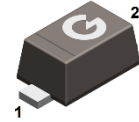


Features

- High switching speed
- Low leakage current
- High breakdown voltage
- Low capacitance
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

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
TBAS40X	SOD-523	3000 pcs / Tape & Reel	43

Maximum Ratings (@ T_A = 25°C 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
Continuous Forward Current	I _F	200	mA
Non-Repetitive Peak Forward Surge Current (t _p = 8.3ms)	I _{FSM}	600	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T _A = 25°C)	P _D	150	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	320	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	230	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	240	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°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	$V_{(BR)R}$	$I_R = 10\mu\text{A}$	40	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$	-	-	0.38	V
		$I_F = 40\text{mA}$	-	-	1	V
Maximum Peak Reverse Current	I_R	$V_R = 30\text{V}$	-	-	200	nA
Capacitance Between Terminals	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	2.5	5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$	-	-	5	ns

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

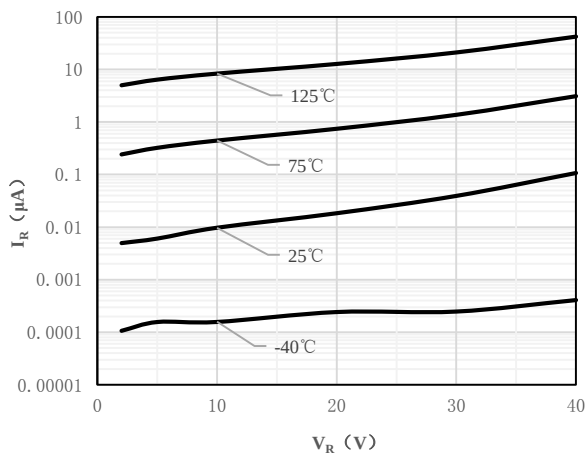


Fig 1 Typical Reverse Characteristic

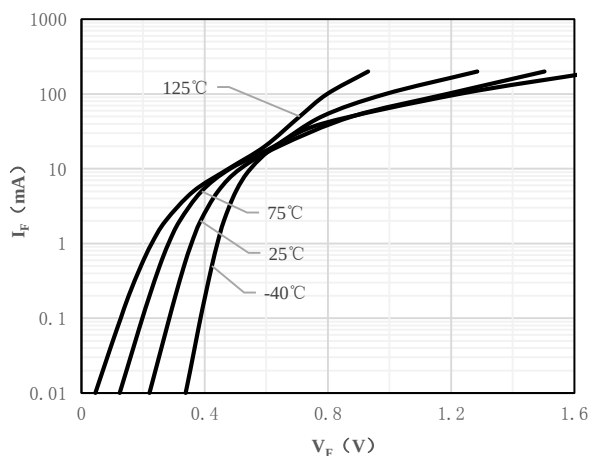


Fig 2 Typical Forward Characteristics

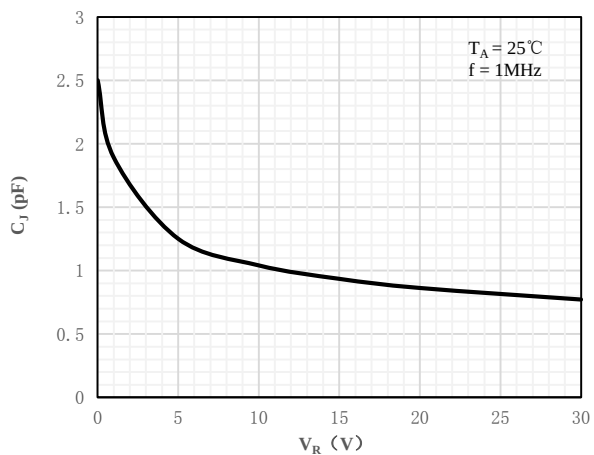


Fig 3 Capacitance Characteristics

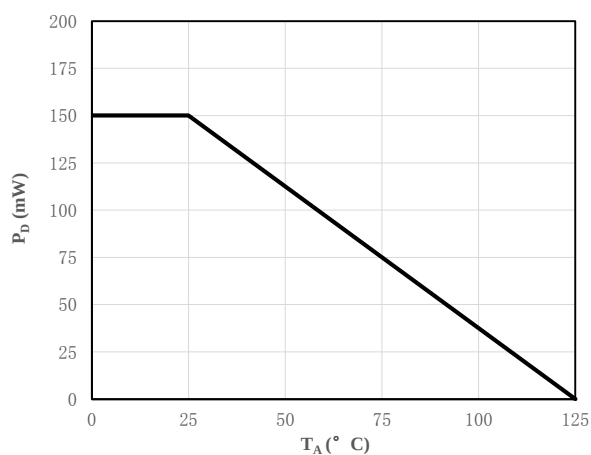
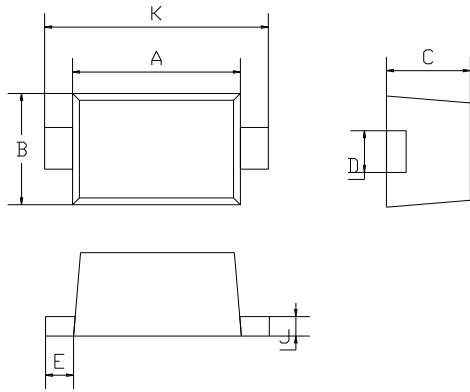


Fig 4 Power Derating Curve

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

