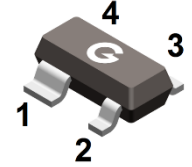
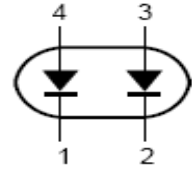


Features

- Continuous reverse voltage: max.200V
- Switching speed: 50ns
- Repetitive peak reverse voltage: max.250V
- Repetitive peak forward current: max.625mA
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOT-143

Mechanical Data

- Case: SOT-143
- 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
TBAV23	SOT-143	3000 pcs / Tape & Reel	L30

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	250	V
DC Blocking Voltage	V _R	200	V
Forward Continuous Current (single diodes)	I _F	225	mA
Forward Continuous Current (double diodes)		125	mA
Repetitive Peak Forward Surge Current	I _{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current, t = 1μs	I _{FSM}	9	A
Non-Repetitive Peak Forward Surge Current, t = 1ms		3	A
Non-Repetitive Peak Forward Surge Current, t = 1s		1.7	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T _A = 25°C)	P _D	400	mW
Thermal Resistance Junction-to-Air ^{*1}	R _{θJA}	312	°C/W
Thermal Resistance Junction-to-Case ^{*1}	R _{θJC}	215	°C/W
Thermal Resistance Junction-to-Lead ^{*1}	R _{θJL}	227	°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 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 = 100μA	200	-	-	V
Forward Voltage	V _F	I _F = 100mA	-	-	1.00	V
		I _F = 200mA	-	-	1.25	V
Forward Voltage Series Connection		I _F = 100mA			2.00	V
		I _F = 200mA	-	-	2.50	V
Reverse Leakage Current	I _R	V _R = 200V, T _J = 25°C	-	-	100	nA
		V _R = 200V, T _J = 150°C	-	-	100	μA
Reverse Leakage Current Series Connection		V _R = 400V, T _J = 25°C	-	-	100	nA
		V _R = 400V, T _J = 150°C	-	-	100	μA
Total Capacitance	C _J	V _R = 0V, f = 1.0MHz	-	-	5	pF
Total Capacitance Series Connection		V _R = 0V, f = 1.0MHz	-	-	2.5	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 10mA I _{rr} = 0.1×I _R , R _L = 100Ω	-	-	50	ns

