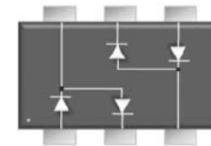


SOT-363

Features

- ◇ Fast switching speed
- ◇ High reverse breakdown voltage rating
- ◇ 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 : SOT-363 small outline plastic package
- ◇ Terminal : Matte tin plated, lead free, solderable per MIL-STD-202, method 208 guaranteed
- ◇ High temperature soldering guaranteed : 260°C/10s
- ◇ Case material UL flammability rating 94V-0
- ◇ Weight : 0.008 grams (approximately)
- ◇ Marking Code : K1

Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)	Marking	Manufacture code
BAV99S	SOT-363	3K / 7 " Reel	RF	RFG	K1	D0

Note : Detail please see "Ordering Information(detail, example)" below.

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Parameter	Symbol	Value	Units
Power Dissipation	P_D	250	mW
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Repetitive Peak Forward Current	I_{FRM}	450	mA
Mean Forward Current	I_O	200	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	I_{FSM}	4.5 0.5	A
Junction and Storage Temperature Range	T_J, T_{STG}	-65 to 150	°C

Electrical Characteristics

Parameter	Symbol	Min	Max	Units	
Reverse Breakdown Voltage $I_R=2.5\mu A$	$V_{(BR)}$	75	-	V	
Forward Voltage	V_F	$I_F=1.0mA$	-	0.715	V
		$I_F=10mA$	-	0.855	
		$I_F=50mA$	-	1.000	
		$I_F=100mA$	-	1.200	
		$I_F=150mA$	-	1.250	
Reverse Leakage Current @ $V_R=75V$	I_R	-	@ $T_j=25^\circ C$	1	μA
@ $T_j=150^\circ C$			50		
Junction Capacitance $V_R=0, f=1.0MHz$	C_J	-	1.5	pF	
Reverse Recovery Time (Note 2)	T_{rr}	-	4	nS	

Note 1 : Pulse width = 1 μ sec & 1 sec

Note 2 : Reverse recovery test conditions : $I_F=I_R=10mA, R_L=100\Omega$

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 Maximum Permissible Continuous Forward Current As A Function of Soldering Point Temperature

