

Features

- High current rectifier schottky diode
- Low voltage
- Low inductance
- For power supply

HF

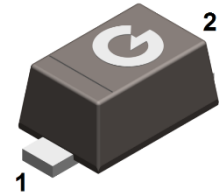
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Application

- High frequency rectification

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



SOD-523

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
RB551SH-30	SOD-523	3000 pcs / Tape & Reel	DH

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

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V _{RM}	30	V
DC Reverse Voltage	V _R	20	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 _{θJA}	230	°C/W
Thermal Resistance Junction-to-Case ^{*1}	R _{θJC}	140	°C/W
Thermal Resistance Junction-to-Lead ^{*1}	R _{θJL}	170	°C/W
Operating junction Temperature	T _J	-40 ~ +125	°C
Storage Temperature Range	T _{STG}	-40 ~ +125	°C

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

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 200\mu\text{A}$	20	-	-	V
Forward Voltage	V_F	$I_F = 0.1\text{A}$	-	-	0.35	V
		$I_F = 0.5\text{A}$	-	-	0.45	V
Maximum Peak Reverse Current	I_R	$V_R = 20\text{V}$	-	-	30	μA
Typical Junction Capacitance	C_J	$V_R = 4\text{V}, f = 1\text{MHz}$	-	45	-	pF
Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{A}, I_R = 1\text{A}, I_{rr} = 0.25\text{A}$	-	25	-	ns

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

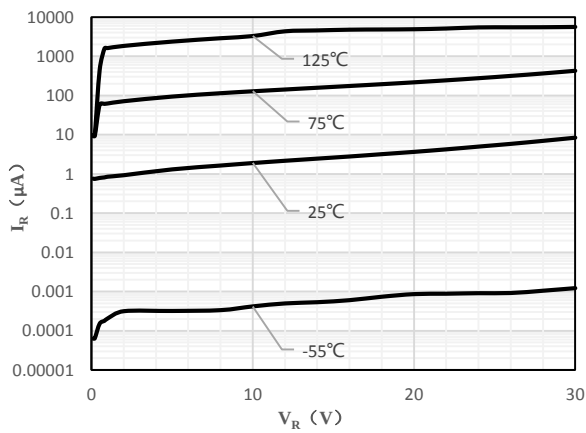


Fig 1 Typical Reverse Characteristic

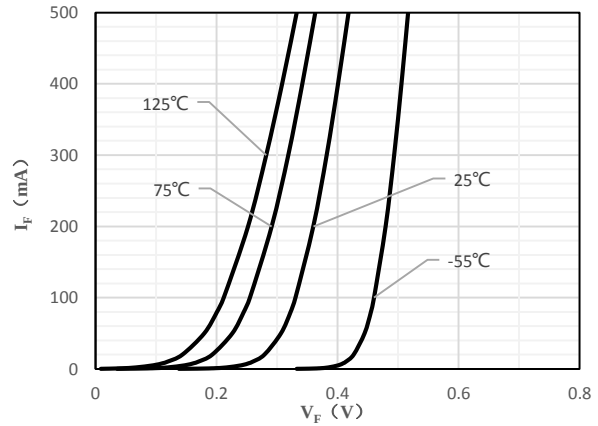


Fig 2 Typical Forward Characteristic

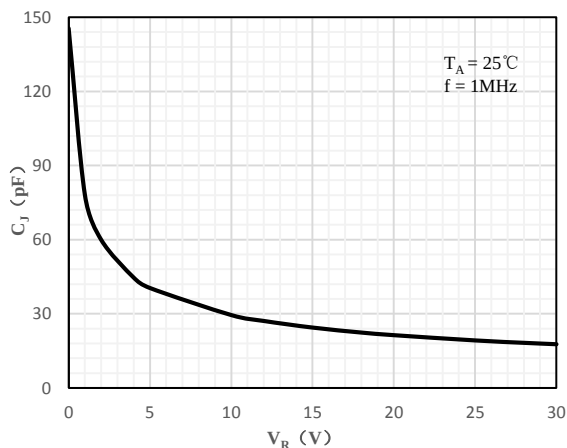
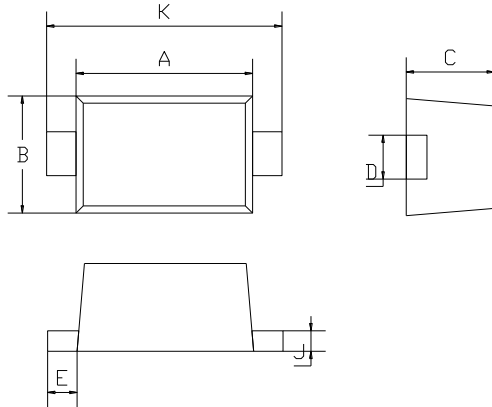


Fig 3 Capacitance vs. Reverse Voltage

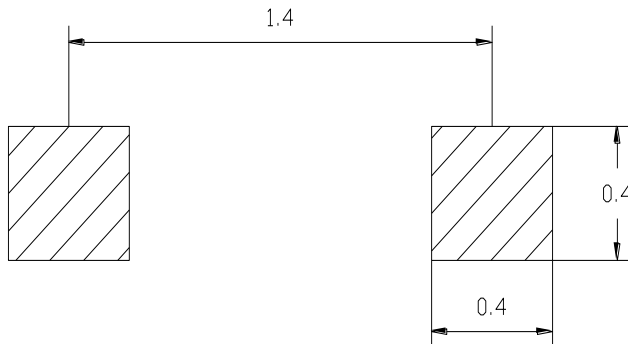
Package Outline Dimensions (Unit: mm)



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

Mounting Pad Layout (Unit: mm)

SOD-523



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