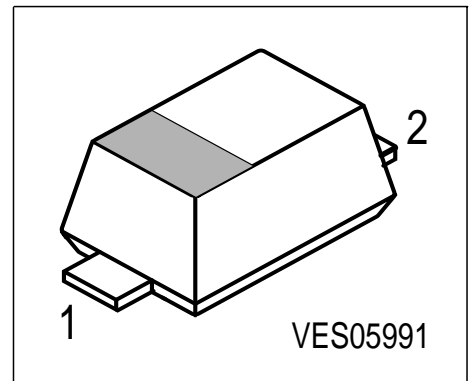


Silicon Tuning Diode

Preliminary data

- Excellent linearity
- High Q hyperabrupt tuning diode
- Low series inductance
- Designed for low tuning voltage operation for VCO's in mobile communications equipment
- Very low capacitance spread



Type	Marking	Ordering Code	Pin Configuration		Package
BBY 55-02W	7	Q62702-B0913	1 = C	2 = A	SCD-80

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	16	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ...+150	°C
Storage temperature	T_{stg}	-55 ...+150	

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current $V_R = 15\text{ V}$	I_R	-	-	3	nA
Reverse current $V_R = 15\text{ V}, T_A = 65^\circ\text{C}$	I_R	-	-	100	
AC characteristics					
Diode capacitance $V_R = 2\text{ V}, f = 1\text{ MHz}$ $V_R = 4\text{ V}, f = 1\text{ MHz}$ $V_R = 10\text{ V}, f = 1\text{ MHz}$	C_T	14 10 5.5	15 11 6	16 12 6.5	pF
Capacitance ratio $V_R = 2\text{ V}, V_R = 10\text{ V}, f = 1\text{ MHz}$	C_{T2}/C_{T10}	2	2.5	3	-
Series resistance $V_R = 5\text{ V}, f = 470\text{ MHz}$	r_s	-	0.15	0.35	Ω
Case capacitance $f = 1\text{ MHz}$	C_C	-	0.09	-	pF
Series inductance	L_s	-	0.6	-	nH

Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

