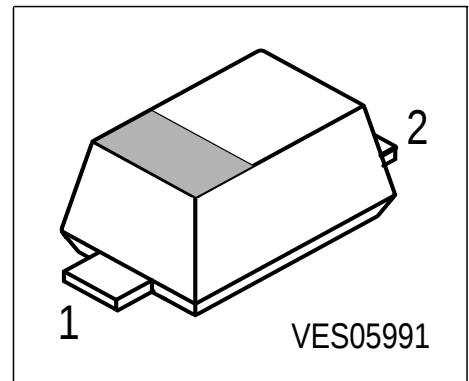


Silicon Tuning Diode

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 56-02W	6	Q62702-	1 = C	2 = A	SCD-80

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	10	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ...+150	°C
Storage temperature	T_{stg}	-55 ...+150	

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current $V_R = 8\text{ V}$	I_R	-	-	1	nA
Reverse current $V_R = 8\text{ V}$, $T_A = 65\text{ °C}$	I_R	-	-	100	μA
AC characteristics					
Diode capacitance $V_R = 0.32\text{ V}$, $f = 1\text{ MHz}$ $V_R = 1\text{ V}$, $f = 1\text{ MHz}$ $V_R = 2\text{ V}$, $f = 1\text{ MHz}$ $V_R = 2.38\text{ V}$, $f = 1\text{ MHz}$ $V_R = 3$, $f = 1\text{ MHz}$	C_T	59 39 22 19.4 15.9	- - - - -	67 43 27.2 23.7 19	pF
Capacitance ratio $V_R = 1\text{ V}$, $V_R = 3\text{ V}$, $f = 1\text{ MHz}$	C_{T1}/C_{T3}	-	2.45	-	-
Series resistance $V_R = 1\text{ V}$, $f = 330\text{ MHz}$	r_s	-	0.3	-	Ω
Case capacitance $f = 1\text{ MHz}$	C_C	-	0.09	-	pF
Series inductance chip to ground	L_s	-	0.6	-	nH