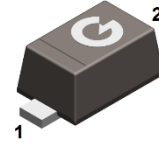


Features

- Low I_R
- High reliability
- Ultra small mold type
- RoHS compliant with Halogen-free

HF

Cathode 1 Anode 2



SOD-523

Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
RB520SH-30	SOD-523	3000 pcs / Tape & Reel	BH

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
DC Blocking Voltage	V_{DC}	30	V
Maximum Average Forward Output Current	$I_{F(AV)}$	200	mA
Peak Forward Surge Current (8.3ms single half sine-wave)	I_{FSM}	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	150	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	667	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on P.C.B. with 8mm*9mm copper pad areas

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	30	-	-	V
Forward Voltage	V_F	$I_F = 200\text{mA}, T_J = 25^\circ\text{C}$	-	0.48	0.6	V
		$I_F = 200\text{mA}, T_J = 125^\circ\text{C}$	-	0.41	-	V
Maximum Peak Reverse Current	I_R	$V_R = 10\text{V}, T_J = 25^\circ\text{C}$	-	0.13	1	μA
		$V_R = 30\text{V}, T_J = 25^\circ\text{C}$	-	0.5	2	μA
		$V_R = 30\text{V}, T_J = 125^\circ\text{C}$	-	195	-	μA
Diode capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	32	-	pF

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

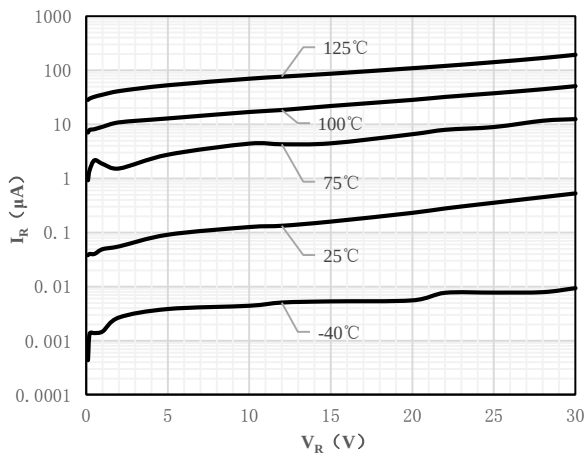


Fig 1 Typical Reverse Characteristic

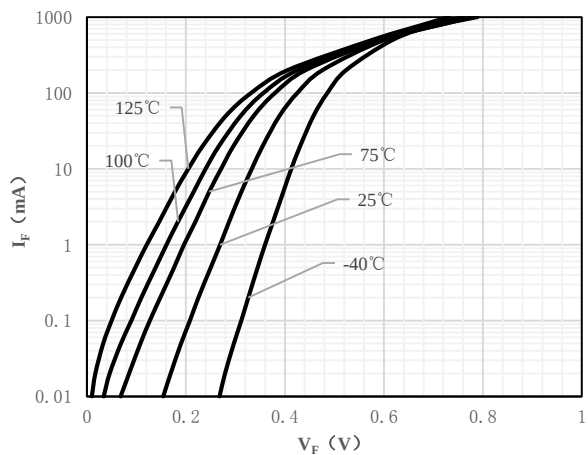


Fig 2 Typical Forward Characteristics

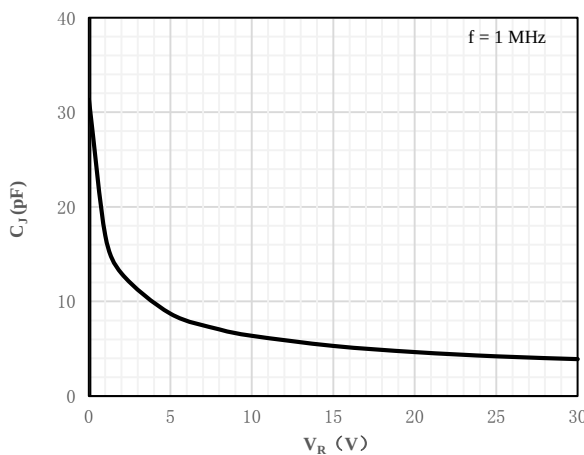


Fig 3 Capacitance Characteristics

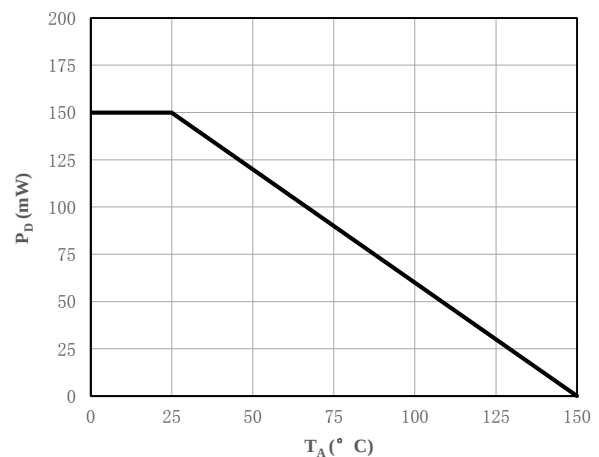
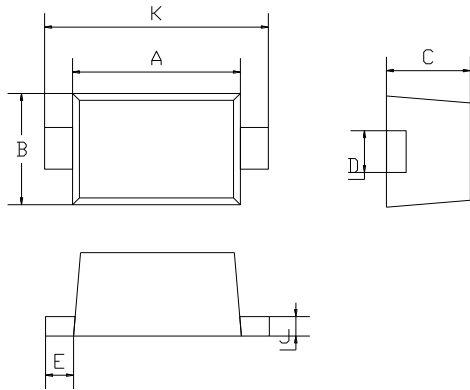


Fig 4 Power Derating Curve

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

