

Features

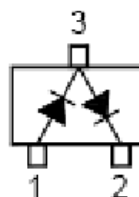
- Fast switching device ($T_{rr} < 4.0\text{ns}$)
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- Pb free version and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code



Mechanical Data

- Case : Flat lead SOT-323 small outline plastic package
- Terminal : Matte tin plated, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: $260^{\circ}\text{C}/\text{S}$
- Polarity : Indicated by cathode band
- Weight : 5 mg

Pin Configuration



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Absolute Maximum Ratings ($T_A = 25^{\circ}\text{C}$)

Parameter	Symbol	Value	Units
Peak Repetitive Reverse Voltage	V_{RRM}	85	V
Reverse Voltage	V_R	75	V
Continuous Forward Current	Single Diode Load	150	mA
	Double Diode Load	130	
Repetitive Peak Forward Current	I_{FRM}	500	mA
Peak Forward Surge Current ($t_p = 10\text{ms}$)	at $t = 1\mu\text{s}$	4	A
	at $t = 1\text{ms}$	1	
	at $t = 1\text{s}$	0.5	
Total Power Dissipation	P_{tot}	200	mW
Thermal Resistance form Junction Ambient	R_{thJA}	625	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150	$^{\circ}\text{C}$

Characteristics at $T_A = 25^{\circ}\text{C}$

Parameter	Symbol	Max.	Units
Forward Voltage	V_F	0.715 0.855 1 1.25	V
at $I_F = 1\text{mA}$			
at $I_F = 10\text{mA}$			
at $I_F = 150\text{mA}$			
Reverse Current	I_R	30 1 30 50	nA uA uA uA
at $V_R = 25\text{V}$			
at $V_R = 75\text{V}$			
at $V_R = 25\text{V}, T_j = 150^{\circ}\text{C}$			
at $V_R = 75\text{V}, T_j = 150^{\circ}\text{C}$			
Total Capacitance	C_d	1.5	pF
at $V_R = 0\text{V}, f = 1\text{MHz}$			
Reverse Recovery Time	t_{rr}	4	ns
at $I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$			

