)
Reverse voltage VR (V)