

SOT23 SILICON PLANAR VARIABLE CAPACITANCE DIODE

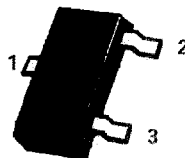
ISSUE 3 – FEBRUARY 1996

BBY31

PIN CONFIGURATION



PARTMARKING DETAIL
BBY31 – S1



SOT23

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation at $T_{amb}=25^{\circ}\text{C}$	P_{tot}	330	mW
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Reverse Breakdown Voltage	V_{BR}	28.0			V	$I_R = 10\mu\text{A}$
Reverse current	I_R			0.05 1.0	μA μA	$V_R = 28\text{V}$ $V_R = 28\text{V}, T_{amb} = 85^{\circ}\text{C}$

TUNING CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Diode Capacitance	C_d	1.8	17.5 11.5	2.8	pF pF pF	$V_R = 1\text{V}, f=1\text{MHz}$ $V_R = 3\text{V}, f=1\text{MHz}$ $V_R = 25\text{V}, f=1\text{MHz}$
Capacitance Ratio	C_d / C_d		5.0			$V_R = 3\text{V}/25\text{V}, f=1\text{MHz}$
Series Resistance	r_d			1.2	Ω	$f=470\text{MHz}$ at the value of V_R at which $C_d=9\text{pF}$

Spice parameter data is available upon request for this device