Small Signal Product

Fig. 1 Forward Current Derating Curve

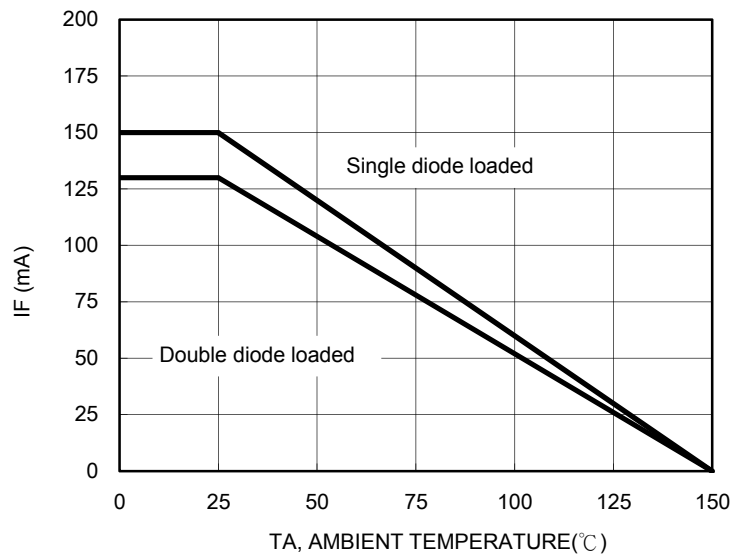


Fig. 2 Forward Characteristics

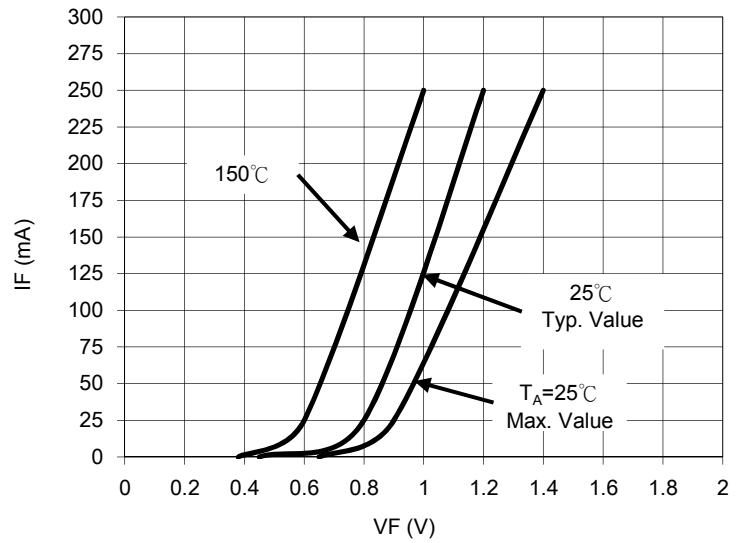


Fig. 3 Maximim Non-repetitive Peak Forward Surge Current

