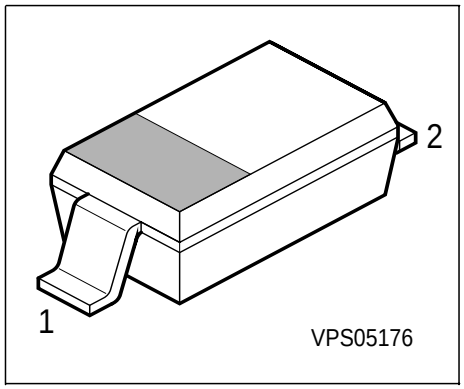
Silicon Tuning Diode

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 56-03W	6 cathd. red	Q62702-	1 = C	2 = A	SOD-323

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 °C, unless otherwise specified.

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