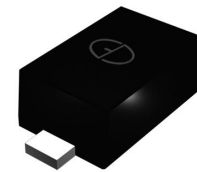


SOD-523 Plastic-Encapsulate Diode

Features

- Low Forward Voltage Drop
- Low Reverse Capacitance
- Low Reverse Recovery Time
- Guard Ring Construction for Transient Protection



Mechanical Data

- SOD-523 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

Marking: S4 SOD-523

Maximum Ratings & Thermal Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

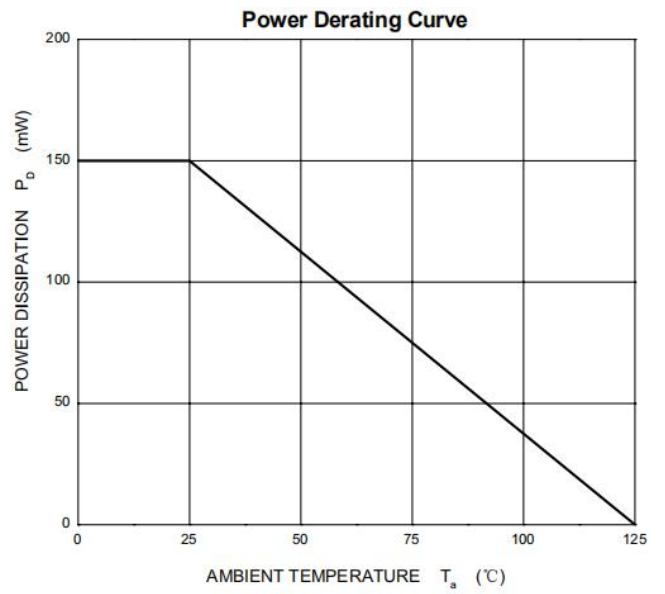
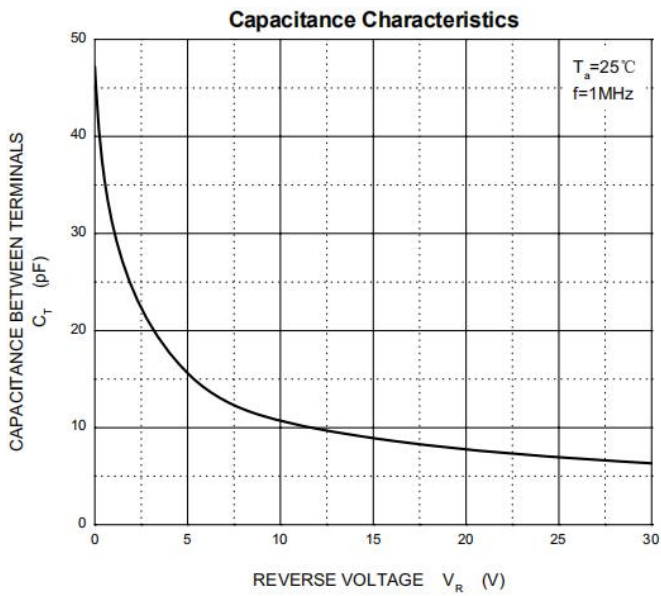
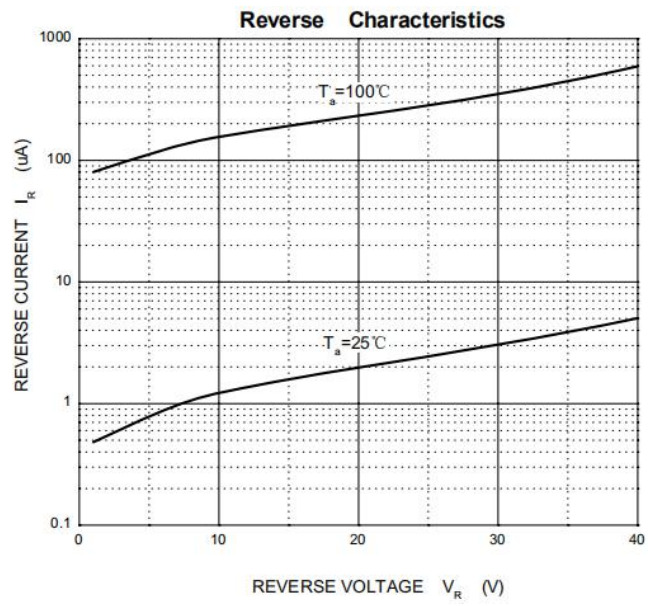
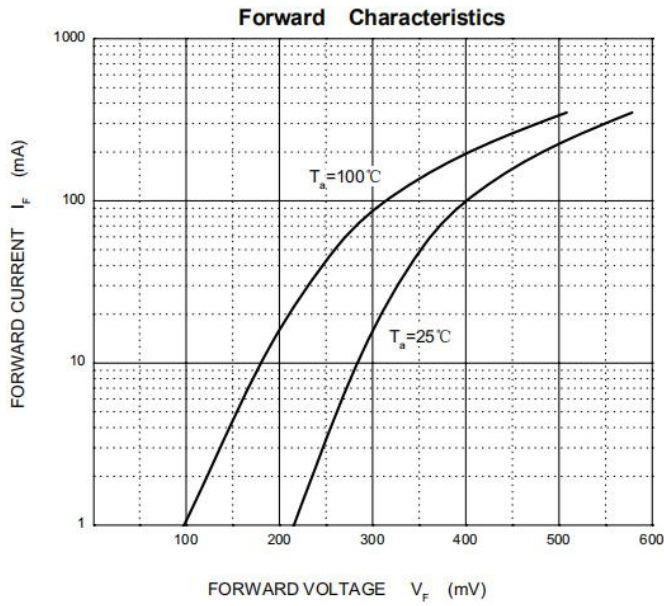
Parameters	Symbol	Value	Unit
DC Blocking Voltage	V_R	40	V
Working Peak Reverse Voltage	V_{RWM}	40	V
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Non-repetitive Peak Forward Current	I_{FM}	350	mA
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	2	A
Power Dissipation	P_D	150	mW
Typical thermal resistance	$R_{\theta JA}$	667	$^{\circ}\text{C}/\text{W}$
Storage temperature range	T_{STG}	-55-+150	$^{\circ}\text{C}$
Junction temperature	T_J	125	$^{\circ}\text{C}$

