

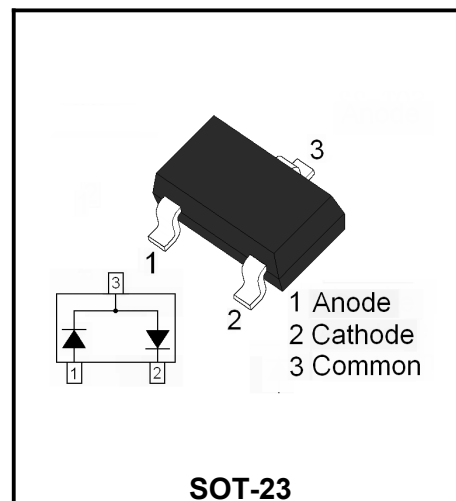
Plastic-Encapsulate Diode

High Voltage General Purpose Diode Applications

Features

- ◆ Repetitive peak reverse voltage: max.120V
- ◆ High Conductance: $I_F = 200$ mA
- ◆ Continuous reverse voltage: max.90V
- ◆ Fast Switching Speed: $t_{rr} < 50$ ns
- ◆ Small Plastic SOT-23 Package

MARKING:L21



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Values	Units
Repetitive peak reverse voltage	V_{RRM}	120	V
Continuous reverse voltage	V_R	90	V
Forward current	I_F	200	mA
Repetitive peak forward current	I_{FRM}	600	mA
Power dissipation $T_S \leq 55^\circ\text{C}$	P_D	350	mW
Operating temperature range	T_j	$-55 \sim 150$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	K/W

Electrical Characteristics ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ	Max.	Units
Breakdown Voltage, per Diode	V_R	$I_R = 1.0\text{mA}$	120			V
Forward voltage, per Diode	V_F	$I_F = 10\text{mA}$			0.75	V
		$I_F = 50\text{mA}$			0.84	
		$I_F = 100\text{mA}$			0.90	
		$I_F = 200\text{mA}$			1.0	
		$I_F = 400\text{mA}$			1.25	
Reverse Leakage, per Diode	I_R	$V_R = 90\text{V}$			0.1	μA
		$V_R = 90\text{V}, T_A = 150^\circ\text{C}$			100	
Capacitance, per Diode	C_O	$V_R = 0\text{V}, f = 1.0\text{MHz}$			35	pF
Reverse-Recovery Time, per Diode	t_{rr}	$I_F = I_R = 30\text{mA}, V_R = 6\text{V}$ $I_{RR} = 3\text{mA}, R_L = 100\Omega$			50	ns

Typical Characteristics

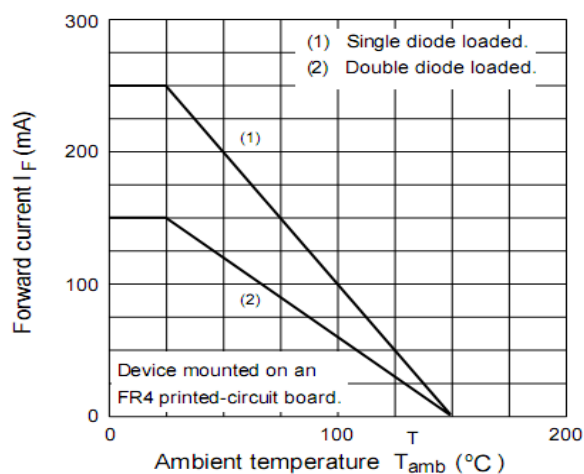


Figure 1. Forward current vs. junction temperature.

