

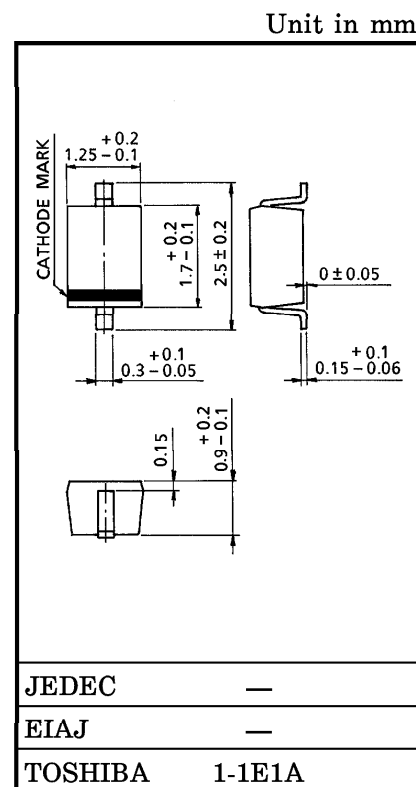
1SV269

CATV TUNING

- High Capacitance Ratio : $C_{2V} / C_{25V} = 11.5$ (Typ.)
- Low Series Resistance : $r_s = 0.55 \Omega$ (Typ.)
- Excellent C-V Characteristics, and Small Tracking Error.
- Small Package

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	V_R	34	V
Peak Reverse Voltage	V_{RM}	36 ($R_L = 10k\Omega$)	V
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55 \sim 125$	$^\circ\text{C}$



Weight : 0.004g

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	V_R	$I_R = 1\mu\text{A}$	34	—	—	V
Reverse Current	I_R	$V_R = 32\text{V}$	—	—	10	nA
Capacitance	C_{2V}	$V_R = 2\text{V}, f = 1\text{MHz}$	29	31.5	34	pF
Capacitance	C_{25V}	$V_R = 25\text{V}, f = 1\text{MHz}$	2.5	2.75	2.9	pF
Capacitance Ratio	C_{2V} / C_{25V}	—	11.0	11.5	—	—
Capacitance Ratio	C_{25V} / C_{28V}	—	1.03	1.05	—	—
Series Resistance	r_s	$V_R = 5\text{V}, f = 470\text{MHz}$	—	0.55	0.7	Ω

(Note 1) : Available in matched group for capacitance to 2.0%.