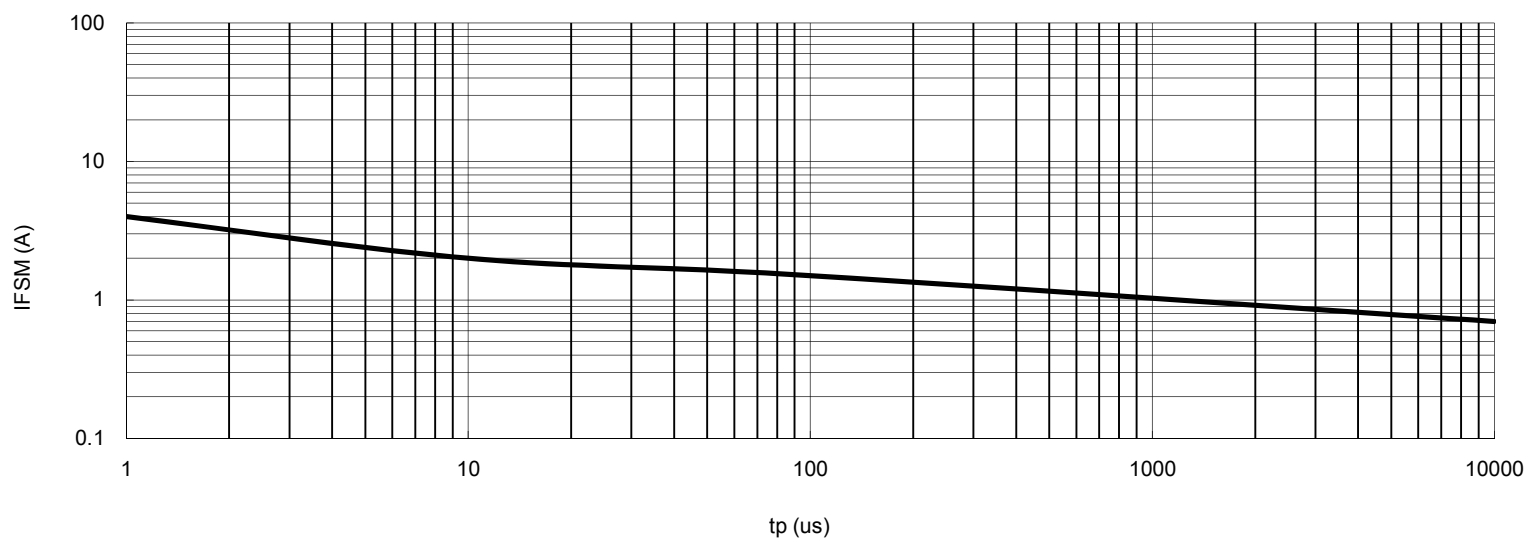


Fig. 4 Typical Reverse Characteristics

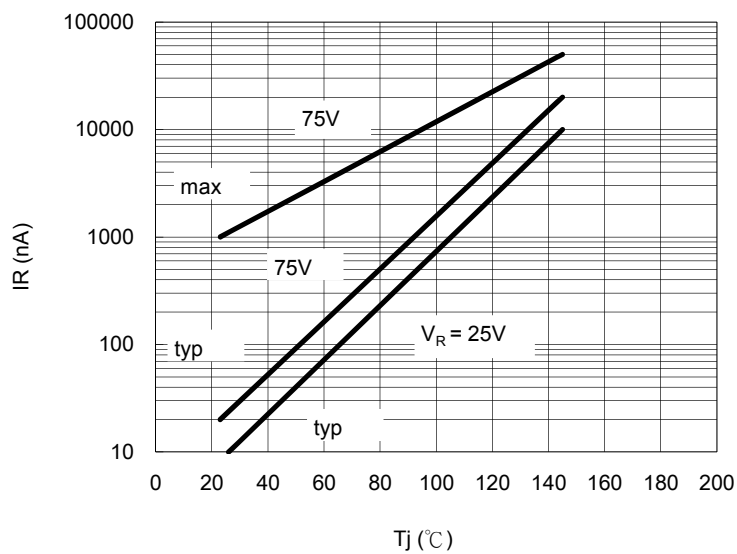
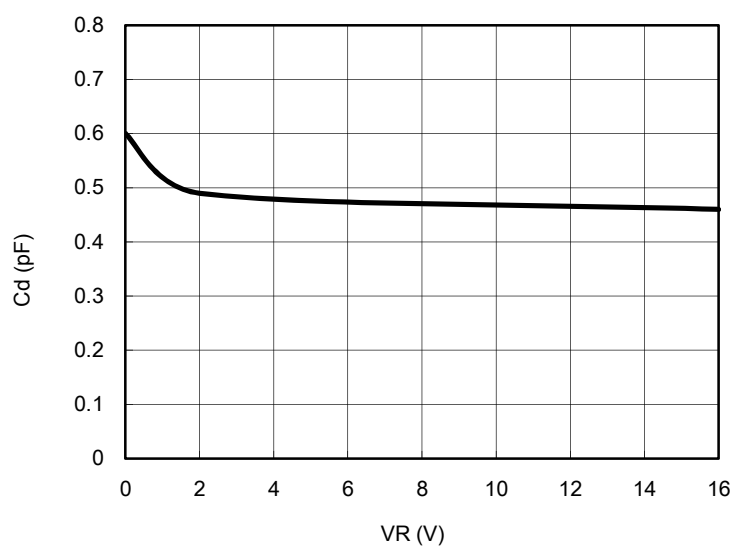
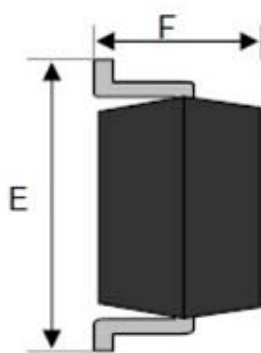
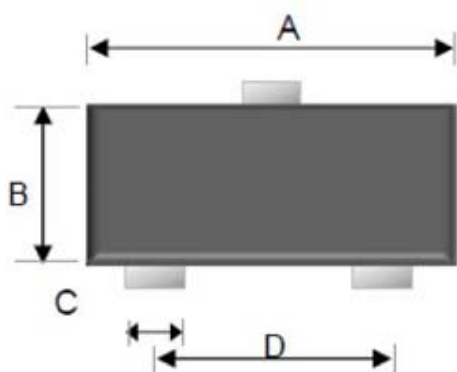


