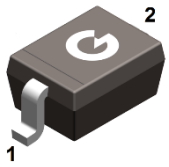
Switching Diode
TBAS416

Features

HF

- Fast switching speed
- Low leakage current
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards





SOD-323

Mechanical Data

- Case: SOD-323
- 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
TBAS416	SOD-323	3000 pcs / Tape & Reel	D4

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	100	V
DC Blocking Voltage	V_R	85	V
Average Rectified Output Current	I_F	200	mA
Peak Forward Surge Current, 1μs Single Half-sine-wave	I_{FSM}	4	A
Peak Forward Surge Current, 1ms Single Half-sine-wave	I_{FSM}	1	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I_{FSM}	0.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	250	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	312	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	192	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	211	°C/W
Operating Junction Temperature Range	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +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	$V_{(BR)R}$	I_R = 100μA	100	-	-	V
Forward Voltage	V_F	I_F = 1mA	-	-	0.90	V
		I_F = 10mA	-	-	1.00	V
		I_F = 50mA	-	-	1.10	V
		I_F = 150mA	-	-	1.25	V
Maximum Peak Reverse Current	I_R	V_R = 75V, T_J = 25°C	-	-	5	nA
		V_R = 75V, T_J = 150°C	-	-	80	nA
Total Capacitance	C_J	V_R = 0V, f = 1.0MHz	-	2	-	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 10mA I_{rr} = 0.1×I_R, R_L = 100Ω	-	-	3	μs

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

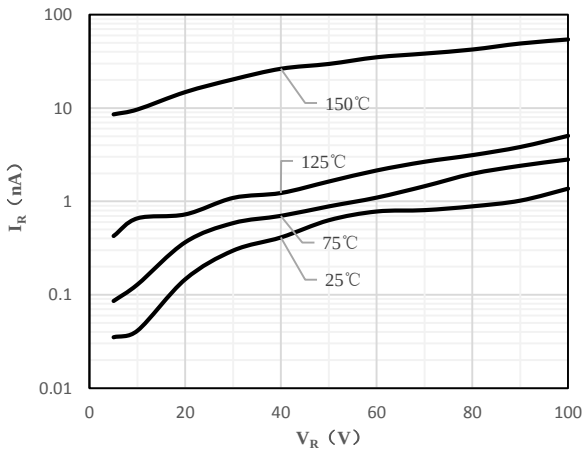


Fig 1 Typical Reverse Characteristic

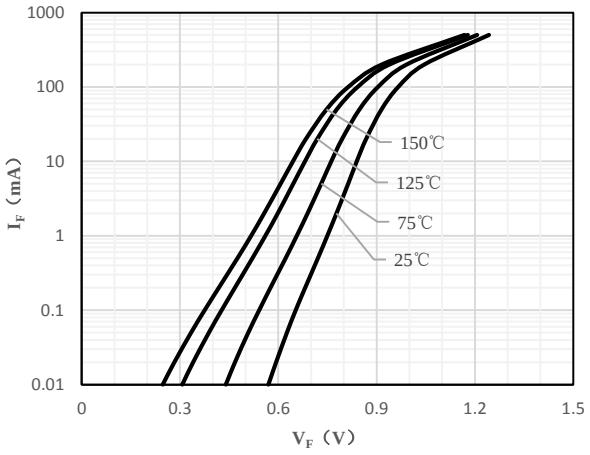


Fig 2 Typical Forward Characteristics

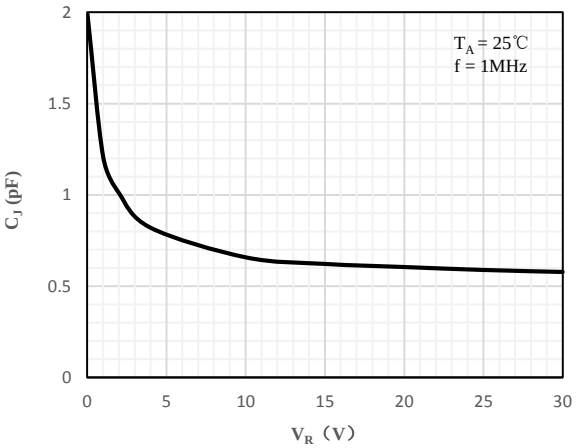


Fig 3 Capacitance vs. Reverse Voltage

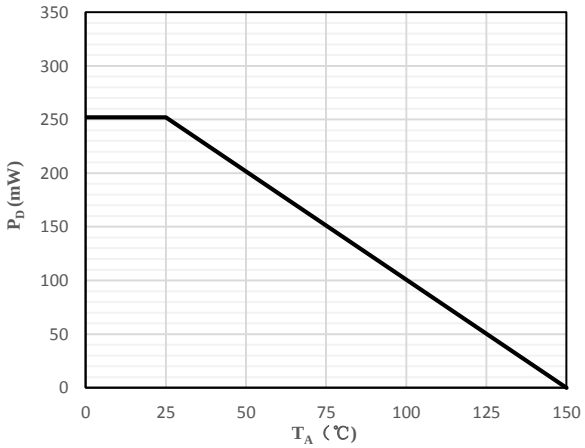


Fig 4 Power Derating Curve

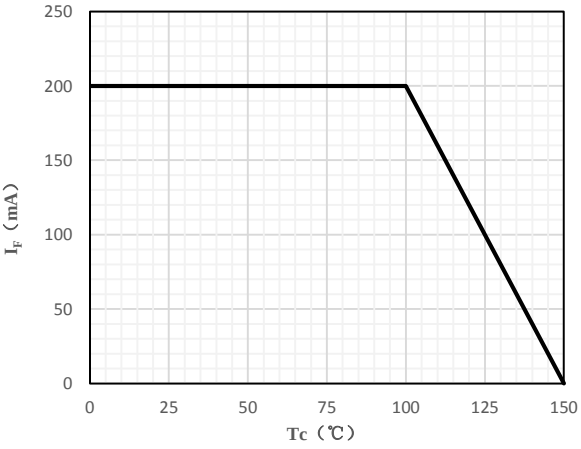
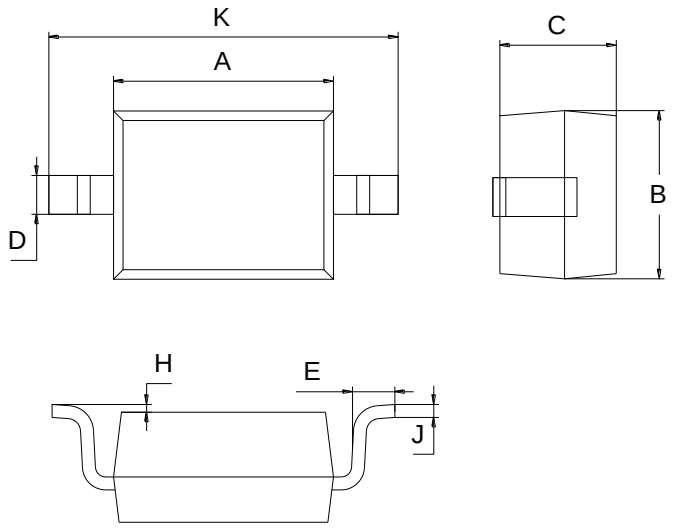


Fig 5 Current Derating Curve

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

