TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV287

UHF SHF Tuning

Unit: mm

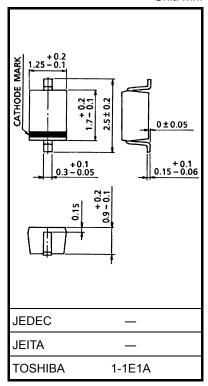
- High capacitance ratio: $C_2 \text{ V/C}_{25} \text{ V} = 7.6 \text{ (typ.)}$
- Low series resistance: $r_s = 1.9 \Omega$ (typ.)
- Excellent C-V characteristics, and small tracking error.
- Useful for small size tuner.

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_{R}	30	V
Peak reverse voltage	V_{RM}	35 ($R_L = 10 \text{ k}\Omega$)	٧
Junction temperature	Tj	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).



Weight: 0.004 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Reverse voltage	V_{R}	$I_R = 1 \mu A$	30	_	_	V
Reverse current	I _R	V _R = 28 V	_	_	10	nA
Capacitance	C _{2 V}	V _R = 2 V, f = 1 MHz	4.2	_	5.7	pF
Capacitance	C _{25 V}	V _R = 25 V, f = 1 MHz	0.53	_	0.68	pF
Capacitance ratio	C _{2 V} /C _{25 V}	_	7.3	7.7	_	_
Series resistance	r _S	V _R = 1 V, f = 470 MHz	_	1.9	2.3	Ω

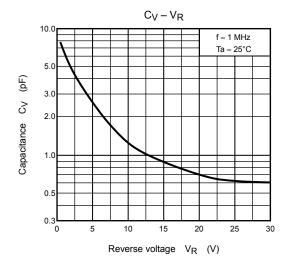
Note: Available in matched group for capacitance to 6%.

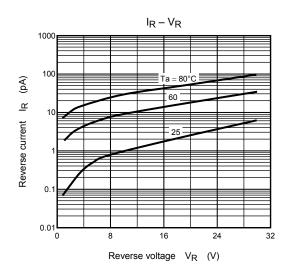
$$\frac{C \text{ (max)} - C \text{ (min)}}{C \text{ (min)}} \leq 0.06$$

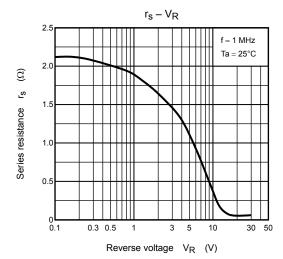
Marking

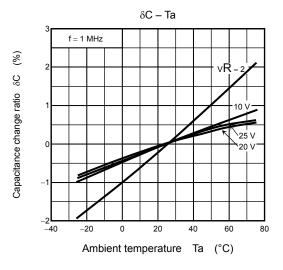


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