

## Silicon Tuning Diode Preliminary data

### Application

- VCO、VCO'S mobile communications equipment
- FM and AFC in communication set

### Features

- Excellent linearity
- Capacitance ratio: $C_{0.3V}/C_{4.7V}=10(\text{Min})$
- Low series resistance:  $r_s \leq 0.6\Omega$
- package:SOD523



SOD-523

### Maximum ratings

Parameter	Symbol	Rating		Unit
		Min	Max	
Assignment Temperature Range	$T_{amb}$	-55	100	°C
Storage Temperature Range	$T_{atg}$	-55	125	°C
Maximum Reverse voltage	$V_{RM}$		10	V
Junction Temperature	$T_j$		125	°C
Forward voltage( $I_F=20\text{mA}$ )	$V_F$		1	V

### Electrical Characteristics(at $T_{amb}=25^\circ\text{C}$ )

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Diode capacitance	$C_1$	$V_{R1}=1\text{V}$	36		43.5	PF
Diode capacitance	$C_2$	$V_{R2}=2\text{V}$	22		25	PF
Diode capacitance	$C_3$	$V_{R2}=4.7\text{V}$	13.8		17.5	PF
Capacitance ratio	$C_1/C_2$	$V_{R1}=0.3\text{V}, V_{R2}=4.7\text{V}$	2.15	2.53		
Reverse Current	$I_R$	$V_R=6\text{V}$			5	nA
series resistance	$r_s$	$F=470\text{MHz}, C_0=14\text{pF}$		0.35	0.6	$\Omega$