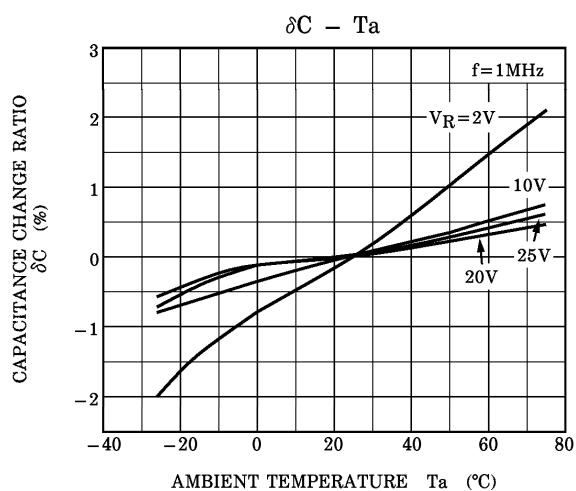
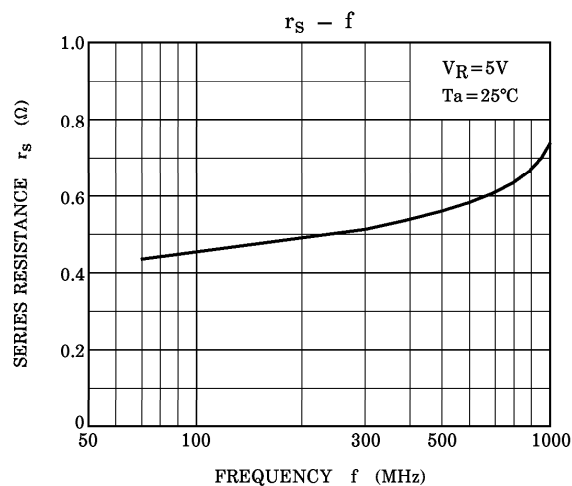
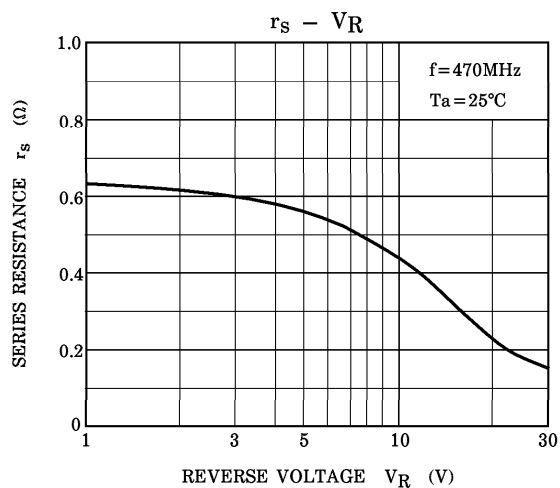
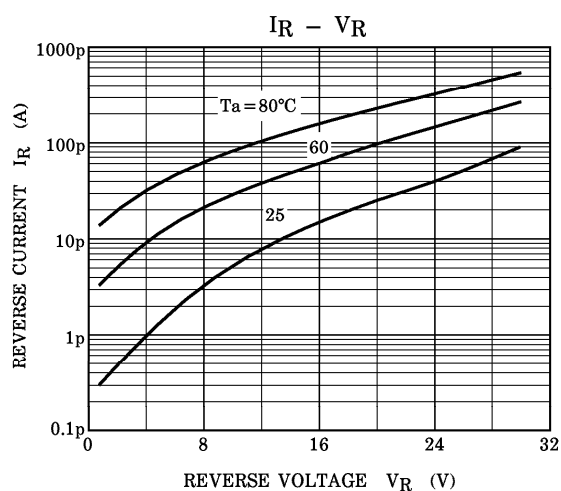
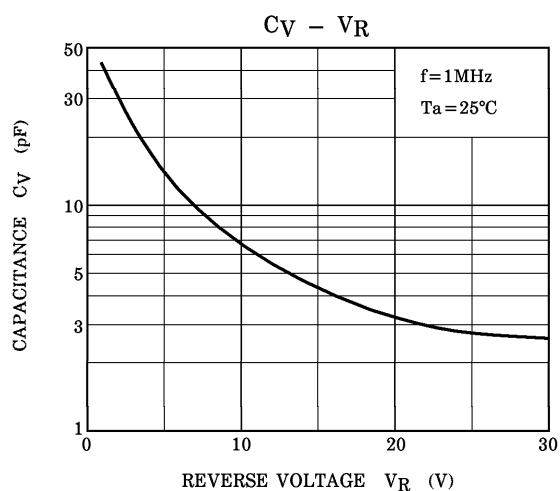
MARKING

$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.02 \quad (V_R = 2 \sim 25\text{V})$$



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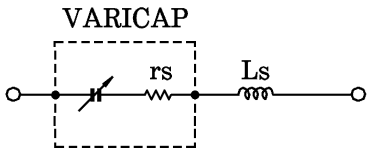
SPICE PARAMETER

SPICE MODEL	: BERKLEY SPICE.2G.6 DIODE MODEL
DATA FORMAT	: MODEL FORMAT
SPICE SYMBOL	: I_S (A), R_S (Ω), N (-), $CJ0$ (F), V_J (V), M (-), B_V (V), I_{BV} (A)
FREQUENCY RANGE	: $f = 0.1 \sim 3$ GHz
REVERSE VOLTAGE RANGE	: $V_R = 2 \sim 25$ V
AMBIENT TEMPERATURE	: $T_a = 27^\circ\text{C}$

PARAMETER

I_S	=	6.685E - 15
N	=	1.069
B_V	=	34
I_{BV}	=	1.00E - 06
R_S	=	0.55
$CJ0$	=	6.847E - 11
V_J	=	2.378
M	=	1.356

L_s	=	1.00E - 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 $V_R = 5$ V and $f = 470$ MHz.
If another value is needed, please refer to $R_S - V_R$ curve in this data sheets.