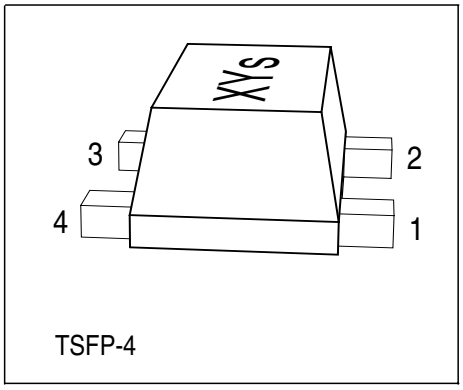
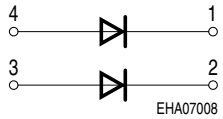
Silicon Tuning Diode

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
- For low frequency control elements
  such as TCXOs and VCXOs
- Very low capacitance spread
- Ultra small SMD package for dual diodes





Type	Marking	Pin Configuration						Package
BBY58-07F	B8s	1=C1	2=C2	3=A2	4=A1	-	-	TSFP-4

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 ... 125	°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	I_R				nA
V_R = 8 V		-	-	10	
V_R = 8 V, T_A = 85 °C		-	-	100	
AC Characteristics					
Diode capacitance-	C_T				pF
V_R = 1 V, f = 1 MHz		17.5	18.3	19.3	
V_R = 2 V, f = 1 MHz		-	12.35	-	
V_R = 3 V, f = 1 MHz		-	8.6	-	
V_R = 4 V, f = 1 MHz		5.5	6	6.6	
Capacitance ratio V_R = 1 V, V_R = 3 V, f = 1 MHz	C_{T1}/C_{T3}	-	2.15	-	
Capacitance ratio V_R = 1 V, V_R = 4 V, f = 1 MHz	C_{T1}/C_{T4}	2.8	3.05	-	
Series resistance V_R = 1 V, f = 470 MHz	r_S	-	0.25	-	Ω
Series inductance	L_S	-	0.6	-	nH

Diode capacitance $C_T = f(V_R)$

f = 1MHz