

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

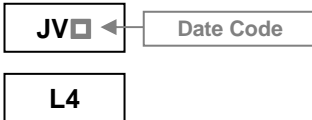
FEATURES

- Low Turn-on Voltage
- Extremely Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection

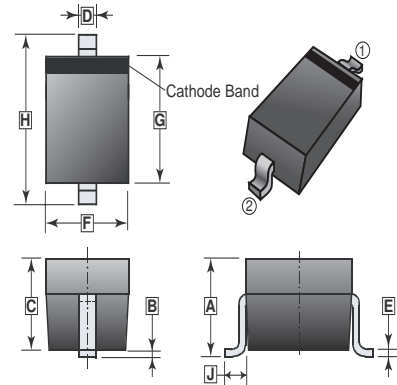
MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Low Forward Voltage : 0.35 V@ $I_F=10\text{mA}$

MARKING



SOD-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.05 REF.		E	0.080	0.180
B	0.20 REF.		F	1.15	1.45
C	0.80	1.00	G	1.60	1.80
D	0.25	0.40	H	2.30	2.70



PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOD-323	3K	7' inch

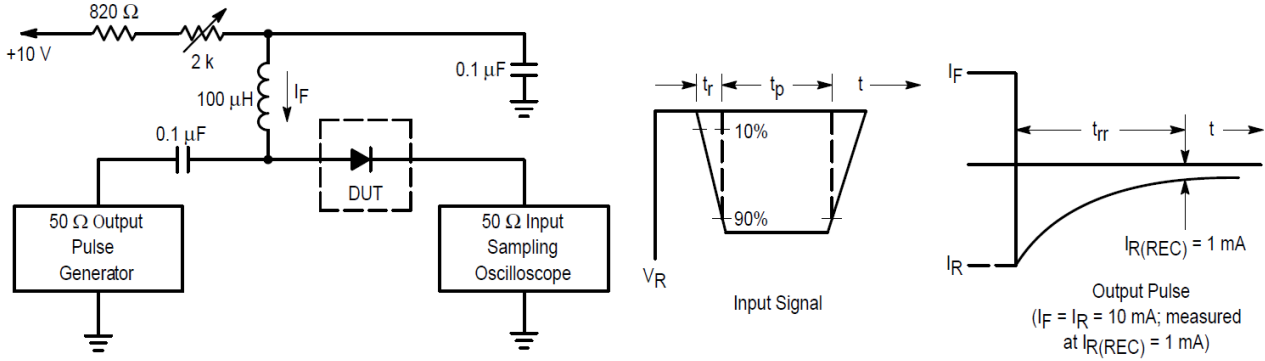
ABSOLUTE MAXIMUM RATINGS ($T_J = 125^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Reverse Voltage	V_R	30	V
Forward Current	I_F	200	mA
Peak Repetitive Forward Current Rated V_R , Square Wave, 20KHz	$I_{FSM} (1)$	400	mA
Non-Repetitive Peak Forward Current ($t \leq 1.0$ s)	$I_{FSM} (2)$	600	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C}/\text{W}$
Power Dissipation	P_D	200	mW
Junction & Storage Temperature	T_J, T_{STG}	-55~125, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage	$V_{(BR)}$	30	-	-	V	$I_R = 10\mu\text{A}$
Total Capacitance	C_T	-	7.6	10	pF	$V_R = 1.0\text{V}, f = 1.0\text{MHz}$
Reverse Leakage	I_R	-	0.5	2.0	μA	$V_R = 25$
Forward Voltage	$V_F (1)$	-	0.22	0.24	V	$I_F = 0.1\text{mA}$
	$V_F (2)$	-	0.29	0.32		$I_F = 1\text{mA}$
	$V_F (3)$	-	0.35	0.40		$I_F = 10\text{mA}$
	$V_F (4)$	-	0.41	0.50		$I_F = 30\text{mA}$
	$V_F (5)$	-	0.52	1.00		$I_F = 100\text{mA}$
Reverse Recovery Time ^{*Figure 1}	T_{rr}	-	-	5	nS	$I_F = I_R = 10\text{mA}, I_{R(REC)} = 1.0\text{mA}$

CIRCUIT DIAGRAM



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

CHARACTERISTIC CURVES

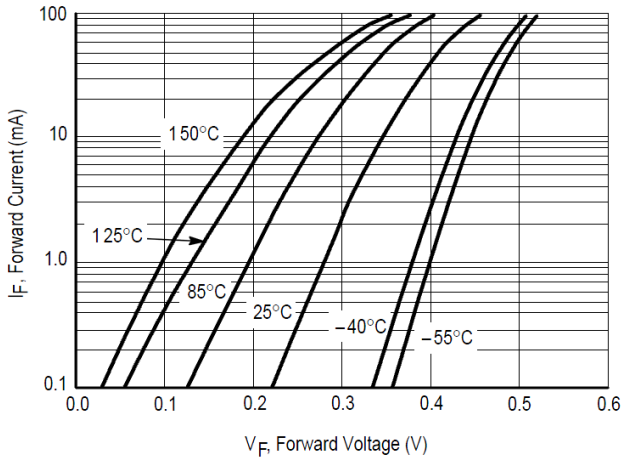


Figure 2. Forward Voltage

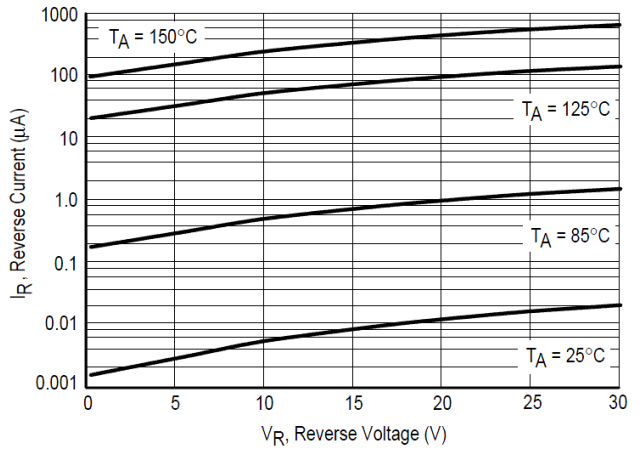


Figure 3. Leakage Current

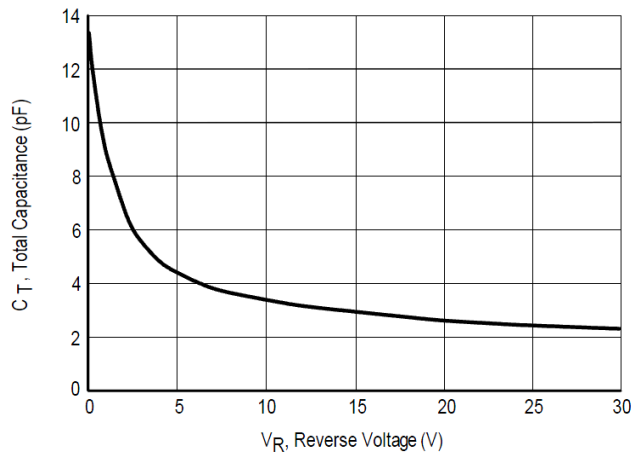


Figure 4. Total Capacitance