Schottky Barrier Diode
B0540W

Features

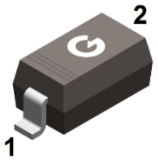
- High conductance
- Low forward voltage drop
- Guard ring construction for transient
- RoHS compliant with Halogen-free

HF

Mechanical Data

- Case: SOD-123
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208





SOD-123

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
B0540W	SOD-123	3000 pcs / Tape & Reel	SF

Maximum Ratings (@ T_A = 25℃ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}	40	V
DC Reverse Voltage	V_R	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}	5.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T_A = 25°C)	P_D	410	mW
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	244	°C/W
Operating Junction Temperature	T_J	-65 ~ +125	°C
Storage Temperature Range	T_{STG}	-65 ~ +125	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	I_R = 20μA	40	-	-	V
Forward Voltage	V_F	I_F = 0.5A, T_J = 25°C	-	-	0.51	V
		I_F = 1A, T_J = 25°C	-	-	0.62	V
		I_F = 0.5A, T_J = 100°C	-	-	0.46	V
		I_F = 1A, T_J = 100°C	-	-	0.61	V
Maximum Peak Reverse Current	I_R	V_R = 20V, T_J = 25°C	-	-	10	μA
		V_R = 40V, T_J = 25°C	-	-	20	μA
		V_R = 20V, T_J = 100°C	-	-	5	mA
		V_R = 40V, T_J = 100°C	-	-	13	mA
Diode capacitance	C_J	V_R = 0V, f = 1MHz	-	-	170	pF

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

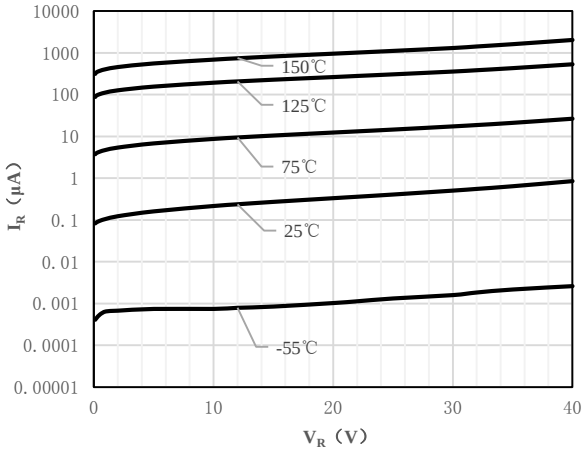


Fig 1 Typical Reverse Characteristic

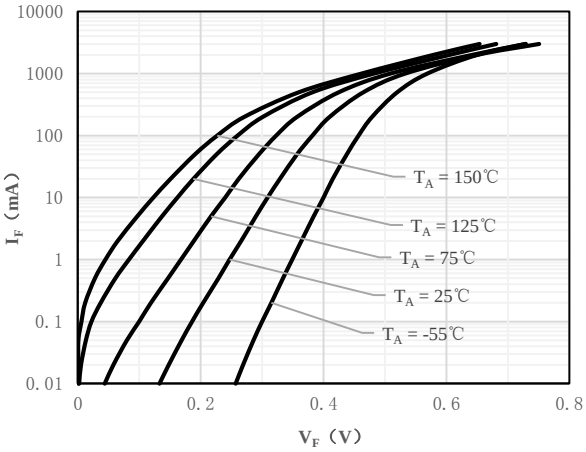


Fig 2 Typical Forward Characteristics

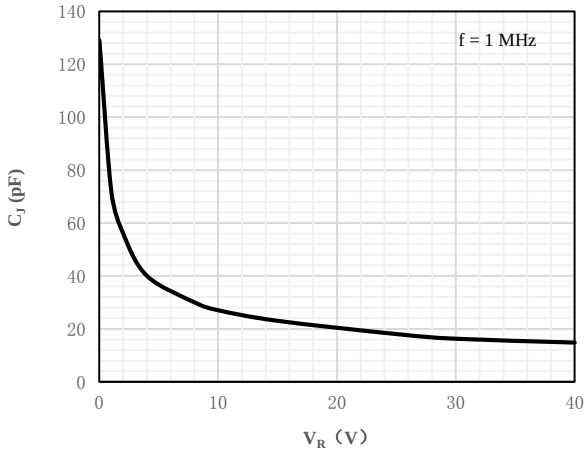


Fig 3 Capacitance vs. Reverse Voltage

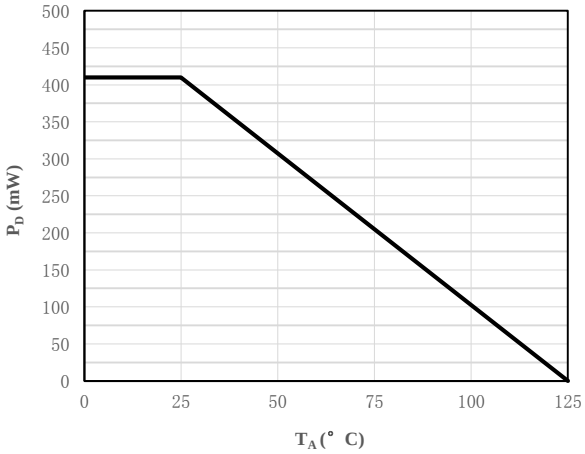
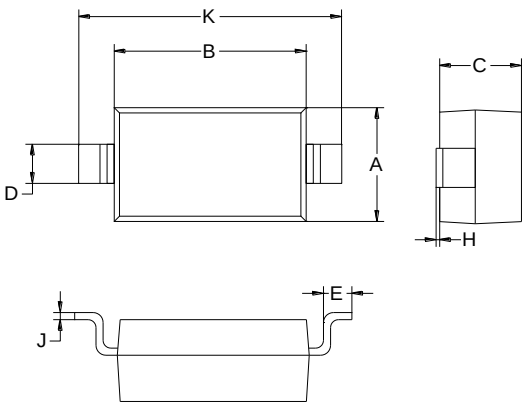


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOD-123		
Dimension	**Min.**	**Max.**
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Mounting Pad Layout (Unit: mm)

SOD-123

