

Features

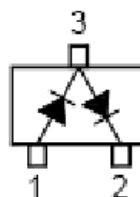
Fast switching device ($T_{rr} < 4.0\text{ns}$)
Surface device type mounting
Moisture sensitivity level 1
Matte Tin(Sn) lead finish with Nickel(Ni) underplate
Pb free version and RoHS compliant
Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code



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	I_F	Single Diode Load 150	mA
		Double Diode Load 130	
Repetitive Peak Forward Current	I_{FRM}	500	mA
Peak Forward Surge Current ($t_p = 10\text{ms}$)	I_{FSM}	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 at $I_F = 1\text{mA}$ at $I_F = 10\text{mA}$ at $I_F = 50\text{mA}$ at $I_F = 150\text{mA}$	V_F	0.715 0.855 1 1.25	V
Reverse Current 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 $V_R = 75\text{V}$, $T_J = 150^{\circ}\text{C}$		30 1 30 50	
Total Capacitance at $V_R = 0\text{V}$, $f = 1\text{MHz}$	C_d	1.5	pF
Reverse Recovery Time at $I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$	t_{rr}	4	ns

Small Signal Product

Fig. 1 Forward Current Derating Curve

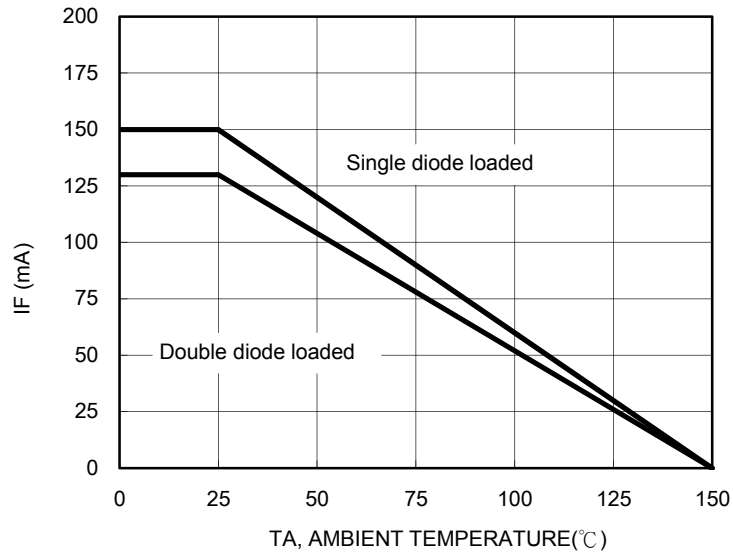


Fig. 2 Forward Characteristics

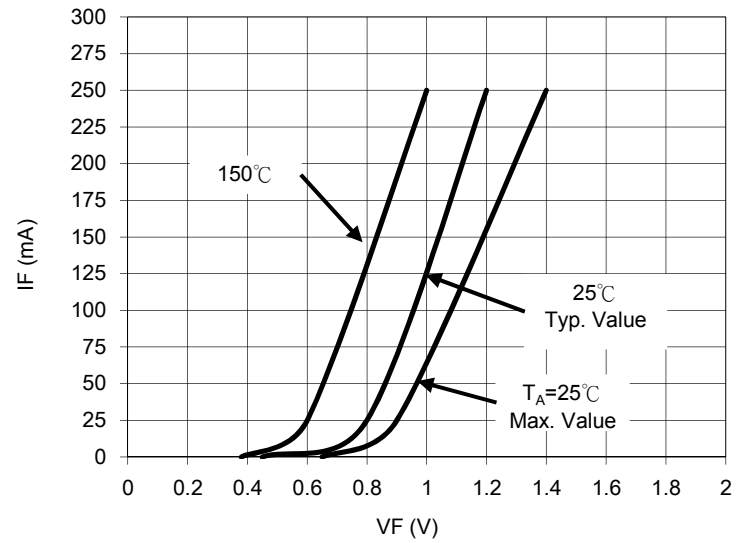


Fig. 3 Maximim Non-repetitive Peak Forward Surge Current

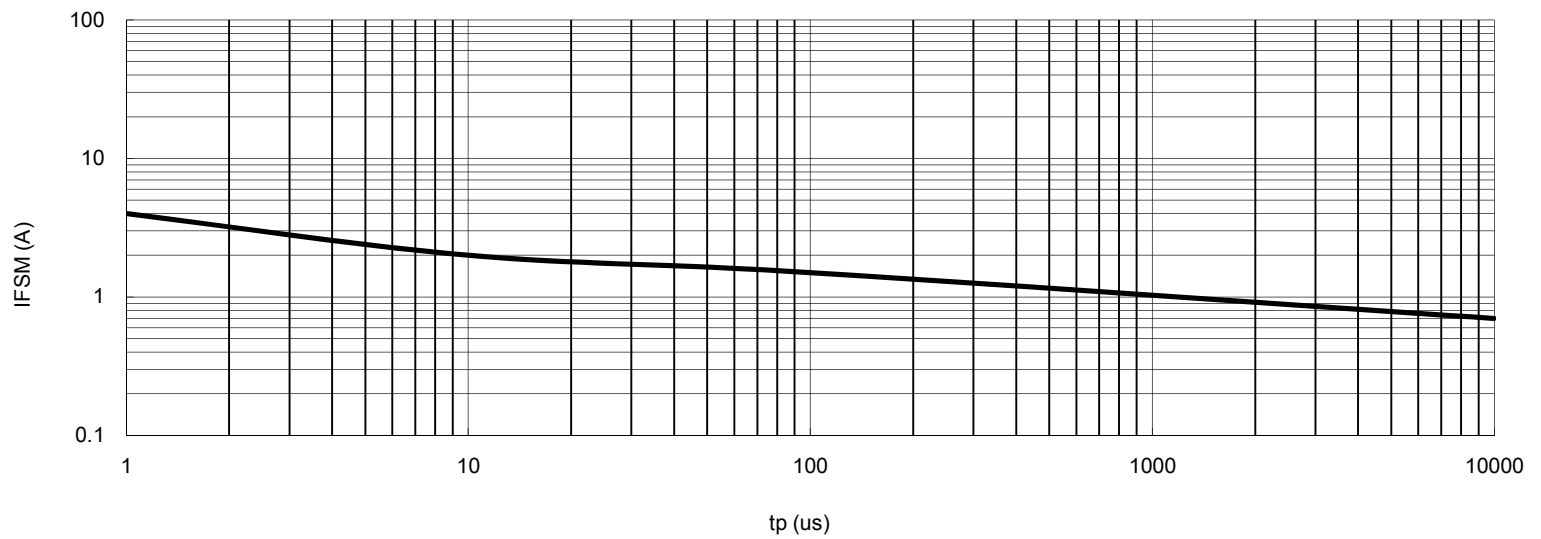


Fig. 4 Typical Reverse Characteristics

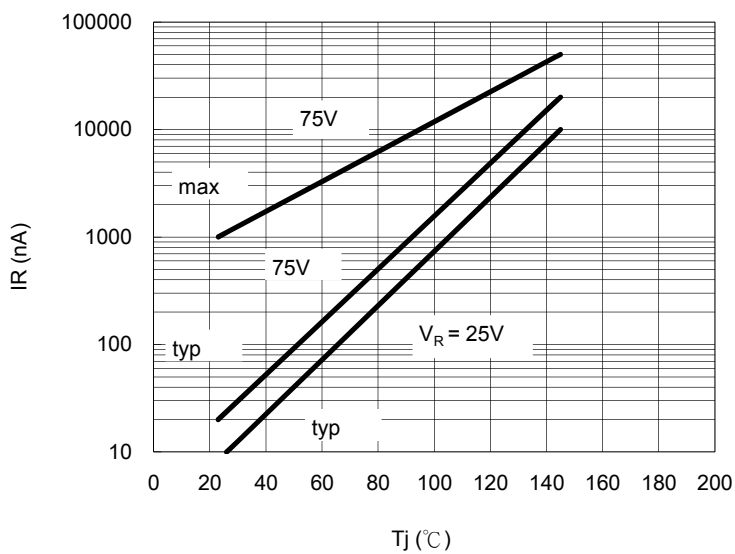
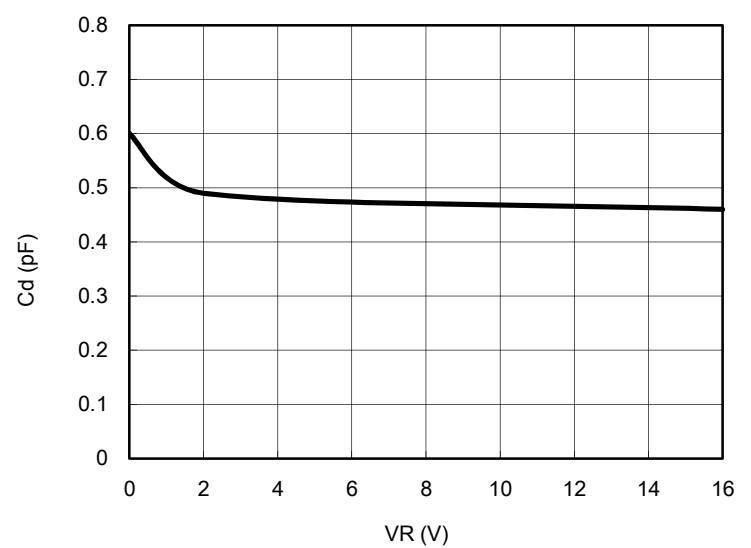
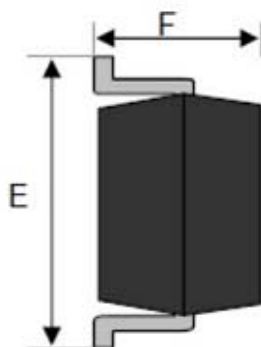
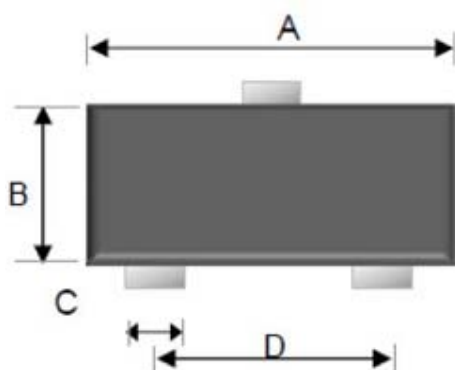


