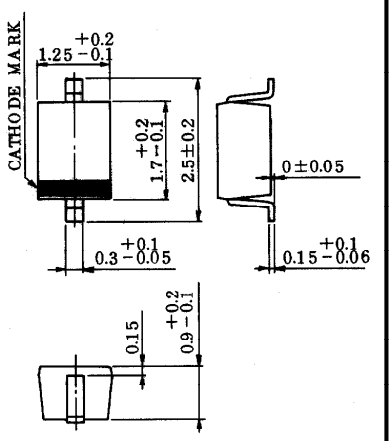
TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

1SV276

VCO FOR UHF BAND RADIO

Unit in mm

- High Capacitance Ratio : $C_{1V}/C_{4V}=2.0$ (Typ.)
- Low Series Resistance : $r_s=0.22\Omega$ (Typ.)
- Small Package



JEDEC	—
EIAJ	—
TOSHIBA	1-1E1A

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	V_R	10	V
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	−55~125	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	V_R	$I_R=1\mu A$	10	—	—	V
Reverse Current	I_R	$V_R=10V$	—	—	3	nA
Capacitance	C_{1V}	$V_R=1V$, f=1MHz	15	16	17	pF
Capacitance	C_{4V}	$V_R=4V$, f=1MHz	7.0	8.0	8.5	pF
Capacitance Ratio	C_{1V}/C_{4V}	—	1.8	2.0	—	—
Series Resistance	r_s	$V_R=1V$, f=470MHz	—	0.22	0.4	Ω

MARKING

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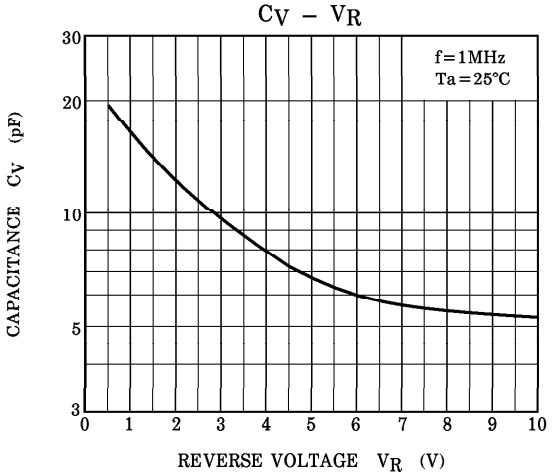
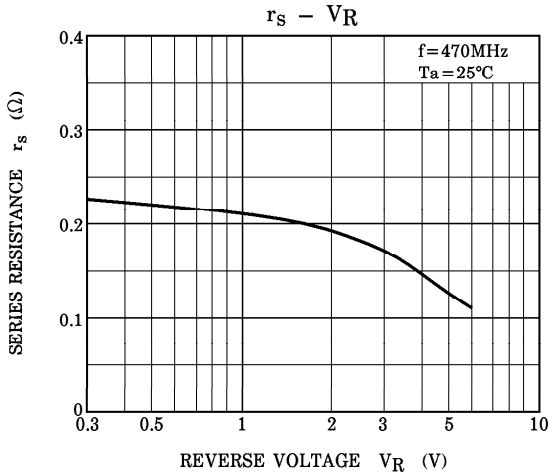

$C_V - V_R$
f=1MHz
Ta=25°C
CAPACITANCE C_V (pF)
30
20
10
5
3
0 1 2 3 4 5 6 7 8 9 10
REVERSE VOLTAGE V_R (V)


$r_S - V_R$
f=470MHz
Ta=25°C
SERIES RESISTANCE r_S (Ω)
0.4
0.3
0.2
0.1
0
0.3 0.5 1 2 3 5 10
REVERSE VOLTAGE V_R (V)