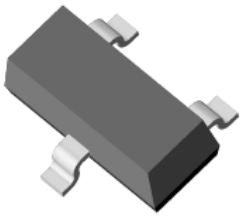
Variable Capacitance Diode

General Description

- For FM tuner
- Monolithic chip with common cathode for perfect tacking of both diodes
- Uniform “square law” characteristics
- Ideal hifi tuning device when used in low-distortion, back-to-back configuration



SOT-23

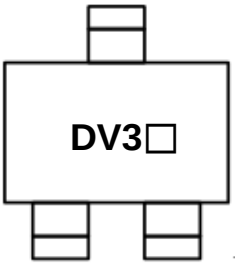
Features and Benefits

- Low series resistance
  : r_s=0.3Ω (Typ.)
- Full lead (Pb)-free device and RoHS compliant device

Ordering Information

Part Number	Marking Code	Package	Packaging
SDV703WK	DV3□	SOT-23	Tape & Reel

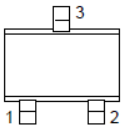
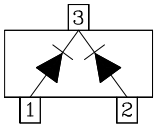
Marking Information



DV3 = Specific Device Code

□ = C_{T2V} rank (Grade)

Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Anode		
2	Anode		
3	Cathode		

Absolute Maximum Ratings (T_{amb}=25℃, Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 ~ 150	

Electrical Characteristics (T_{amb}=25℃, Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse voltage	V_R	I_R=10uA	15	-	-	V
Reverse current	I_R	V_R=15V	-	-	50	nA
Diode capacitance	C_{T2V}*	V_R=2V, f=1MHz	42.0	-	47.5	pF
	C_{T8V}	V_R=8V, f=1MHz	24.0	-	28.8	
Capacitance ratio	C_{T2V}/C_{T8V}	-	1.65	1.71	1.80	-
Series resistance	rs	C_T=38pF, f=100MHz	-	0.3	0.4	Ω

* : C_{T2V} / A : 42~43.5pF, B : 43~44.5pF, C : 44~45.5pF, D : 45~46.5pF, E : 46~47.5pF

Rating and Characteristic Curves

Fig. 1) C_T - V_R

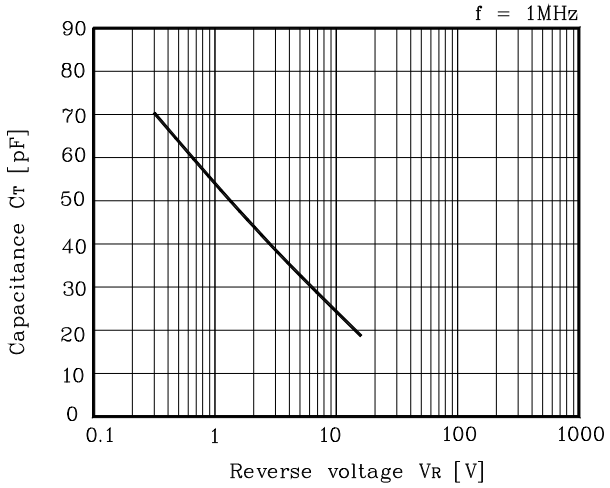
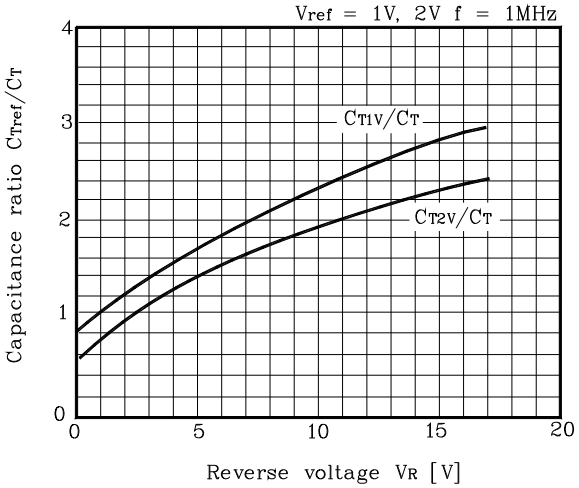
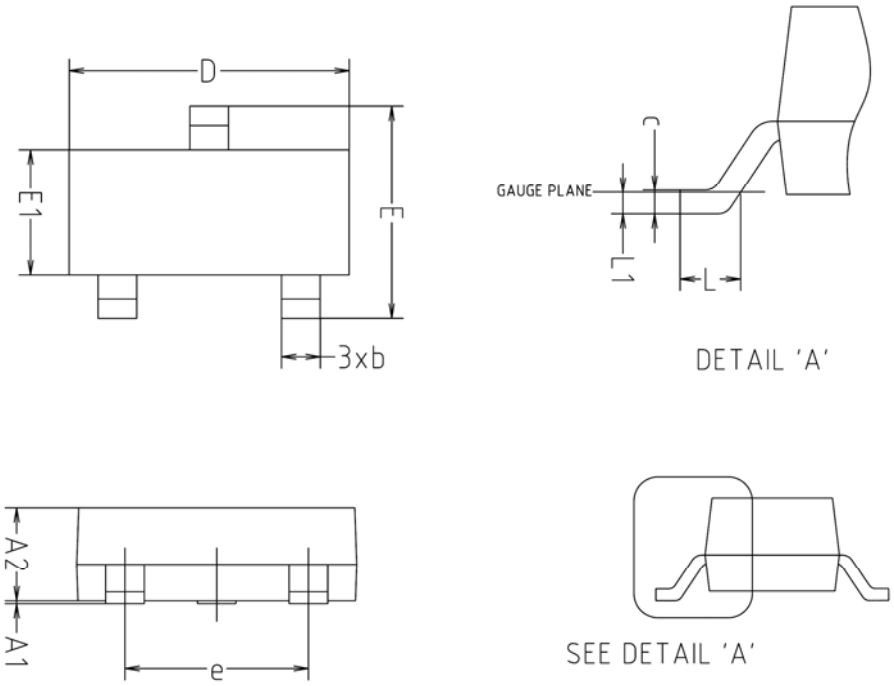


Fig. 2) (C_{Tref}/C_T) - V_R

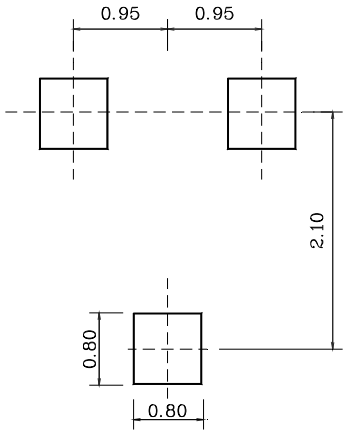


Package Outline Dimensions (Unit: mm)



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

※ Recommend PCB solder land (Unit: mm)



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