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

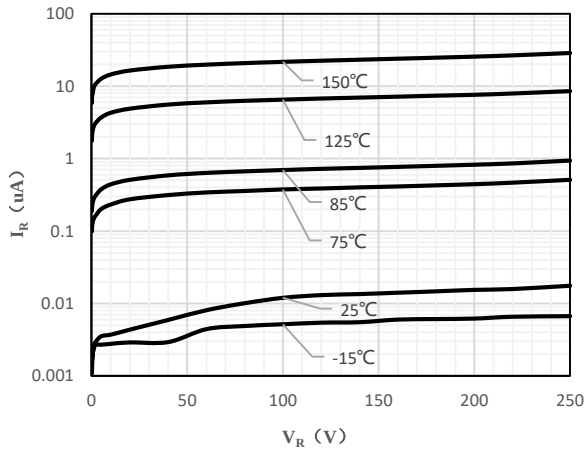


Fig 1 Typical Reverse Characteristic

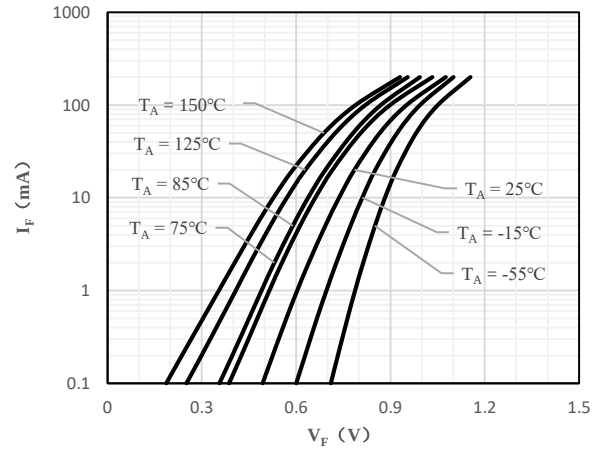


Fig 2 Typical Forward Characteristics

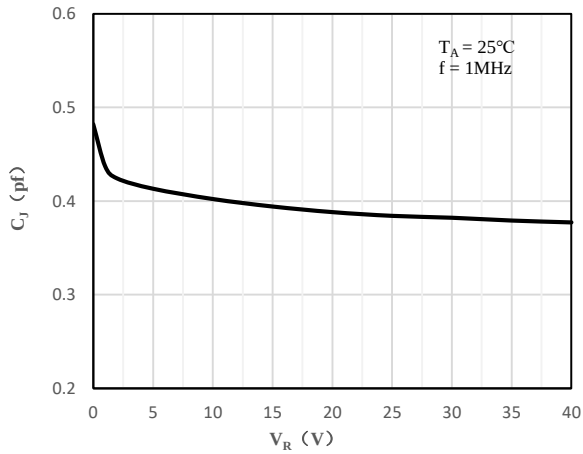


Fig 3 Capacitance vs. Reverse Voltage

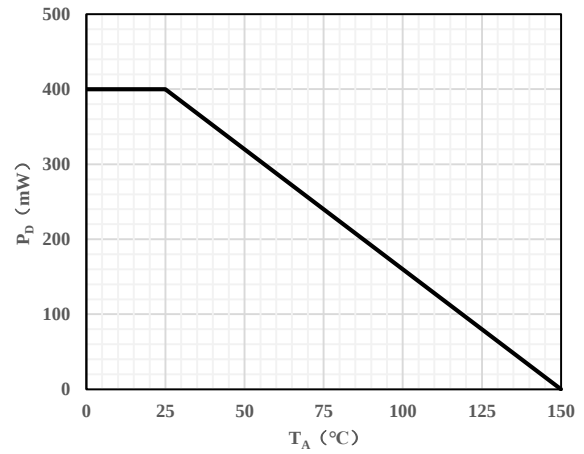


Fig 4 Power Derating Curve

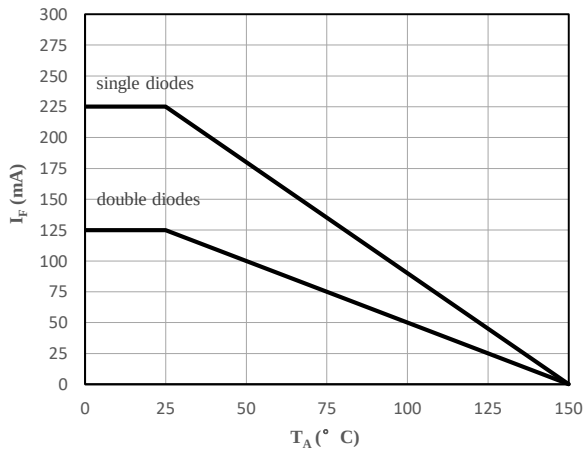
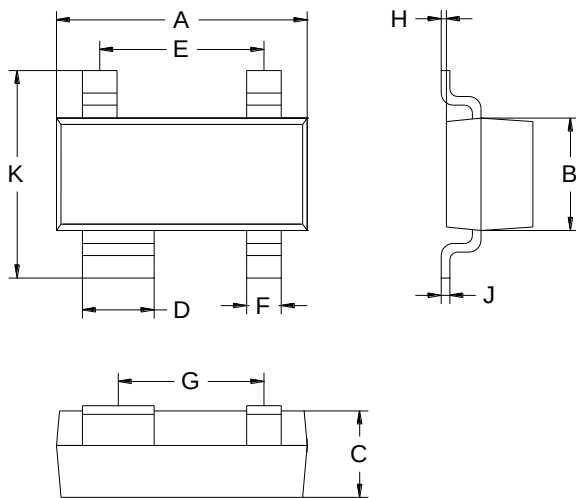


Fig 5 Current Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-143		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.78	0.88
E	1.80	2.00
F	0.37	0.43
G	1.59	1.79
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-143