Fig. 5 Typical Capacitance



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Dimensions

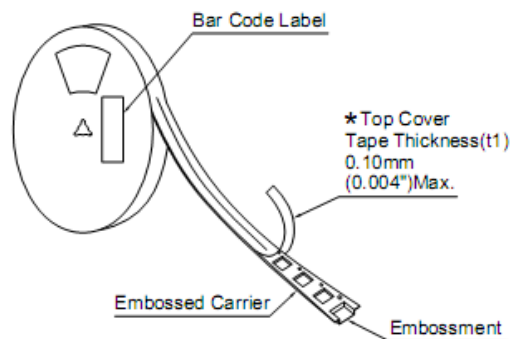
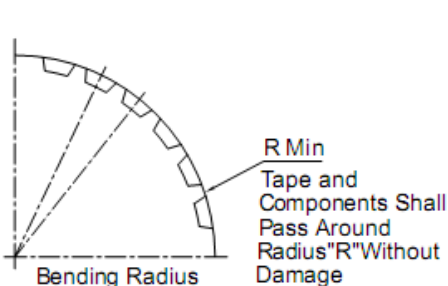
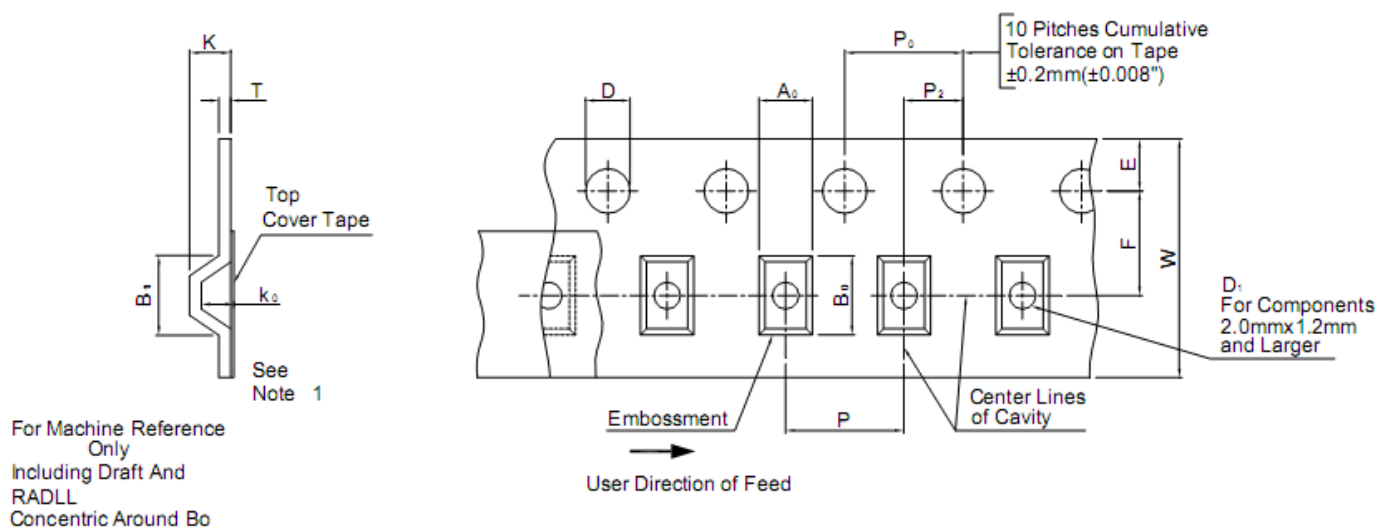


DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.90	2.10	0.075	0.083
B	1.15	1.35	0.045	0.053
C	0.25	0.35	0.010	0.014
D	1.20	1.40	0.047	0.055
E	2.00	2.45	0.079	0.096
F	0.80	1.00	0.031	0.039

Ordering Information

Part No.	Package	Packing	Packing code	Packing code (Green)	Marking
BAV99W	SOT-323	3K / 7" Reel	RF	RFG	A7

Tape and Reel specification



Tape Size	B1	D	D1	E	F	K	P0	P2	R
	max	+0.1;-0	min	± 1.0	± 0.05	max	± 0.1	± 0.1	min
8 mm	4.55	1.5	1	1.75	3.5	2.4	4	2	25

T	W
max	max
0.6	8.3

Unit (mm)