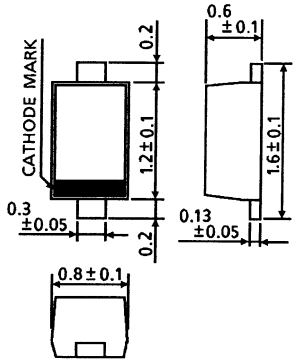
TOSHIBA Diode Silicon Epitaxial Planar Type

1SV325

TCXO/VCO

Unit: mm



ESC

JEDEC	—
JEITA	—
TOSHIBA	1-1G1A

Weight: 0.0014 g (typ.)

- High capacitance ratio: $C_{1\ V}/C_{4\ V}$ = 4.3 (typ.)
- Low series resistance: r_s = 0.4 Ω (typ.)
- Useful for small size tuner.

Absolute 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

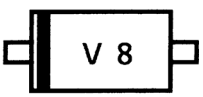
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

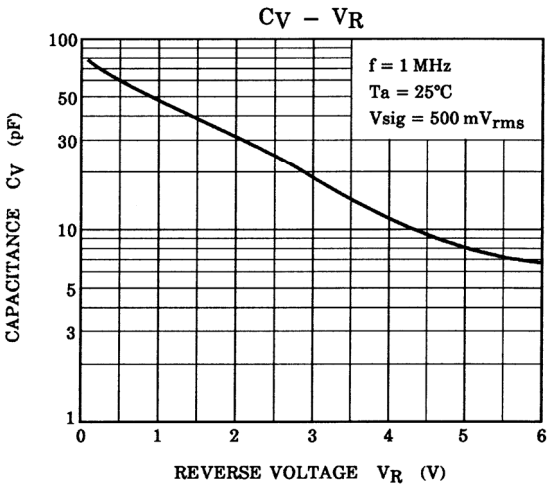
Electrical Characteristics (Ta = 25°C)

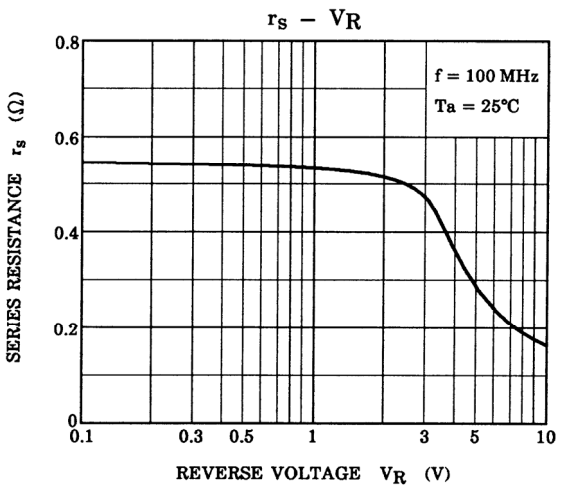
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	I_R = 1 μA	10	—	—	V
Reverse current	I_R	V_R = 10 V	—	—	3	nA
Capacitance	$C_{1\ V}$	V_R = 1 V, f = 1 MHz	44	—	49.5	pF
Capacitance	$C_{4\ V}$	V_R = 4 V, f = 1 MHz	9.2	—	12	pF
Capacitance ratio	$C_{1\ V}/C_{4\ V}$	—	4	4.3	—	—
Series resistance	r_s	V_R = 4 V, f = 100 MHz	—	0.4	0.8	Ω

Note: Signal level when capacitance is measured: Vsig = 500 mVfms

Marking




$C_V - V_R$
f = 1 MHz
Ta = 25°C
Vsig = 500 mV_{rms}
CAPACITANCE C_V (pF)
100
50
30
10
5
3
1
0
1
2
3
4
5
6
REVERSE VOLTAGE V_R (V)


$r_S - V_R$
f = 100 MHz
Ta = 25°C
SERIES RESISTANCE r_S (Ω)
0.8
0.6
0.4
0.2
0
0.1
0.3
0.5
1
3
5
10
REVERSE VOLTAGE V_R (V)

RESTRICTIONS ON PRODUCT USE

20070701-EN GENERAL

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