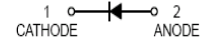




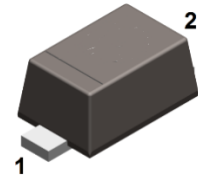
Features

- Low reverse current and low forward voltage
- High reliability
- Small surface mounting type



Typical Applications

- For general purpose applications



Mechanical Data

- Case: SOD-523
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Tin plated leads, solderable per MIL-STD-202, Method 208

SOD-523

Ordering Information

Part Number	Package	Shipping	Marking Code
SD103AX	SOD-523	3000 pcs / Tape * Reel	S4
SD103BX	SOD-523	3000 pcs / Tape * Reel	S5
SD103CX	SOD-523	3000 pcs / Tape * Reel	S6

Maximum Ratings (@T_A=25°C unless otherwise specified)

Characteristic	Symbol	SD103AX	SD103BX	SD103CX	Units
Peak repetitive reverse voltage	V _{RRM}	40	30	20	V
RMS Reverse voltage	V _{RMS}	28	21	14	V
Maximum average forward output current	I _{F(AV)}	350			mA
Peak forward surge current, 8.3ms single half-sine-wave	I _{FSM}	1.5			A

Thermal Characteristics

Characteristic	Symbol	Value	Units
Power dissipation	P _D	150	mW
Typical thermal resistance to Air	R _{θJA} *	295	°C/W
Typical thermal resistance to Case	R _{θJC} *	200	°C/W
Typical thermal resistance to Lead	R _{θJL} *	205	°C/W
Operating junction temperature range	T _J	-55 to +125	°C
Storage temperature range	T _{STG}	-55 to +150	°C

* Part mounted on FR-4 board with recommended pad layout

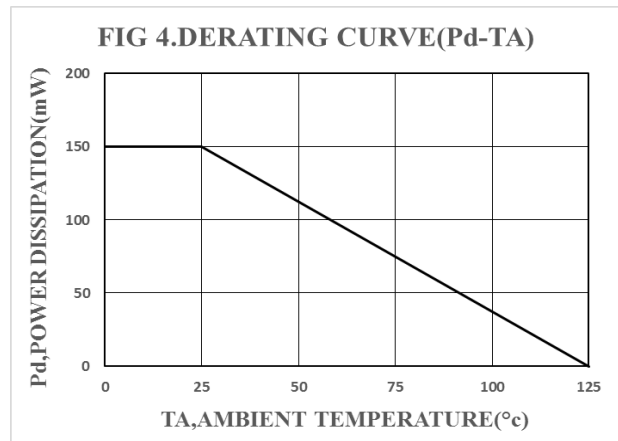
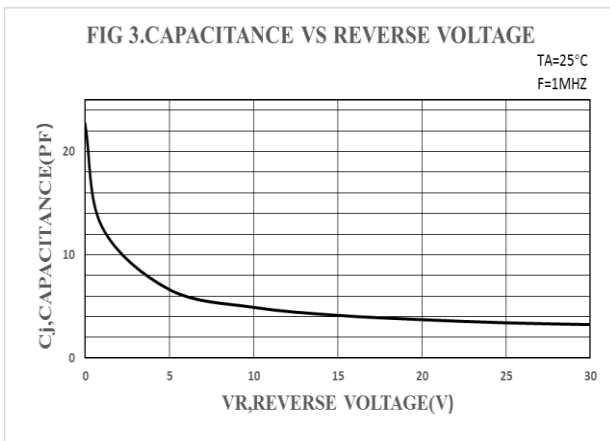
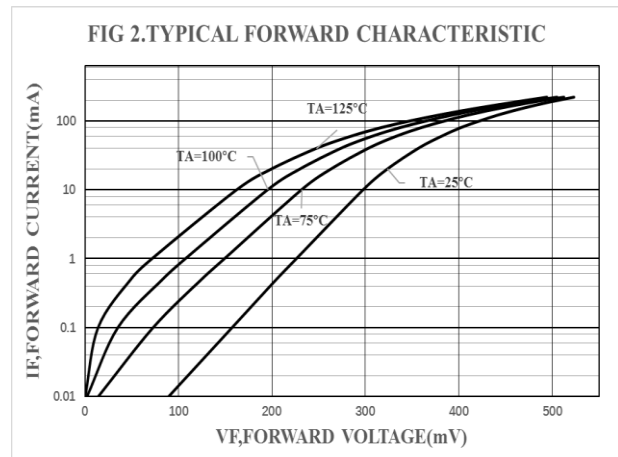
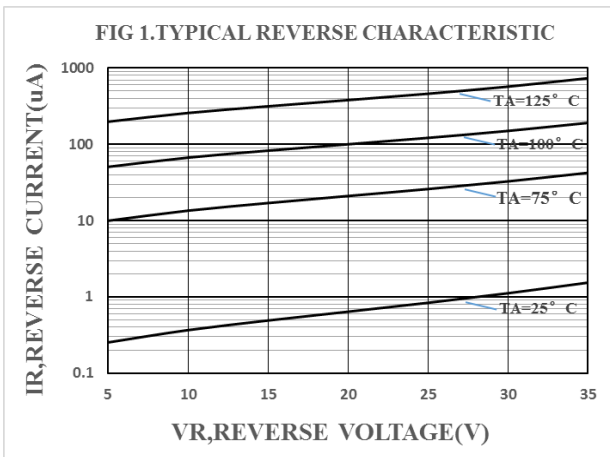


Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Test conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\mu\text{A}$ SD103AX SD103BX SD103CX	40 30 20	-	-	V
Forward Voltage	V_F^*	$I_F=20\text{mA}$	-	-	0.37	V
		$I_F=200\text{mA}$	-	-	0.60	
Maximum Peak Reverse Current	I_R^{**}	$V_R= 30\text{V}$ (SD103AX) $V_R= 20\text{V}$ (SD103BX) $V_R= 10\text{V}$ (SD103CX)	-	-	5	μA
Capacitance between terminals	C_T	$V_R=0\text{V}, f=1\text{MHz}$	-	22	50	pF

*Pulse width $\leq 380\ \mu\text{s}$, Duty cycle < 2%
**pulse test , $t_p \leq 5\text{ms}$

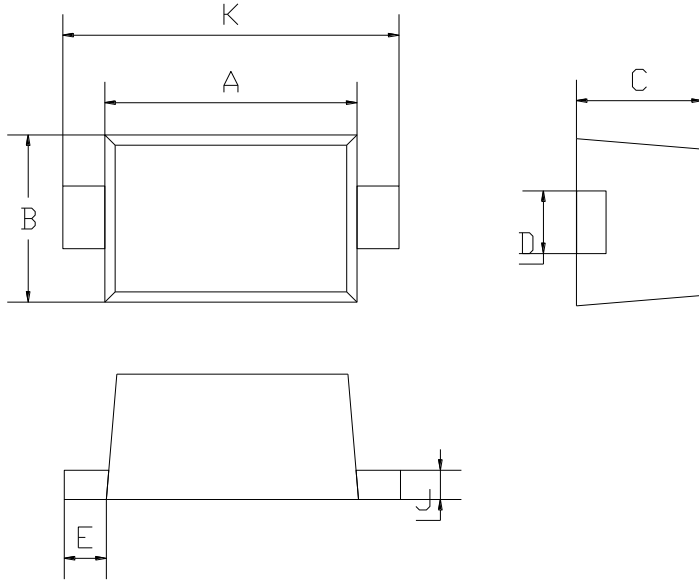
Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)





Package Outline Dimensions (unit: mm)

SOD-523



SOD-523		
Dim	Min	Max
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

Mounting Pad Layout (unit: mm)

SOD-523

