

# SOT-23 Plastic-Encapsulate Diodes

Switching Diode

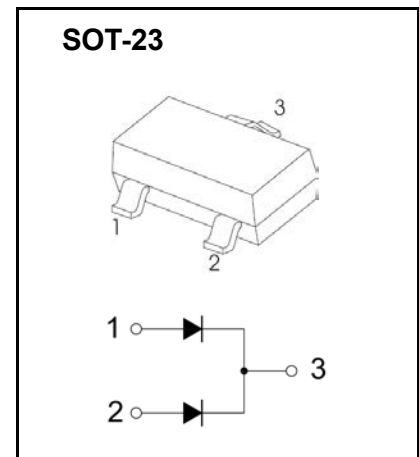
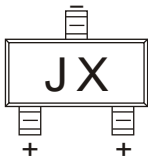
## FEATURES

- Low Leakage Current
- High Switching Speed
- AEC-Q101 qualified (Automotive grade with suffix " Q")

## APPLICATION

- Low-leakage Current Applications  
in Surface Mounted Circuits

## MARKING:JX



## MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

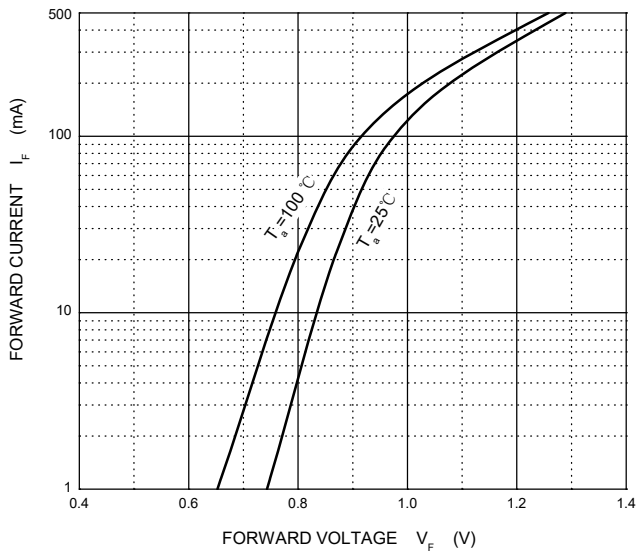
Symbol	Parameter	Value	Unit
$V_{RRM}$	Repetitive Peak Reverse Voltage	85	V
$V_R$	DC Blocking Voltage	75	V
$I_F$	Forward Current(single diode )	215	mA
	Forward Current(double diode )	125	
$I_{FRM}$	Repetitive Peak Forward Current	500	mA
$I_{FSM}$	Non-repetitive Peak Forward Surge Current@ t =8.3ms	1.0	A
$P_D$	Power Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	500	$^{\circ}\text{C}/\text{W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

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

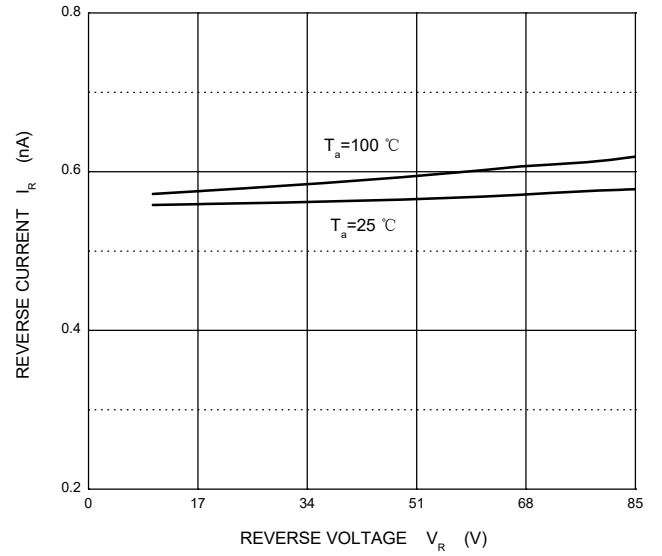
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	75			V
Reverse current	$I_R$	$V_R=75\text{V}$			5	nA
Forward voltage	$V_F$	$I_F=1\text{mA}$			0.9	V
		$I_F=10\text{mA}$			1	
		$I_F=50\text{mA}$			1.1	
		$I_F=150\text{mA}$			1.25	
Total capacitance	$C_{tot}$	$V_R=0, f=1\text{MHz}$		2		pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$			3	$\mu\text{s}$

