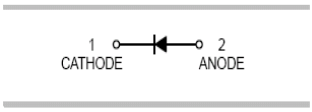
Small Signal Schottky Barrier Diode

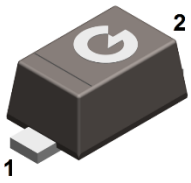
SD103AX SD103BX SD103CX

Features

HF

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





SOD-523

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

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℃ 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	$R_{\Theta JA}$*	295	°C/W
Typical thermal resistance to Case	$R_{\Theta JC}$*	200	°C/W
Typical thermal resistance to Lead	$R_{\Theta JL}$*	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

Small Signal Schottky Barrier Diode

SD103AX SD103BX SD103CX

Electrical Characteristics (@T_A=25℃ unless otherwise specified)

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

*Pulse width ≤380 uS, Duty cycle < 2%

**pulse test ， tp≤5ms

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

FIG 1.TYPICAL REVERSE CHARACTERISTIC

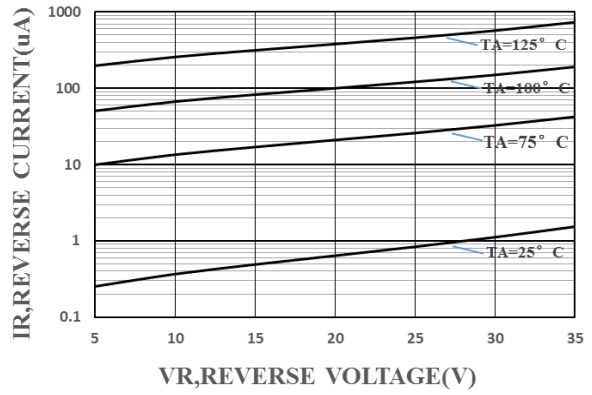


FIG 2.TYPICAL FORWARD CHARACTERISTIC

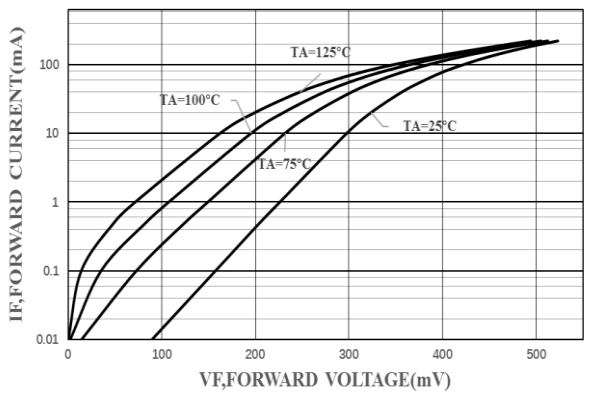


FIG 3.CAPACITANCE VS REVERSE VOLTAGE

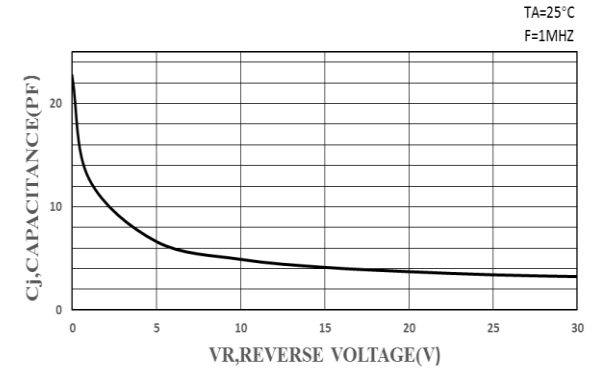
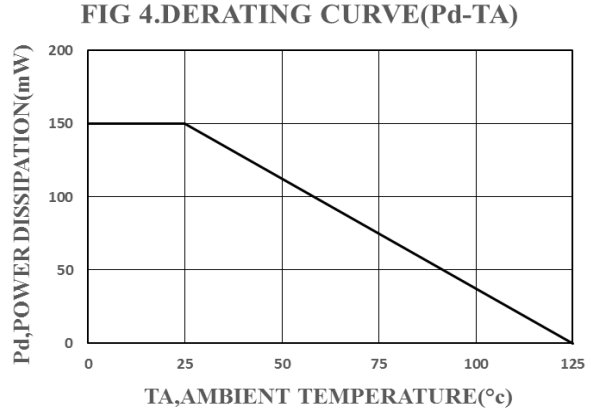
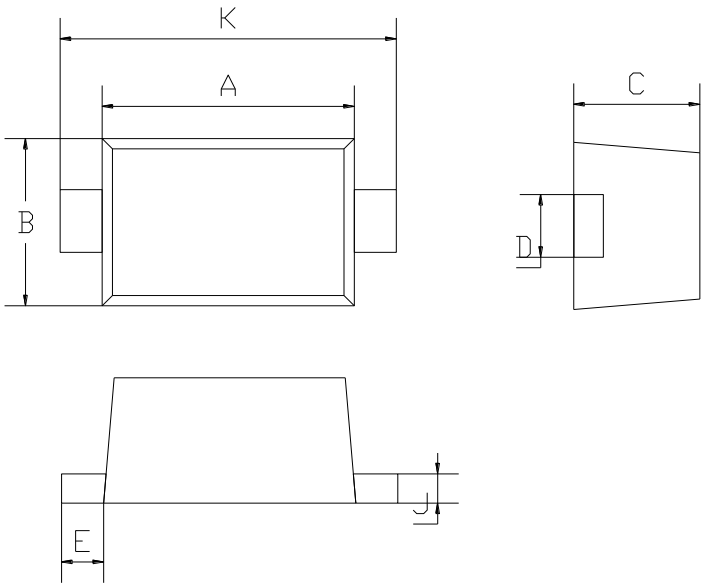


FIG 4.DERATING CURVE(Pd-TA)



Package Outline Dimensions (unit: mm)

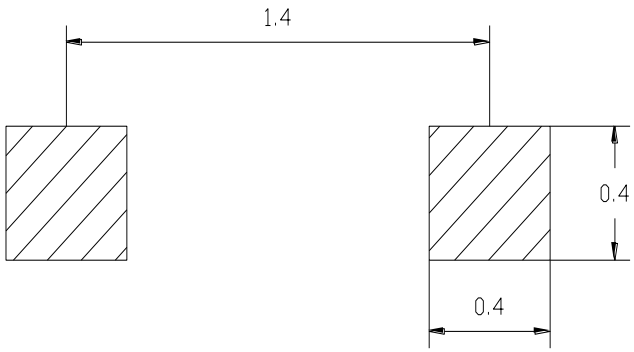
SOD-523



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



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