

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	1SV270TPH3F
Manufacturer:	Toshiba Semiconductor and Storage
Package:	Please confirm with sales
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/toshiba-semiconductor-and-storage/1sv270tph3f.html>

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Website: <https://antrexco.com>

Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV270

VCO for UHF Band Radio

Unit: mm

- High capacitance ratio: $C_{1V} / C_{4V} = 2.0$ (typ.)
- Low series resistance: $r_s = 0.28 \Omega$ (typ.)
- Small package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	10	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 125	$^\circ\text{C}$

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).

JEDEC	—
JEITA	—
TOSHIBA	1-1E1A

Weight: 0.004 g (typ.)

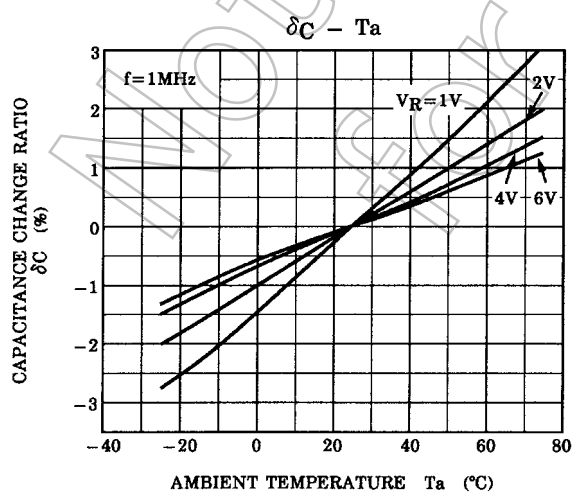
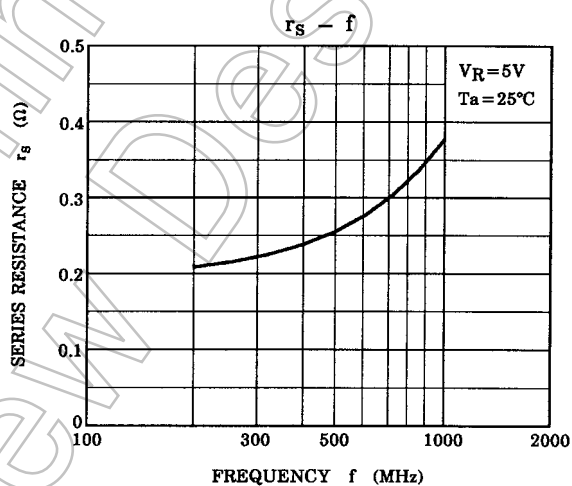
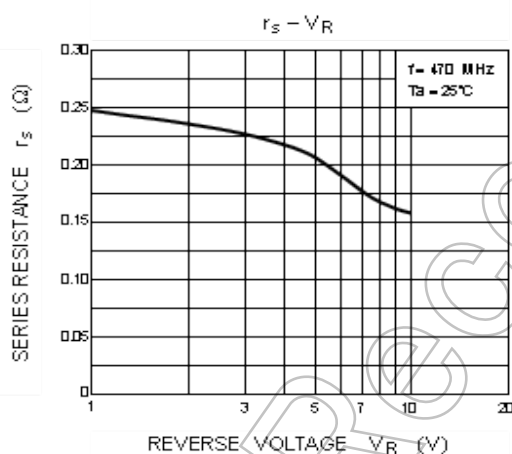
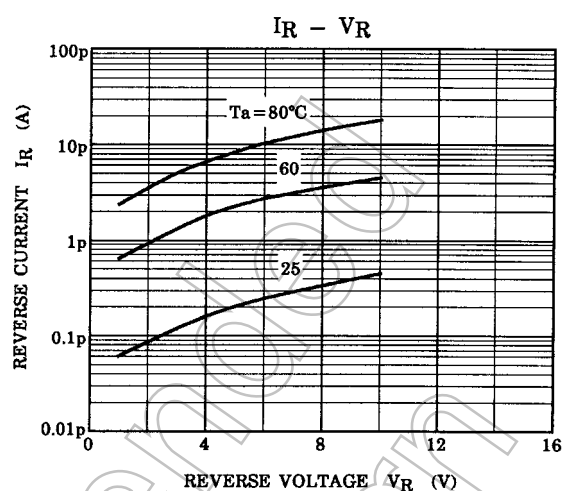
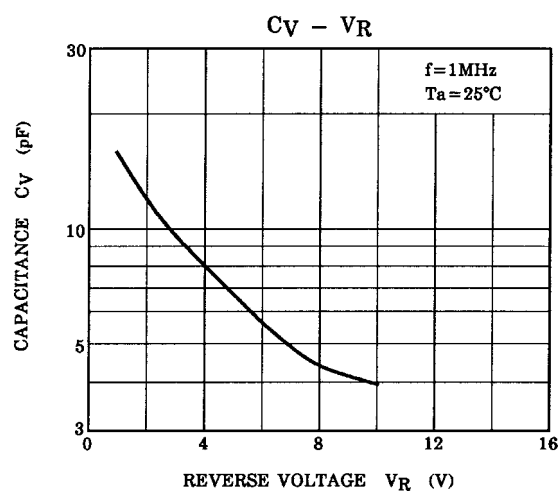
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 1 \mu\text{A}$	10	—	—	V
Reverse current	I_R	$V_R = 10 \text{ V}$	—	—	3	nA
Capacitance	C_{1V}	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	15	16	17	pF
Capacitance	C_{4V}	$V_R = 4 \text{ V}, f = 1 \text{ MHz}$	7.3	8.0	8.7	pF
Capacitance ratio	C_{1V} / C_{4V}	—	1.8	2.0	—	—
Series resistance	r_s	$V_R = 1 \text{ V}, f = 470 \text{ MHz}$	—	0.28	0.5	Ω

Marking



Start of commercial production
1993-02



Note:
$$\delta C = \frac{C(T_a) - C(25)}{C(25)} \times 100 \text{ (%)}$$

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