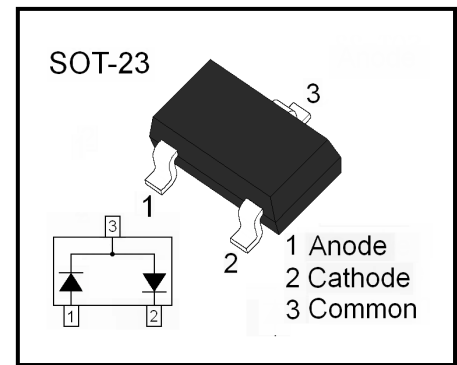


High Conductance Ultra-Fast Switching Diode**Applications**

- High-Speed Switching

Features

- High Conductance: $I_F = 200\text{ mA}$
- Fast Switching Speed: $t_{rr} < 4\text{ ns}$ Maximum
- Small Plastic SOT-23 Package
- Series-Pair Configuration
- Marking: A7

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

Parameter	Symbol	Values	Units
Reverse Voltage	V_R	70	V
Forward current	I_F	200	mA
Power dissipation $T_S \leq 55\text{ }^\circ\text{C}$	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 ($T_A = 25\text{ }^\circ\text{C}$ Unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ	Max.	Units
Breakdown Voltage, per Diode	V_R	$I_R = 100\mu\text{A}$	70			V
Forward voltage, per Diode	V_F	$I_F = 1\text{ mA}$			0.715	V
		$I_F = 10\text{ mA}$			0.855	
		$I_F = 50\text{ mA}$			1.00	
		$I_F = 150\text{ mA}$			1.25	
Reverse Leakage, per Diode	I_R	$V_R = 70\text{V}$			2.5	μA
		$V_R = 25\text{V}, T_A = 150\text{ }^\circ\text{C}$			30	
		$V_R = 70\text{V}, T_A = 150\text{ }^\circ\text{C}$			50	
Total Capacitance, per Diode	C_T	$V_R = 0\text{ V}, f = 1.0\text{ MHz}$			1.5	pF
Reverse-Recovery Time, per Diode	t_{rr}	$I_F = I_R = 10\text{ mA}, I_{RR} = 1\text{ mA}$ $R_L = 100\text{ }\Omega$			6.0	ns