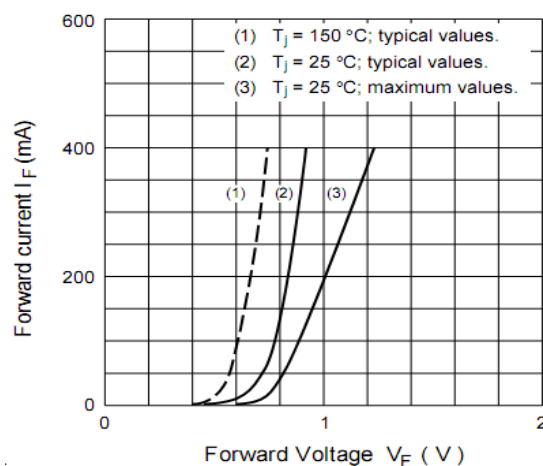


Figure 2. Forward current vs. forward voltage

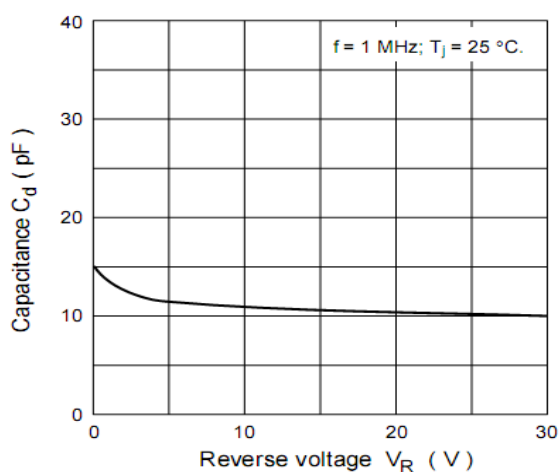


Figure 3. Total Capacitance vs. Reverse Voltage

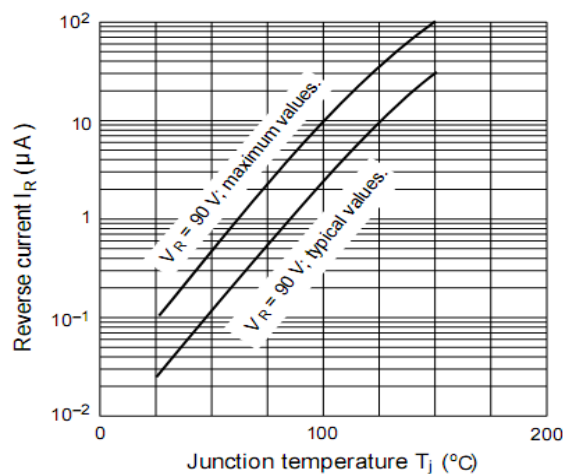


Figure 4. Reverse Current vs. Junction temperature.

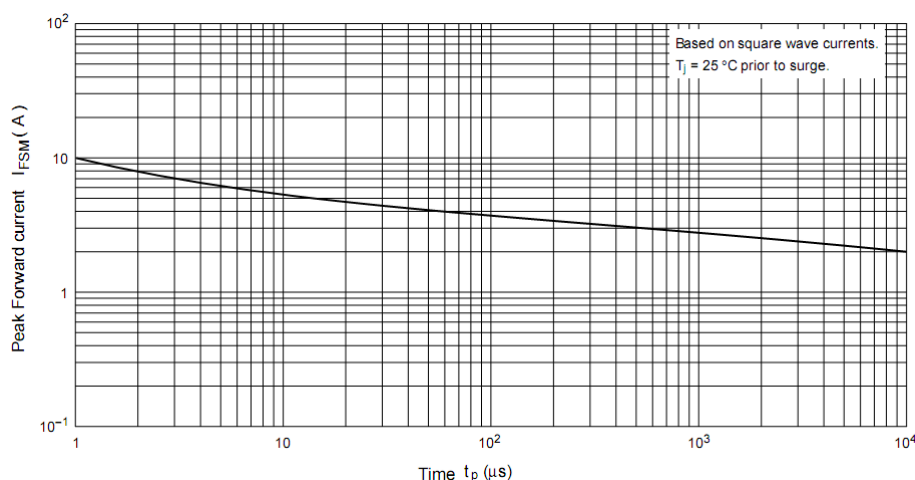


Figure 5. Maximum non-repetitive peak forward current

Package Outline

SOT-23

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.90	1.00	0.035	0.039
e1	1.80	2.00	0.071	0.079
L	0.50	0.60	0.020	0.024
L1	0.30	0.50	0.012	0.020

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1