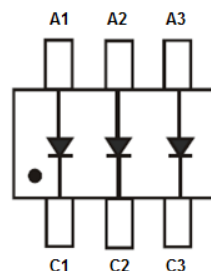


Features

- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free

HF



SOT-563

Mechanical Data

- Case: SOT-563
- 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
BAS16TV	SOT-563	3000 pcs / Tape & Reel	A2

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

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V _{RRM}	100	V
Working Peak Reverse Voltage	V _{RWM}	100	V
DC Blocking Voltage	V _R	100	V
RMS Reverse Voltage	V _{R(RMS)}	70	V
Forward Current	I _F	150	mA
Non-Repetitive Peak Forward Surge Current, t _p = 1ms	I _{FSM}	1	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P _D	350	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	357	°C/W
Thermal Resistance Junction-to-Air *2	R _{θJA}	300	°C/W
Thermal Resistance Junction-to-Case *2	R _{θJC}	230	°C/W
Thermal Resistance Junction-to-Lead *2	R _{θJL}	250	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Notes:

1. Device mounted on FR-4 PCB, on minimum recommended, 2oz copper pad layout
2. 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	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	100	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$	-	-	0.715	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 50\text{mA}$	-	-	1.000	V
		$I_F = 150\text{mA}$	-	-	1.250	V
Maximum Peak Reverse Current	I_R	$V_R = 25\text{V}$	-	-	30	nA
		$V_R = 80\text{V}$	-	-	0.5	μA
		$V_R = 25\text{V}, T_J = 150^\circ\text{C}$	-	-	30	μA
		$V_R = 80\text{V}, T_J = 150^\circ\text{C}$	-	-	50	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	1.5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

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

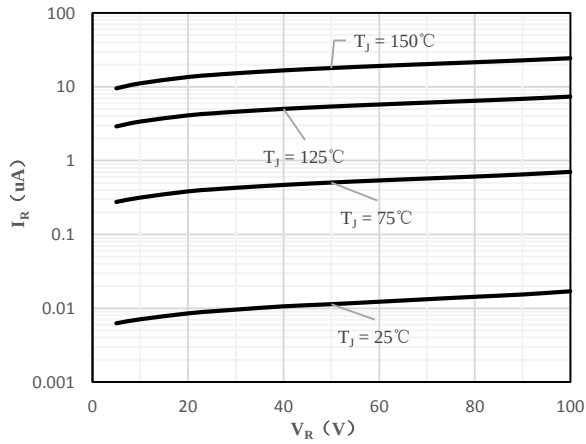


Fig 1 Typical Reverse Characteristic

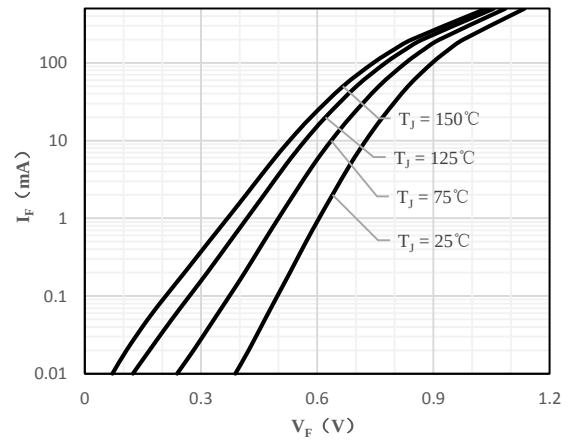


Fig 2 Typical Forward Characteristics

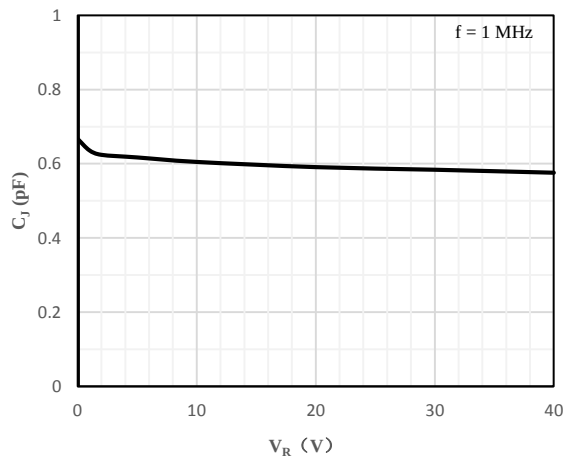


Fig 3 Capacitance vs. Reverse Voltage

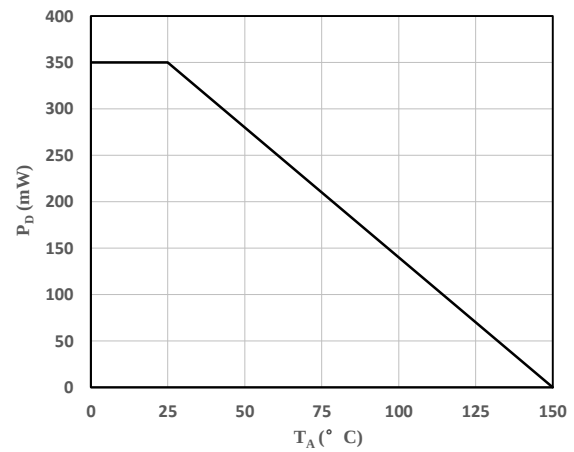
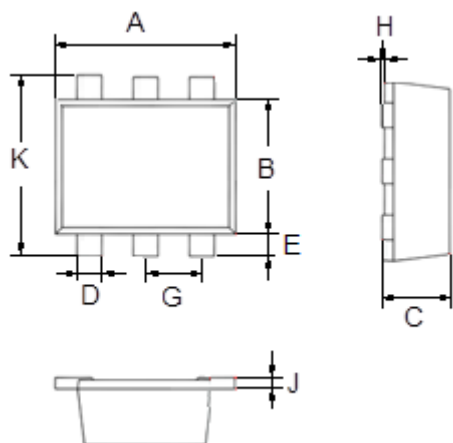


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-563		
Dimension	Min.	Max.
A	1.500	1.700
B	1.100	1.300
C	0.525	0.600
D	0.170	0.270
E	0.100	0.300
G	0.450	0.550
H	0.000	0.050
J	0.090	0.160
K	1.500	1.700

Package Outline Dimensions (Unit: mm)

SOT-563

