

## **SDV711Q**

Variable Capacitance Diode

#### **Features**

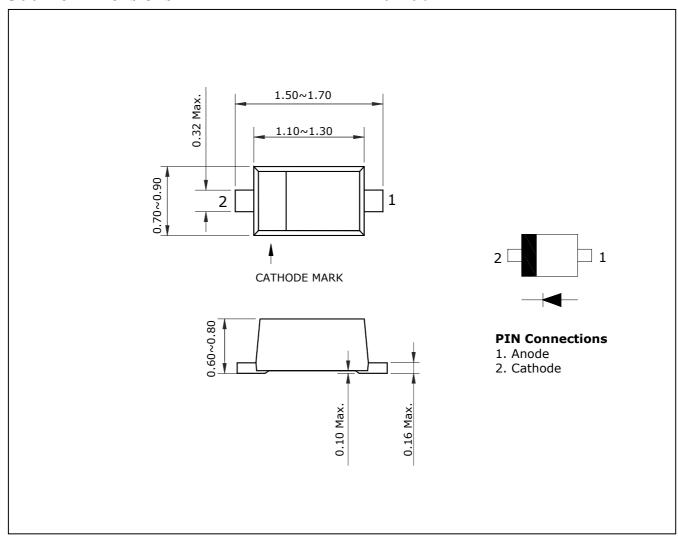
- Suitable for UHF / VHF band VCO.
- High Capacitance Ratio :  $C_{1V}/C_{4V}=2.0(Typ.)$
- Low series resistance : rs=0.3\(\Omega(Typ.)\)
- Useful for Small Size Tuner.

### **Ordering Information**

Type No.	Marking	Package Code		
SDV711Q	VB	SOD-523		

### **Outline Dimensions**

#### unit: mm



# SDV711Q

**Absolute maximum ratings** 

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Continuous reverse voltage	$V_R$	10	V
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	$T_{stg}$	-55 ~ 150	°C

## **Electrical Characteristics**

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse voltage	$V_R$	$I_R=1\mu A$	10	1	-	V
Reverse current	$I_{R}$	V <sub>R</sub> =10V	1	1	3	nA
Total Capacitance	C <sub>1V</sub>	V <sub>R</sub> =1V, f=1MHz	15	-	17	pF
	C <sub>4V</sub>	V <sub>R</sub> =4V, f=1MHz	7.3	-	8.7	pF
Capacitance Ratio	C <sub>1V/4V</sub>	-	1.8	2.0	-	
Series resistance	$r_{\rm S}$	V <sub>R</sub> =1V, f=470MHz	-	0.3	0.5	Ω

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#### **Electrical Characteristic Curves**

Fig. 1  $C_T$  -  $V_R$ 

Potal Capacitance C₁ [pf]

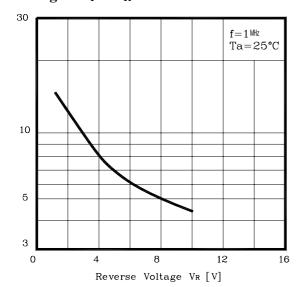


Fig. 3  $r_s$  -  $V_R$ 

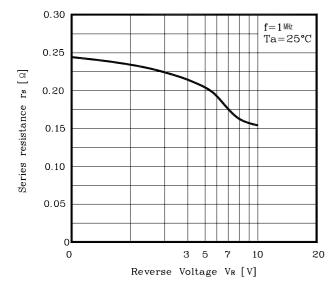


Fig. 2  $I_R$  -  $V_R$ 

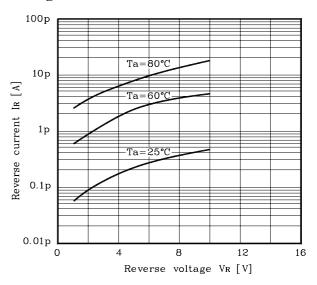
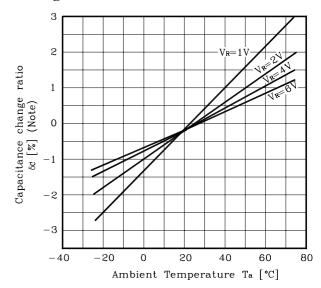


Fig. 4  $\delta_C$  - Ta



Note: 
$$\delta_C = \frac{C(Ta) - C(25)}{C(25)} \times 100(\%)$$

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