

Small Signal Switching Diodes

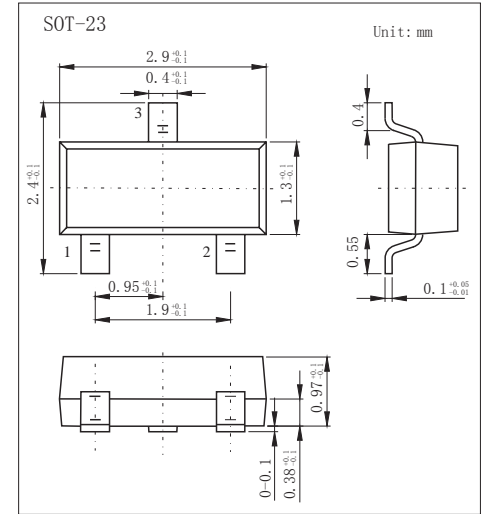
VOLTAGE RANGE: 75V
PEAK PULSE POWER: 250mW

Features

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance

MECHANICAL DATA

- Case: SOT-23 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage	V _{RRM}		
Working Peak Reverse Voltage	V _{RWM}	75	V
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	53	V
Average Rectified Output Current	I _O	200	mA
Forward Continuous Current	I _{FM}	300	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 μs	I _{FSM}	2.0	A
@ t = 1.0s		1.0	
Power Dissipation	P _d	250	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	357	°C/W
Operating and Storage Temperature Range	T, T _{STG}	-55 to +150	°C

Electrical Specification (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V _{(BR)R}	I _R =100 μA	75			V
Forward Voltage	V _F	I _F = 1.0mA			0.715	V
		I _F = 10mA			0.855	
		I _F = 50mA			1.0	
		I _F = 150mA			1.25	
Leakage Current	I _R	V _R = 75V			1.0	μA
		V _R = 20V			25	nA
Junction Capacitance	C _j	V _R = 0, f = 1.0MHz			2	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 10mA, I _{tr} = 0.1 X I _R , R _L = 100 Ω			4	ns

Marking

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RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

