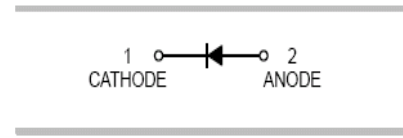


Features

- Low reverse current and forward voltage
- High reliability
- Low-profile SMT package
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF

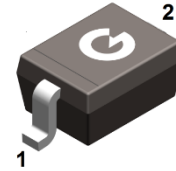


Typical Applications

- General purpose in mobile, handheld & desktop systems

Mechanical Data

- Case: SOD-323
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



SOD-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TSD103AWS	SOD-323	3000 pcs / Tape & Reel	S4
TSD103BWS	SOD-323	3000 pcs / Tape & Reel	S5
TSD103CWS	SOD-323	3000 pcs / Tape & Reel	S6

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

Parameter	Symbol	TSD103AWS	TSD103BWS	TSD103CWS	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	40	30	20	V
RMS Reverse Voltage	V _{RMS}	28	21	14	V
Maximum Average Forward Output Current	I _{F(AV)}	350			mA
Peak Forward Surge Current (8.3ms single half sine-wave)	I _{FSM}	1.5			A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	200	mW
Thermal Resistance (Junction-to-Ambient)	R _{θJA} *	500	°C/W
Thermal Resistance (Junction-to-Case)	R _{θJC}	276	°C/W
Operating junction Temperature	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note: * Part mounted on FR-4 board with recommended pad layout

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F^*	$I_F = 20\text{mA}$	-	-	0.37	V
		$I_F = 200\text{mA}$	-	-	0.60	
Maximum Peak Reverse Current	I_R^{**}	$V_R = 30\text{V}$ (TSD103AWS) $V_R = 20\text{V}$ (TSD103BWS) $V_R = 10\text{V}$ (TSD103CWS)	-	-	5	μA
Capacitance between Terminals	C_T	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	22	50	pF

Note: * Pulse width $\leq 380\mu\text{s}$; duty cycle $< 2\%$

** Pulse test; $T_p \leq 5\text{ms}$

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

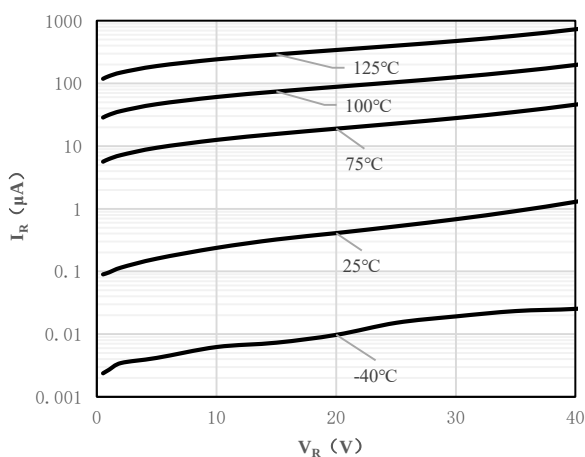


Fig 1 Typical Reverse Characteristic

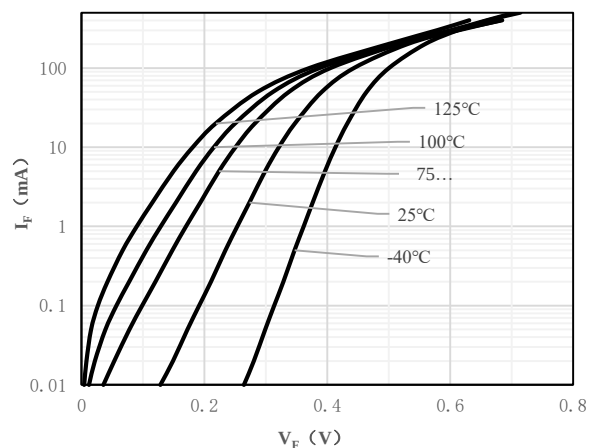


Fig 2 Typical Forward Characteristics

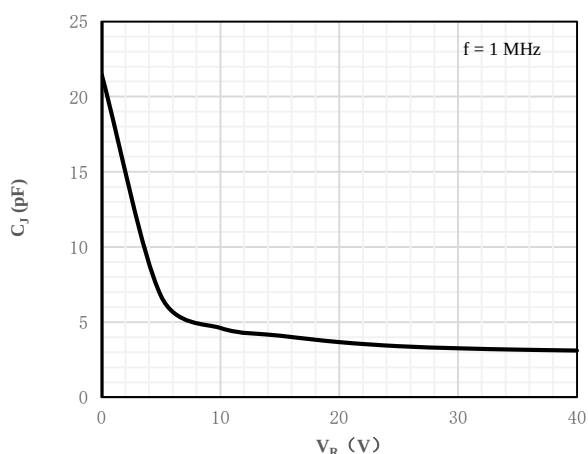


Fig 3 Capacitance vs. Reverse Voltage

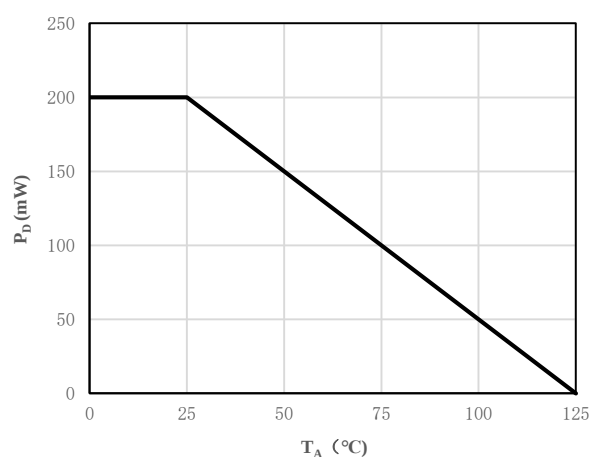
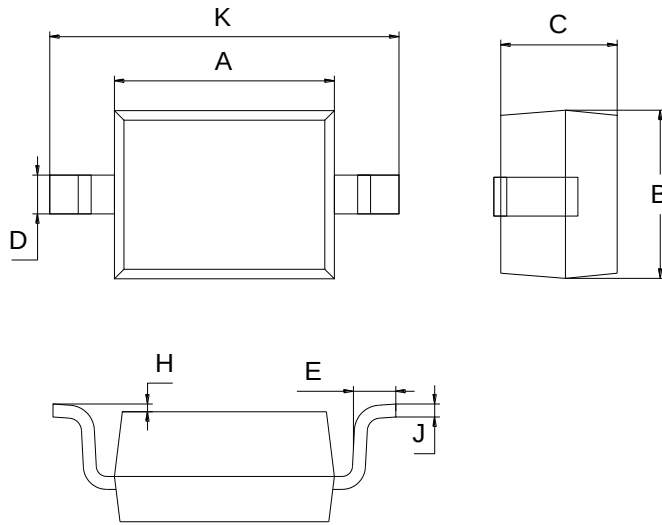


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOD-323		
Dimension	Min.	Max.
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout (Unit: mm)

SOD-323

