

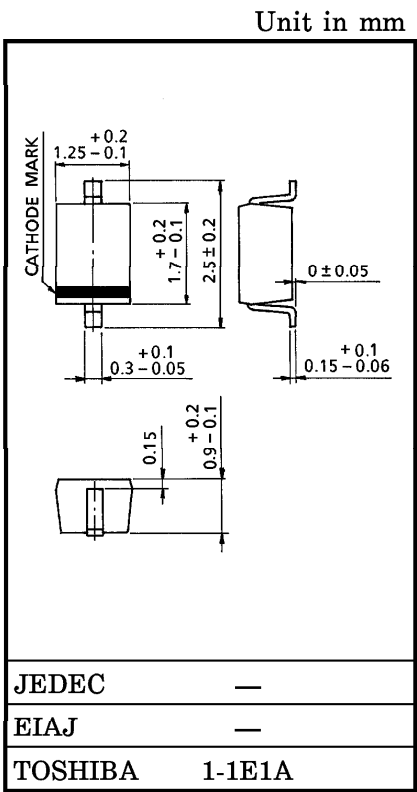
1SV270

VCO FOR UHF BAND RADIO

- High Capacitance Ratio :  $C1V / C4V = 2.0$  (Typ.)
- Low Series Resistance :  $r_s = 0.28\Omega$  (Typ.)
- Small Package

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



Weight : 0.004g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

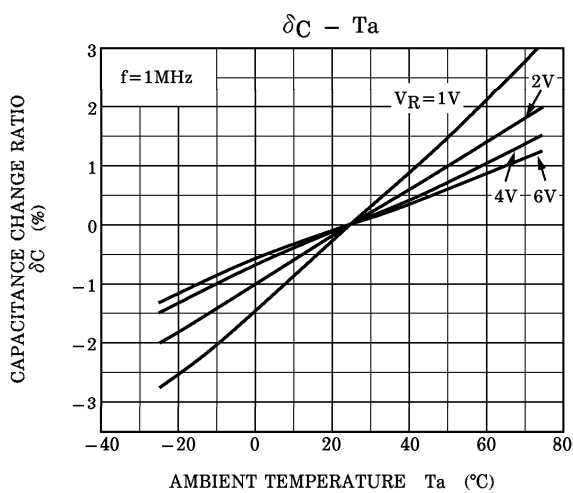
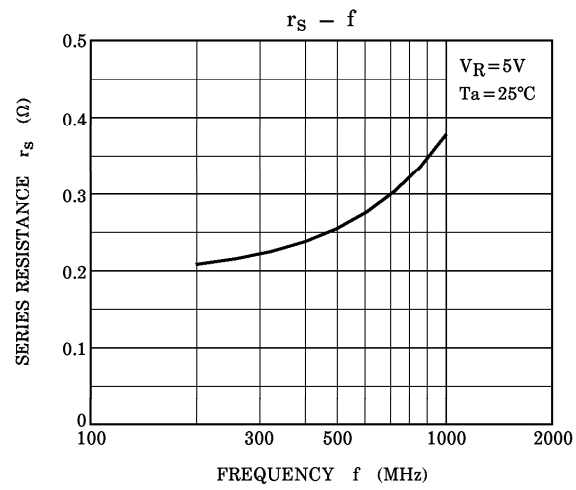
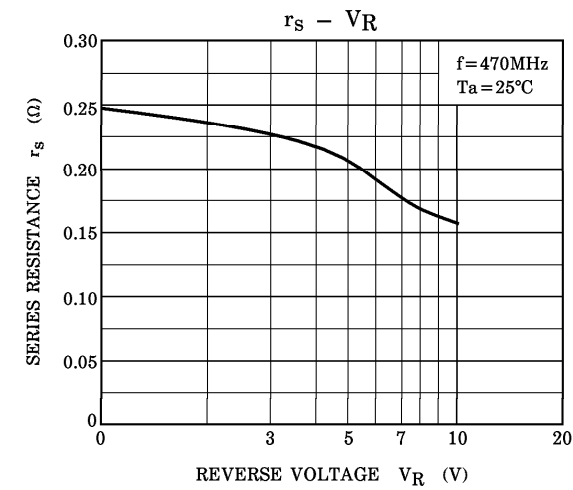
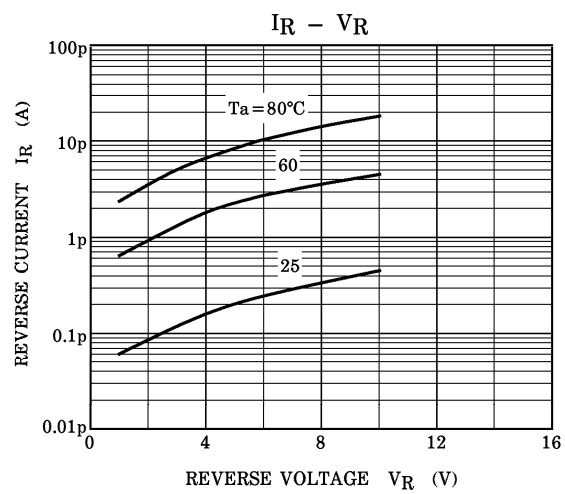
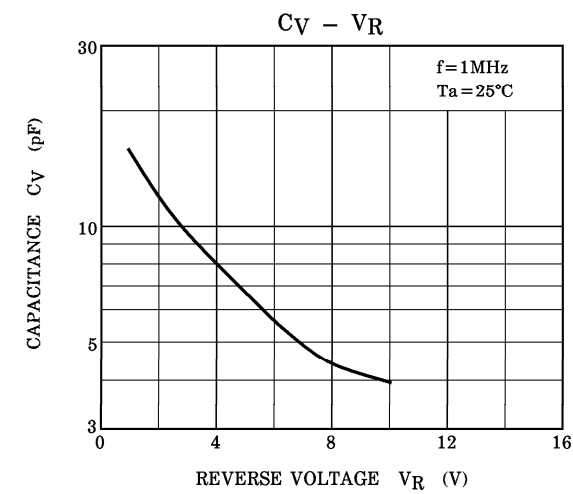
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	$V_R$	$I_R = 1\mu A$	10	—	—	V
Reverse Current	$I_R$	$V_R = 10V$	—	—	3	nA
Capacitance	$C1V$	$V_R = 1V, f = 1MHz$	15	16	17	pF
Capacitance	$C4V$	$V_R = 4V, f = 1MHz$	7.3	8.0	8.7	pF
Capacitance Ratio	$C1V / C4V$	—	1.8	2.0	—	—
Series Resistance	$r_s$	$V_R = 1V, f = 470MHz$	—	0.28	0.5	$\Omega$

