

9097250 TOSHIBA (DISCRETE/OPTO)

67C 09358 D T-07-19

Silicon Epitaxial Planar Type

Variable Capacitance Diode

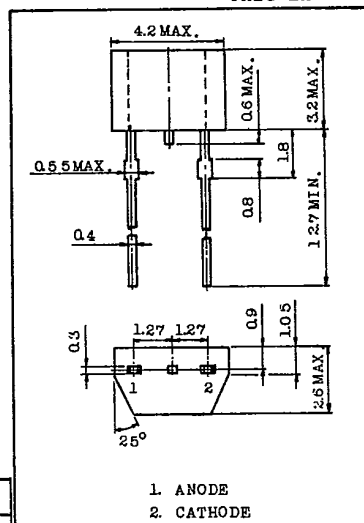
# 1SV101

FM RADIO BAND TUNING APPLICATIONS.

**FEATURES:**

- . High Capacitance Ratio :  $C_{3V}/C_{9V}=2.0\sim 2.7$
- . Low Series Resistance :  $r_s=0.3\Omega(\text{Typ.})$
- . Small Package.
- . Low Voltage Operation : 3V-9V

Unit in mm



**MAXIMUM RATINGS (Ta=25°C)**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	$V_R$	15	V
Junction Temperature	$T_j$	125	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 125	°C

JEDEC	-
EIAJ	-
TOSHIBA	1-4 E1A

Weight : 0.09g

**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	$V_R$	$I_R=10\mu A$	15	-	-	V
Reverse Current	$I_R$	$V_R=15V$	-	-	10	nA
Capacitance	$C_{3V}$	$V_R=3V, f=1MHz$	28	-	32	pF
Capacitance	$C_{9V}$	$V_R=9V, f=1MHz$	12	-	14	pF
Capacitance Ratio	$C_{3V}/C_{9V}$	-	2.0	-	2.7	
Series Resistance	$r_s$	$C=30pF, f=50MHz$	-	0.3	0.5	$\Omega$

Note : Available in matched group for capacitance to 3%.

$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.03 \quad (V_R=3V-9V)$$

and capacitance is classified as Table 1.

TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

67C 09359

D T-07-19

**1SV101**

Table 1 : Capacitance Data

TEST CONDITION : f=1MHz, Ta=25°C

No.	C3V	C5V	C7V	C9V
1	28.20 ~ 29.04	20.50 ~ 21.11	15.65 ~ 16.11	12.066 ~ 12.427
2	28.85 ~ 29.71	20.97 ~ 21.59	16.01 ~ 16.49	12.343 ~ 12.713
3	29.51 ~ 30.39	21.44 ~ 22.08	16.38 ~ 16.87	12.627 ~ 13.005
4	30.19 ~ 31.09	21.94 ~ 22.59	16.76 ~ 17.26	12.917 ~ 13.304
5	30.89 ~ 31.81	22.45 ~ 23.12	17.15 ~ 17.66	13.214 ~ 13.610
6		22.97 ~ 23.65	17.54 ~ 18.06	13.518 ~ 13.923
7		23.49 ~ 24.19	17.94 ~ 18.47	

- (1) This table is not selection guide, which means only to show the data.
- (2) The number on the vinyl package (on the label in the vinyl package) is to show the capacitance data at each voltage in a matched group.

Example      4   -   3   -   2   -   1  
                  (C3V)    (C5V)    (C7V)    (C9V)

- (3) The absolute capacitance value is in  $\pm 0.5\%$ .