Fig. 5 Typical Capacitance



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Dimensions

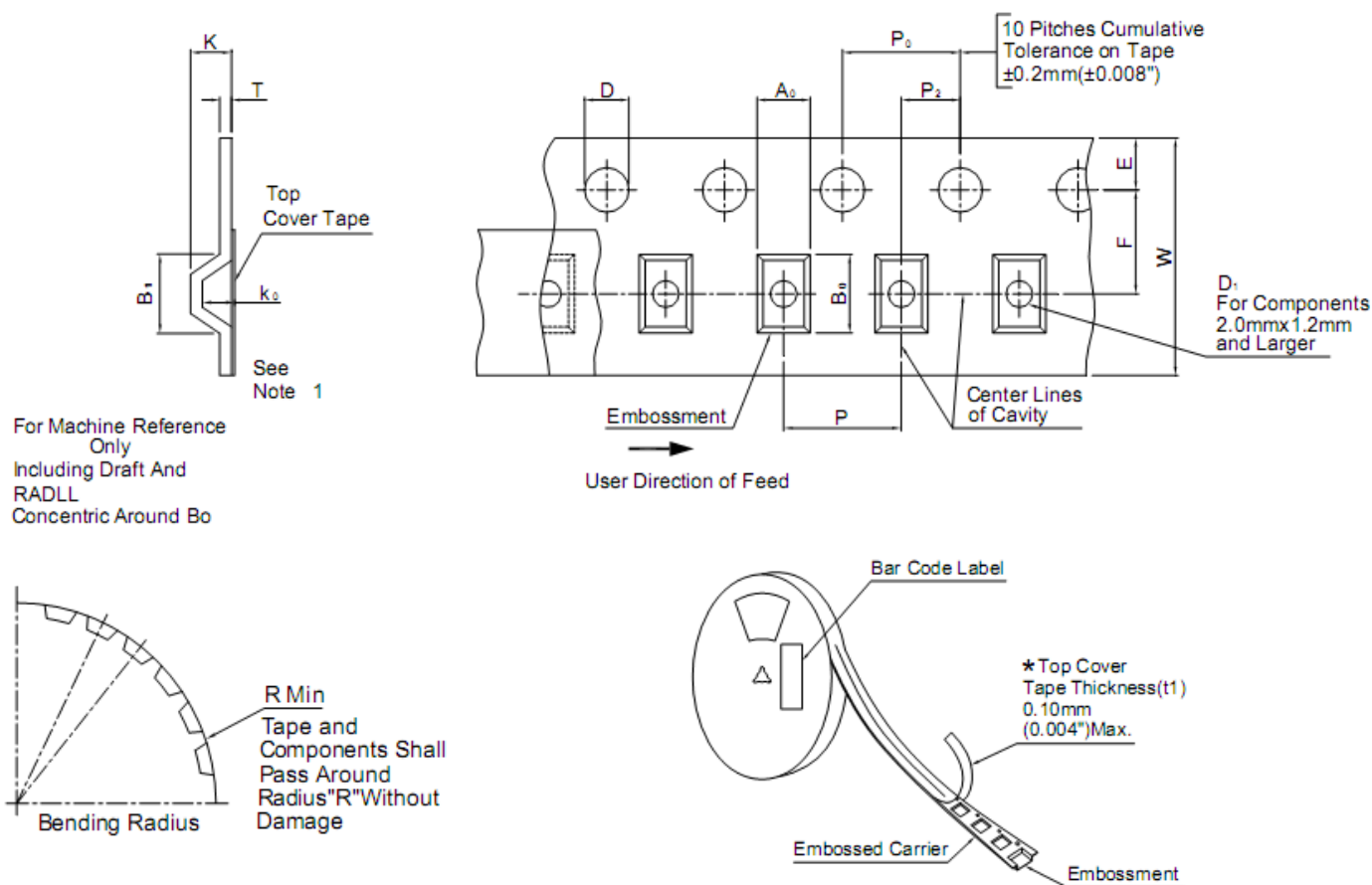


DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.90	2.10	0.075	0.083
B	1.15	1.35	0.045	0.053
C	0.25	0.35	0.010	0.014
D	1.20	1.40	0.047	0.055
E	2.00	2.45	0.079	0.096
F	0.80	1.00	0.031	0.039

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)