MARKING



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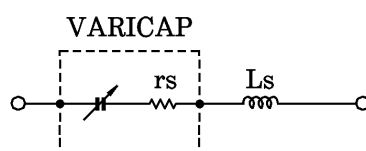


## SPICE PARAMETER

SPICE MODEL : BERKLEY SPICE.2G.6 DIODE MODEL  
 DATA FORMAT : MODEL FORMAT  
 SPICE SYMBOL :  $I_S$  (A),  $R_S$  ( $\Omega$ ),  $N$  (-),  $CJ0$  (F),  $V_J$  (V),  $M$  (-),  $B_V$  (V),  $I_{BV}$  (A)  
 FREQUENCY RANGE :  $f = 0.1 \sim 3$  GHz  
 REVERSE VOLTAGE RANGE :  $V_R = 1 \sim 4$  V  
 AMBIENT TEMPERATURE :  $T_a = 27^\circ\text{C}$

## PARAMETER

$I_S = 6.929\text{E} - 16$   
 $N = 1.017$   
 $B_V = 10$   
 $I_{BV} = 1.00\text{E} - 04$   
 $R_S = 0.28$   
 $CJ0 = 2.303\text{E} - 11$   
 $V_J = 2.637$   
 $M = 1.181$   
 -----  
 $L_s = 1.00\text{E} - 09$



- (Note 1) : These parameters from  $I_S$  to  $M$  mean die characteristic.  
 Actually device has lead inductance so  $L_s$  is necessary for simulation.  
 And please use default value except above parameters.
- (Note 2) :  $R_S$  shows the value at the condition of  $V_R = 1$  V and  $f = 470$  MHz.  
 If another value is needed, please refer to  $R_S - V_R$  curve in this data sheets.