

Features

- Low forward voltage drop
- High breakdown voltage
- Guard ring protected
- Low capacitance
- Very small SMD package
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

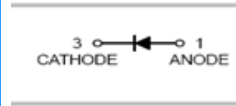
HF

Applications

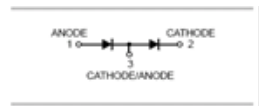
- Schottky barrier detector and switching diodes

Mechanical Data

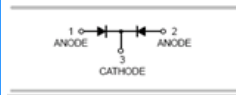
- Case: SOT-323
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



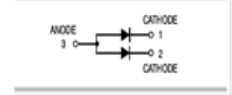
TBAS40W



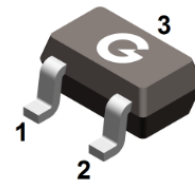
TBAS40W-04



TBAS40W-05



TBAS40W-06



SOT-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TBAS40W	SOT-323	3000 pcs / Tape & Reel	43
TBAS40W-04	SOT-323	3000 pcs / Tape & Reel	44
TBAS40W-05	SOT-323	3000 pcs / Tape & Reel	45
TBAS40W-06	SOT-323	3000 pcs / Tape & Reel	46

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
RMS Reverse Voltage	V _{R(RMS)}	28	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 ($T_A = 25^\circ\text{C}$)	P_D	200	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	360	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	210	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	270	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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 *2	V_F	$I_F = 1\text{mA}$	-	-	0.38	V
		$I_F = 40\text{mA}$	-	-	1	V
Maximum Peak Reverse Current *3	I_R	$V_R = 30\text{V}$	-	-	200	nA
Capacitance Between Terminals	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	3	5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1I_R, R_L = 100\Omega$	-	-	5	ns

Notes:

1. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper
2. Pulse test, $t_p \leq 300\mu\text{s}$
3. Pulse test, $t_p \leq 5\text{ms}$

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

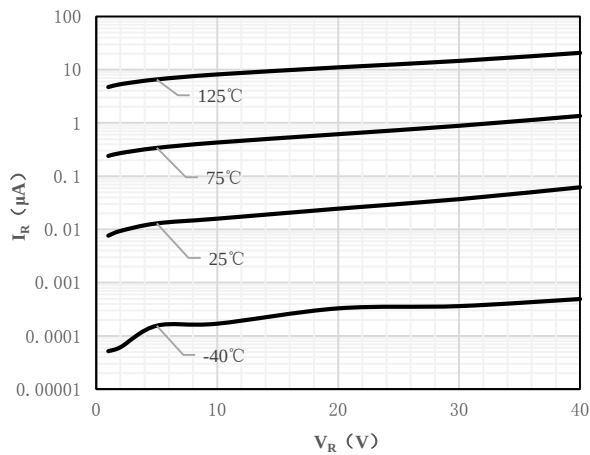


Fig 1 Typical Reverse Characteristic

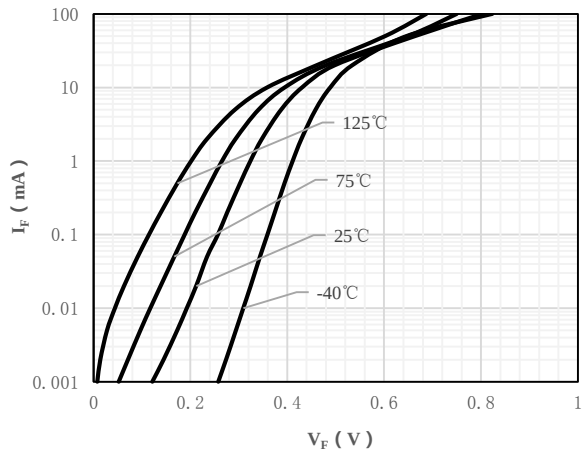


Fig 2 Typical Forward Characteristics

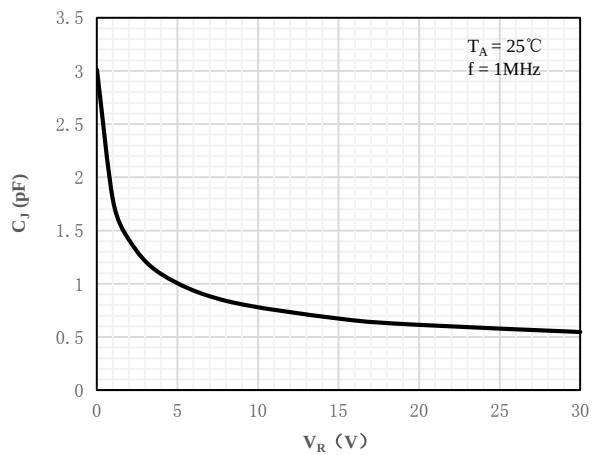


Fig 3 Capacitance Characteristics

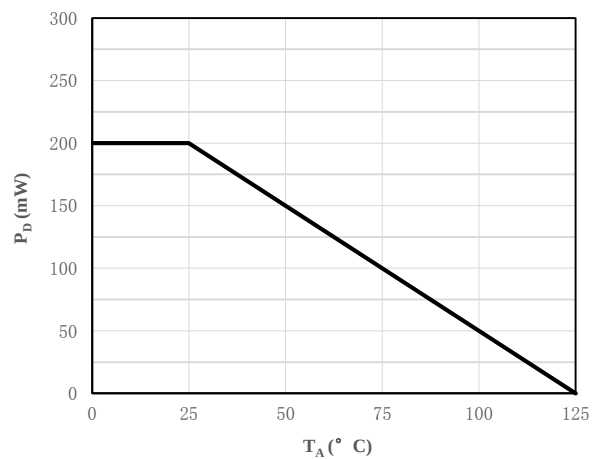
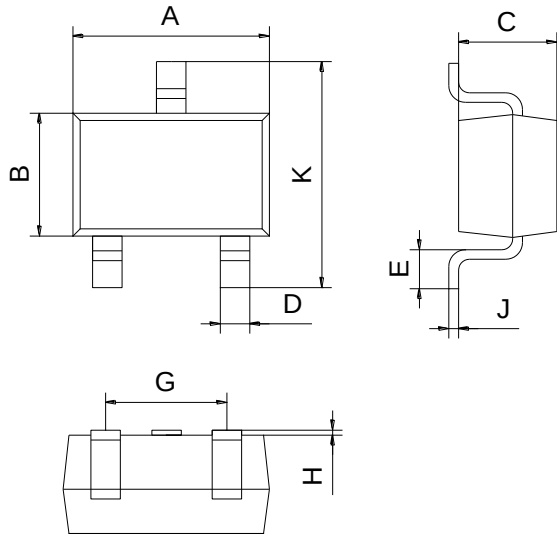


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-323		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout (Unit: mm)

SOT-323