Typical Characteristics

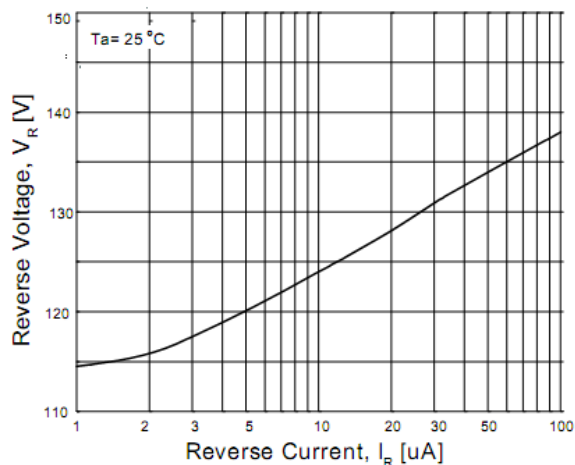


Figure 1. Reverse Voltage vs. Reverse Current

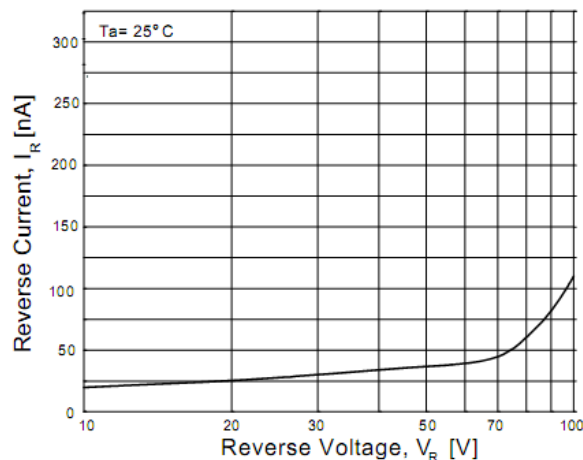


Figure 2. Reverse Current vs. Reverse Voltage

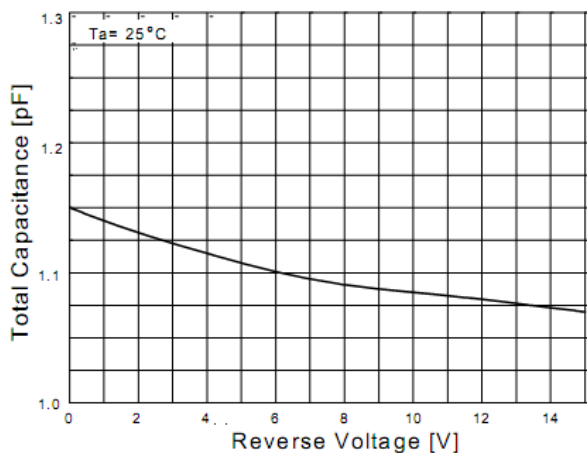


Figure 3. Total Capacitance vs. Reverse Voltage

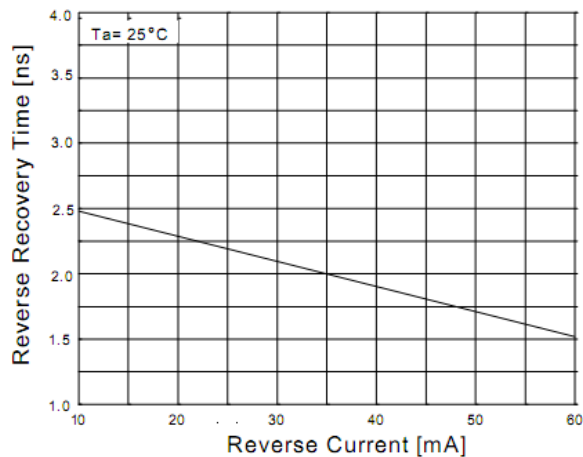


Figure 4. Reverse-Recovery Time vs. Reverse Current

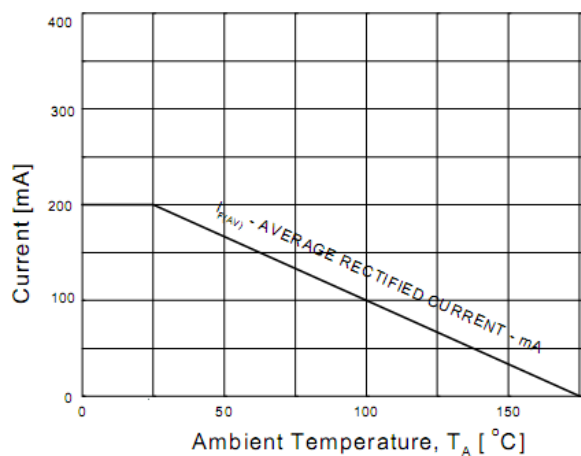
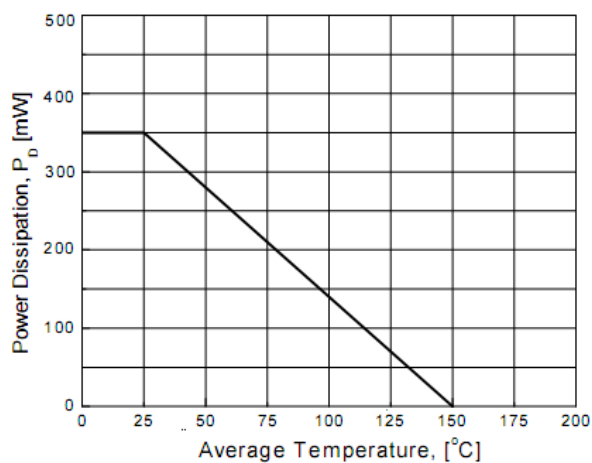
Figure 5. Average Rectified Current ($I_{F(AV)}$) vs. Ambient Temperature (T_A)

Figure 6. Power Derating Curve

Package Dimensions

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