High Speed Switching Diode
1SS400

Features

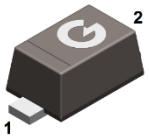
HF

- High speed and high reliability
- RoHS compliant with Halogen-free

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
1SS400	SOD-523	3000 pcs / Tape & Reel	A

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

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
DC Blocking Voltage	V_R	100	V
Average Rectified Output Current	I_F	100	mA
Forward Current	I_{FM}	225	mA
Peak Forward Surge Current, 1s Single Half-sine-wave	I_{FSM}	0.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	150	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	400	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	315	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	330	°C/W
Operating Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

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

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V_{BR}	I_R = 100μA	100	-	-	V
Forward Voltage	V_F	I_F = 100mA	-	-	1.2	V
Maximum Peak Reverse Current	I_R	V_R = 80V	-	-	0.1	μA
Total Capacitance	C_J	V_R = 0.5V, f = 1.0MHz	-	-	3	pF
Reverse Recovery Time	t_{rr}	I_F = 10mA, V_R = 6V R_L = 100Ω	-	-	4	ns

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

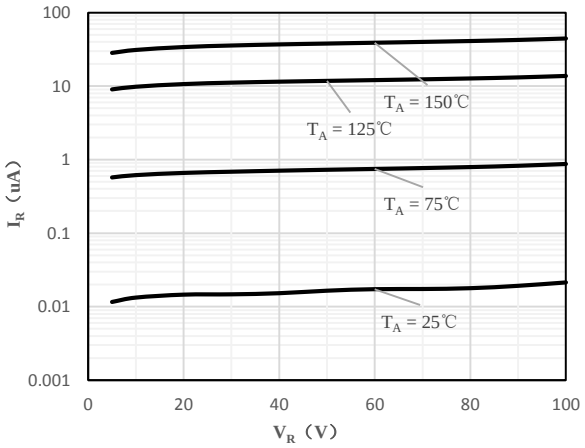


Fig 1 Typical Reverse Characteristic

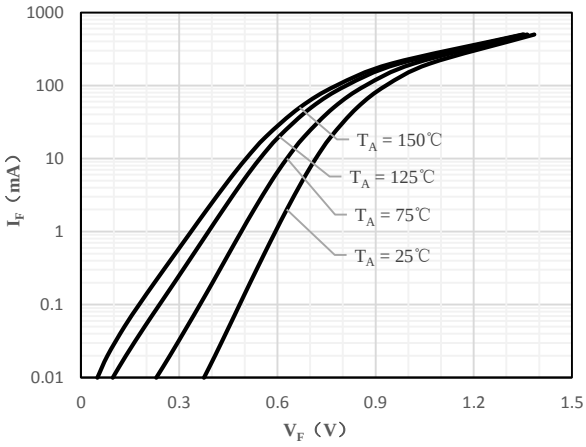


Fig 2 Typical Forward Characteristics

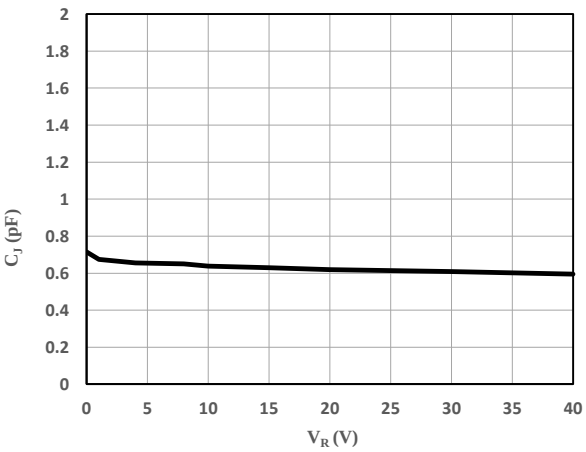


Fig 3 Capacitance vs. Reverse Voltage

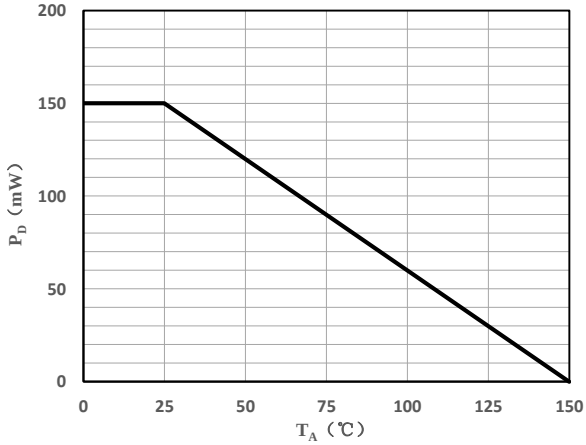


Fig 4 Power Derating Curve

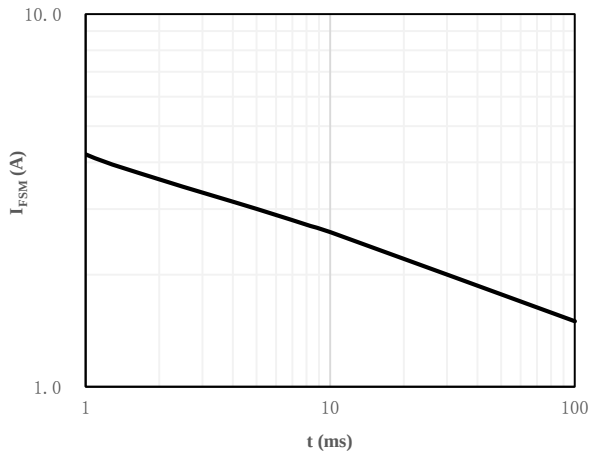


Fig 5 Surge Current Derating Curve

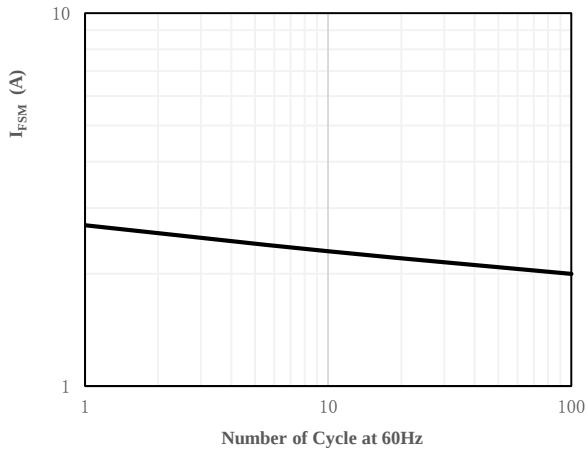
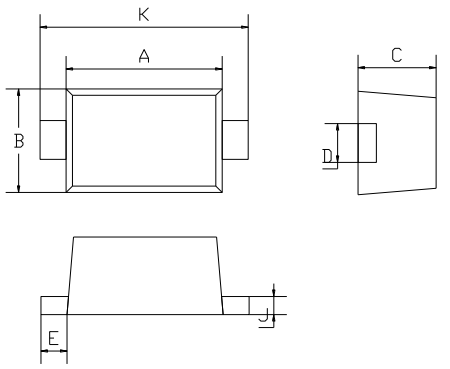


Fig 6 Surge Current Derating Curve

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