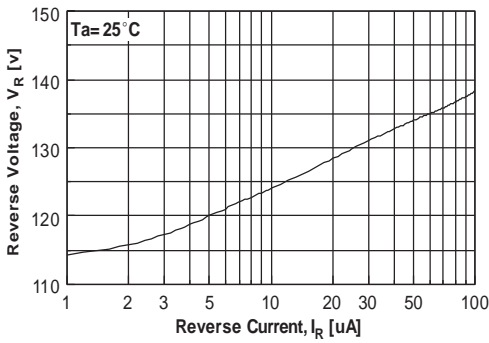


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 uA

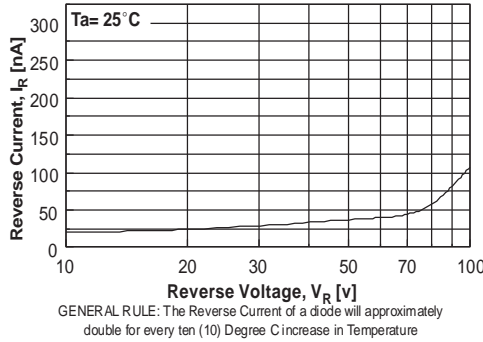


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

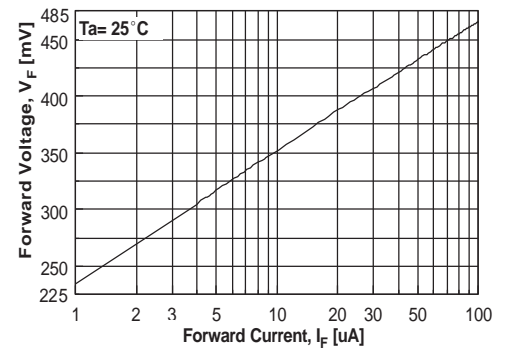


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

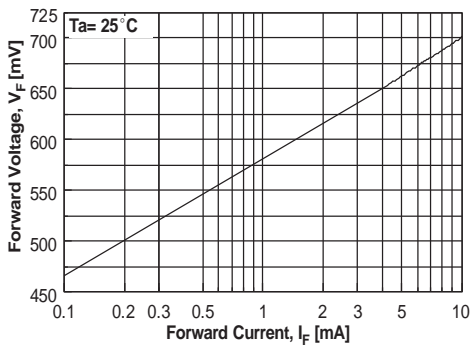


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

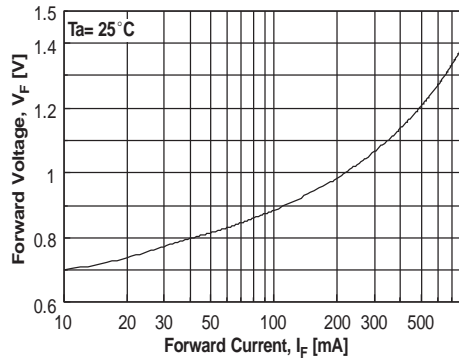


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

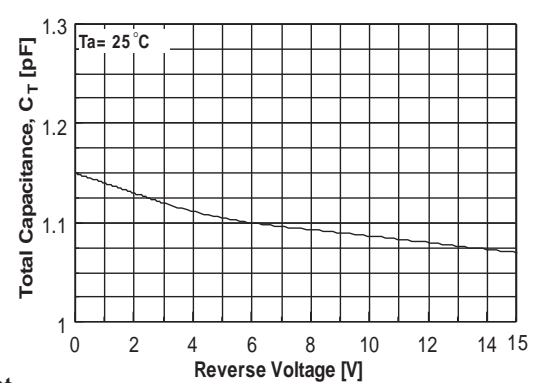


Figure 6. Total Capacitance

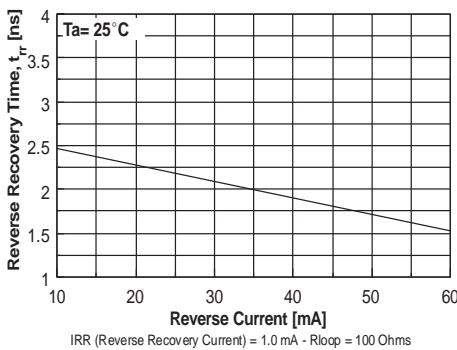


Figure 7. Reverse Recovery Time
vs Reverse Current
TRR - IR 10 mA vs 60 mA

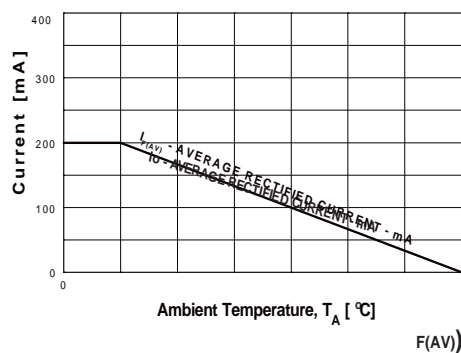


Figure 8. Average Rectified Current (I_A)
versus Ambient Temperature (T)

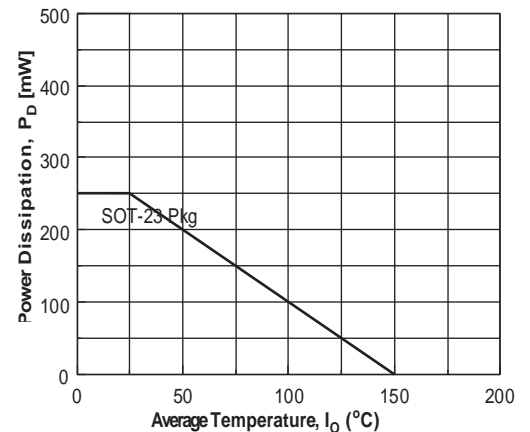


Figure 9. Power Derating Curve