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

Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
Reverse Breakdown Voltage	V_R	$I_R=100\mu\text{A}$	40			V
Maximum reverse current	I_R	$V_R=30\text{V}$			5	uA
		$V_R=20\text{V}$			2	
		$V_R=10\text{V}$			1	
Maximum forward voltage	V_F	$I_F=1\text{mA}$		0.27		V
		$I_F=5\text{mA}$		0.32		
		$I_F=20\text{mA}$			0.37	
		$I_F=200\text{mA}$			0.6	
Type junction capacitance	C_j	$V_R=0\text{V}, f=1\text{MHz}$			50	pF
Reverse Recover Time	T_{rr}	$I_F = I_R = 200\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$			10	nS

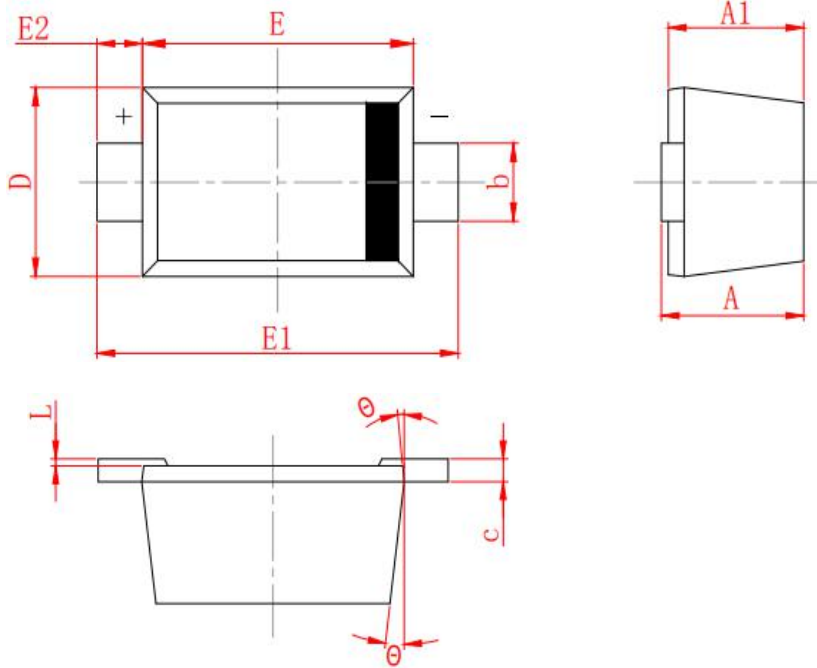
Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)



Package Outline Dimensions

in inches (millimeters)



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.530	0.730
A1	0.500	0.700
b	0.280	0.380
c	0.080	0.150
D	0.750	0.850
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
L	0.010	0.070
θ	7° REF	

Revision History

Document Version	Date of release	Description of changes
Rev.A	2020.06.17	First issue

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