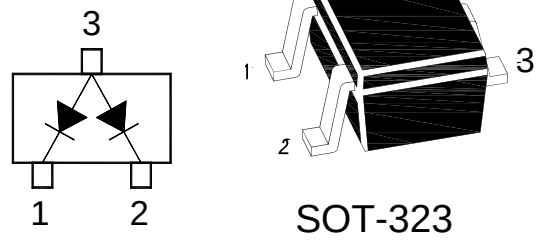
Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes

Marking Code: X6t



SOT-323

Absolute Maximum Ratings (T_a = 25℃)

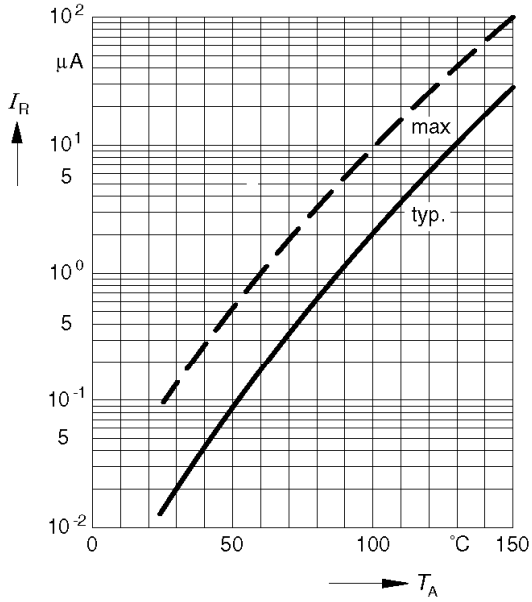
Parameter		Symbol	Value	Unit
Reverse Voltage		V_R	250	V
Continuous Forward Current		$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 1 µs	I_{FSM}	0.5 2.5	A
Total Device Dissipation		P_{tot}	250	mW
Thermal Resistance Junction to Ambient		$R_{\theta JA}$	357	℃/W
Junction and Storage Temperature Range		T_j, T_{stg}	- 55 to + 150	℃

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 µA at I_R = 100 µA at I_R = 100 µA	$V_{(BR)R}$	250	-	V
Forward Voltage at I_F = 100 mA at I_F = 200 mA	V_F	- -	1 1.25	V
Reverse Current at V_R = 200 V at V_R = 200 V, T = 150℃ j	I_R	- -	0.1 100	µA
Total Capacitance at V_R = 0, f = 1 MHz	C_{tot}	-	5	pF
Reverse Recovery Time at I_F = I_R= 30 mA, $I_{R(REC)}$ = 3 mA, R_L = 100 Ω	t_{rr}	-	50	ns

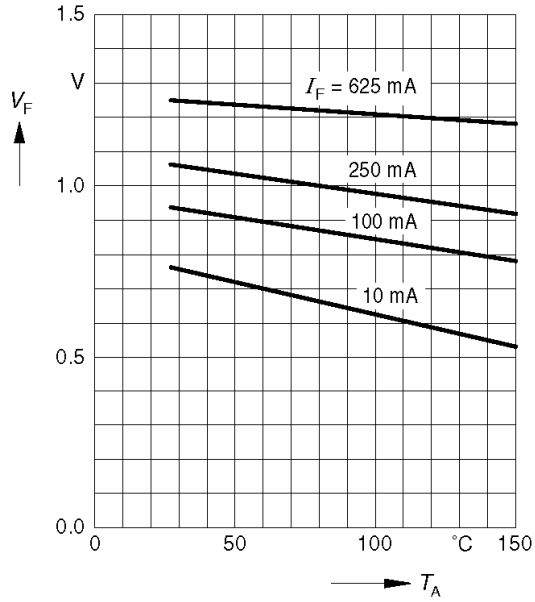
Reverse current $I_R = f(T_A)$

V_R = 200V

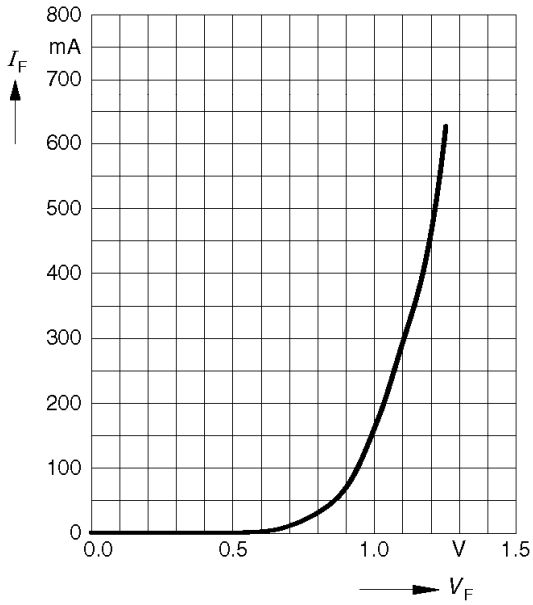


Forward Voltage $V_F = f(T_A)$

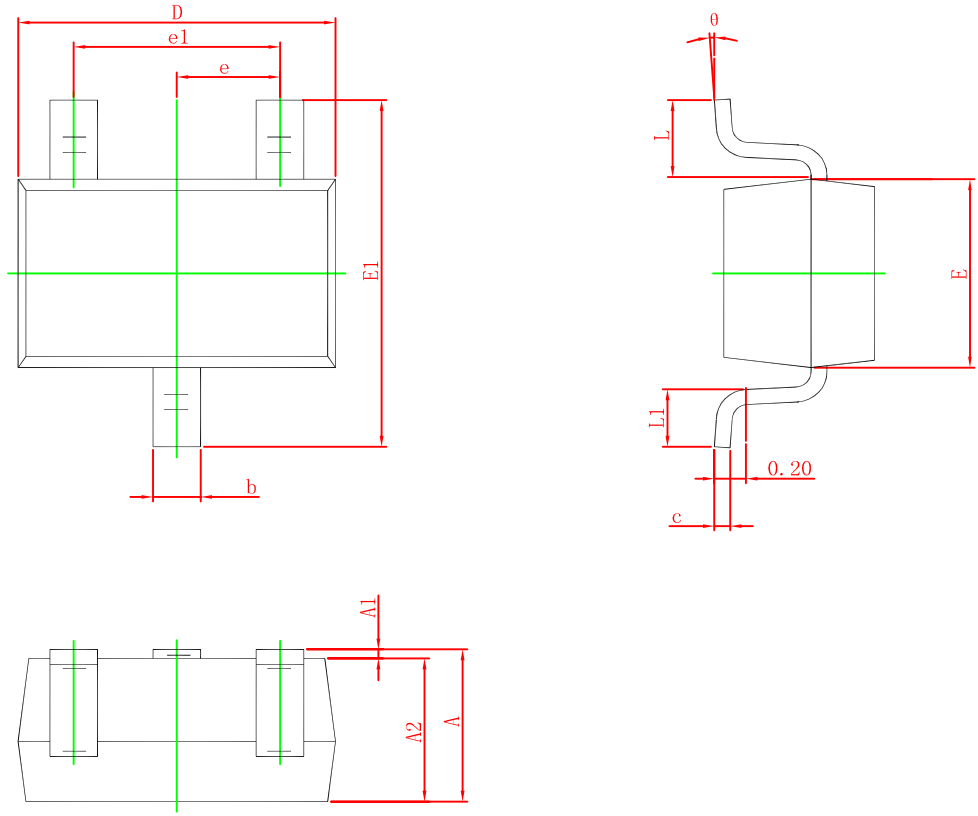
I_F = Parameter



Forward current $I_F = f(V_F)$



SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°