

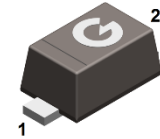
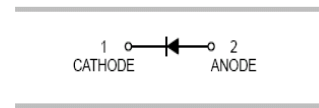
Features

- Forward current: $I_F \leq 0.5A$
- Reverse voltage: $V_R \geq 40V$
- Very low forward voltage

HF

Mechanical Data

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



SOD-523

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
SBT0540X	SOD-523	3000 pcs / Tape & Reel	SF

Maximum Ratings (@ $T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
RMS Reverse Voltage	V_{RMS}	28	V
Maximum Average Forward Output Current	$I_{F(AV)}$	0.5	A
Peak Forward Surge Current (8.3ms single half sine-wave)	I_{FSM}	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	200	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	300	$^\circ C/W$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	220	$^\circ C/W$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	240	$^\circ C/W$
Operating junction Temperature	T_J	-55 ~ +125	$^\circ C$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ C$

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu A$	40	-	-	V
Forward Voltage	V_F	$I_F = 0.01A$	-	0.25	-	V
		$I_F = 0.1A$	-	0.35	-	V
		$I_F = 0.5A$	-	-	0.5	V
Maximum Peak Reverse Current	I_R	$V_R = 40V$	-	-	50	μA

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

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

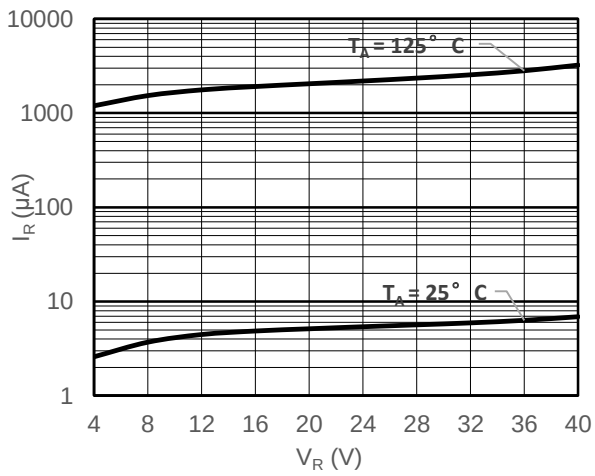


Fig 1 Typical Reverse Characteristic

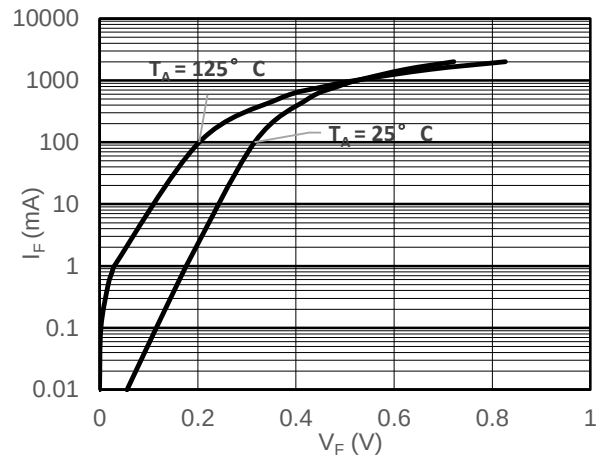


Fig 2 Typical Forward Characteristics

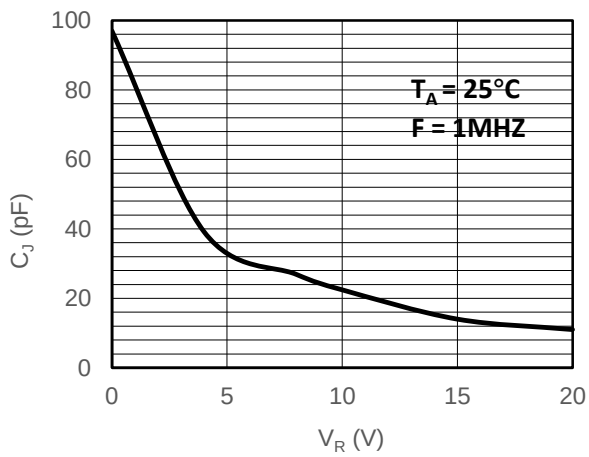
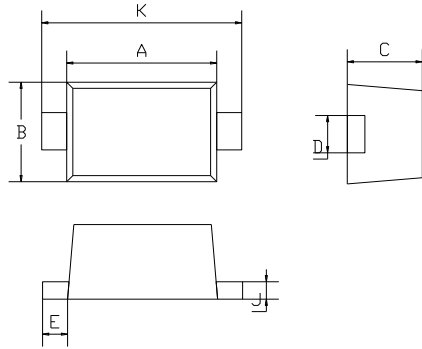


Fig 3 Capacitance Characteristics

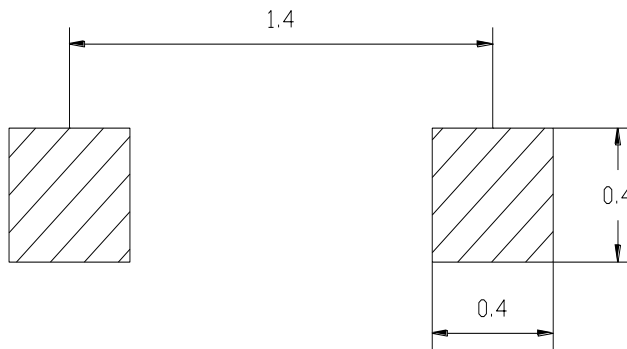
Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	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

Package Outline Dimensions (Unit: mm)

SOD-523



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