Typical Characteristics

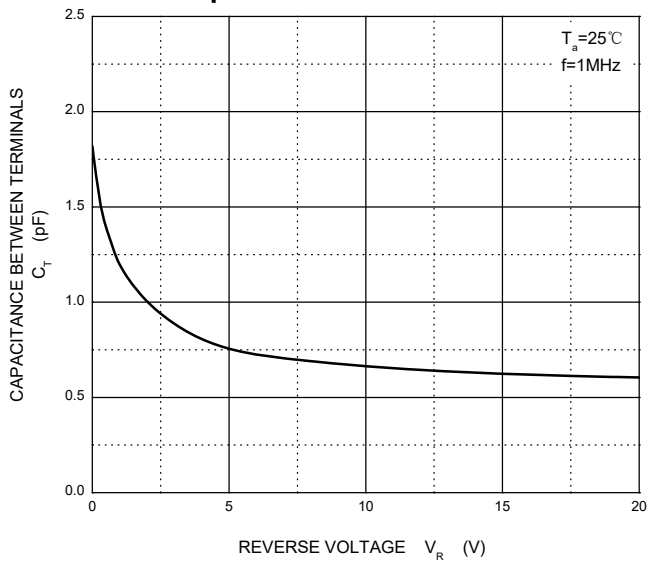
Forward Characteristics



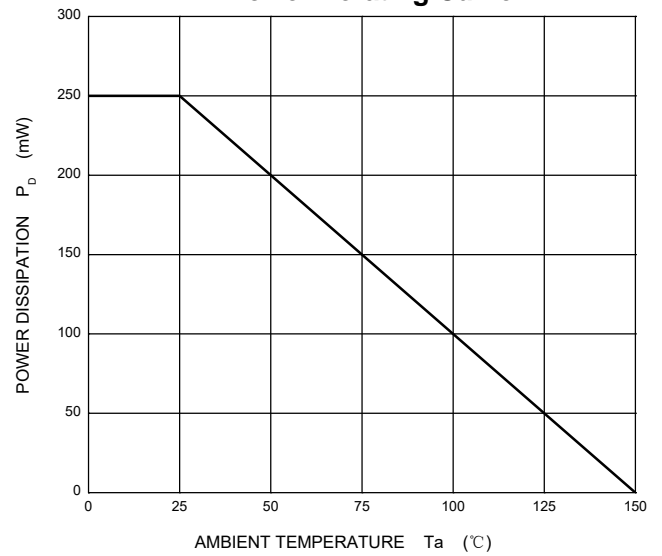
Reverse Characteristics



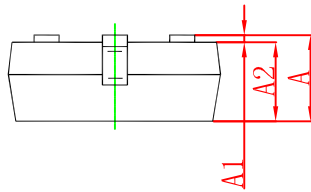
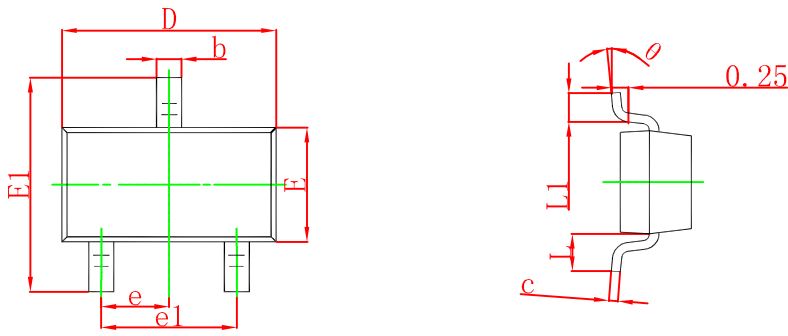
Capacitance Characteristics



Power Derating Curve

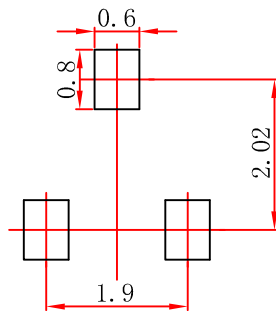


## SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

## SOT-23 Suggested Pad Layout



## Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.