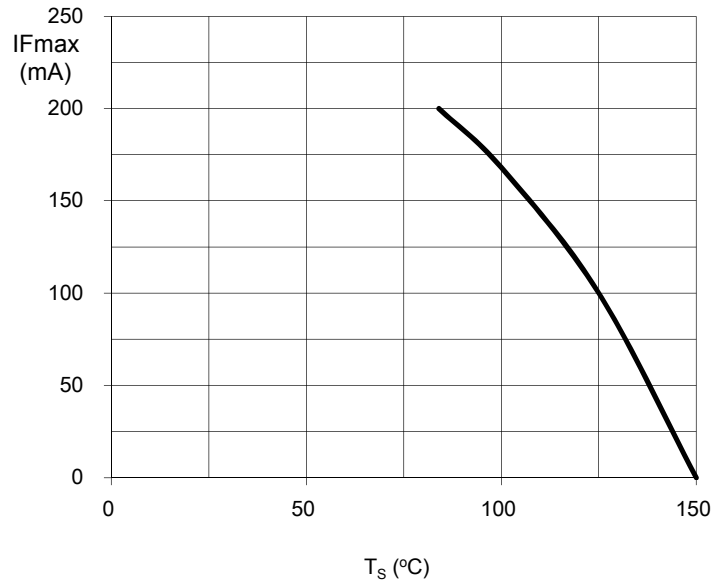


Fig. 2 Forward Current As A Function of Forward Voltage

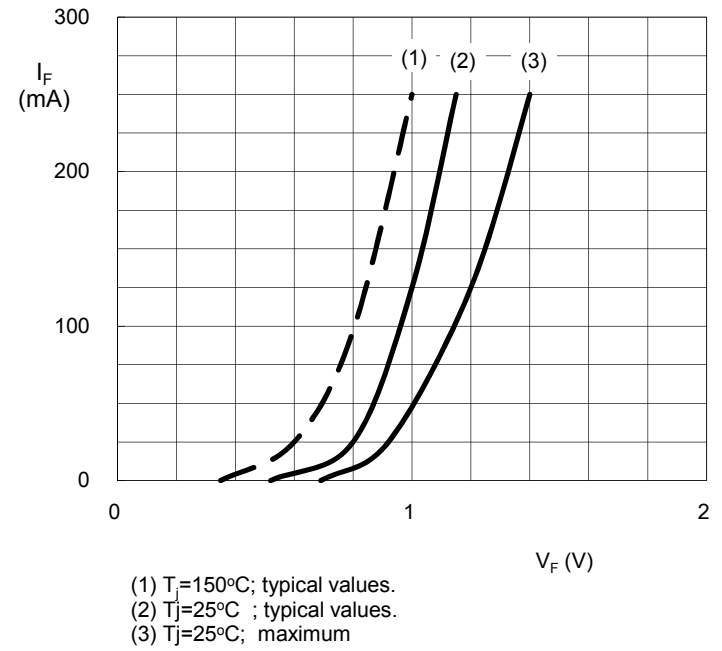
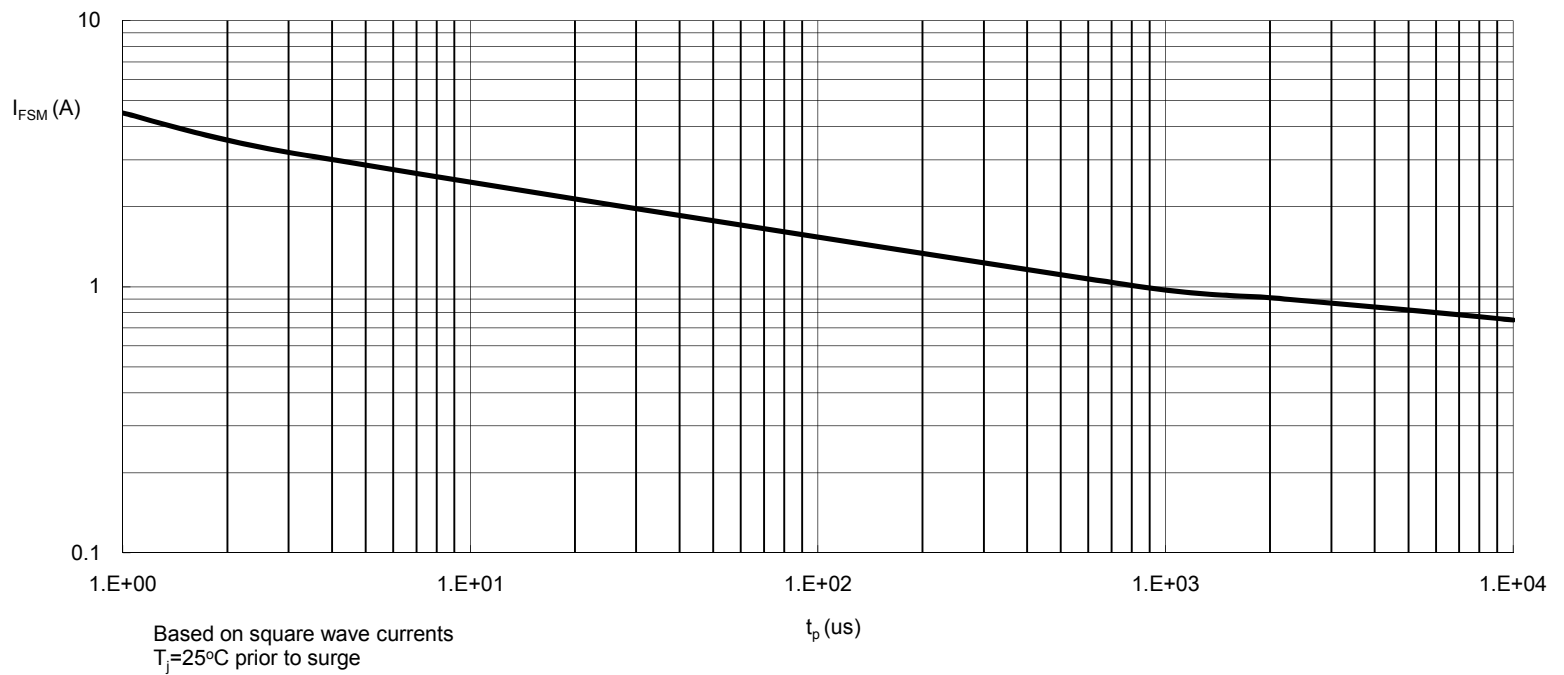


Fig. 3 Maximum Permissible Non-Repetitive Peak Forward Current As A Function of Pulse Duration

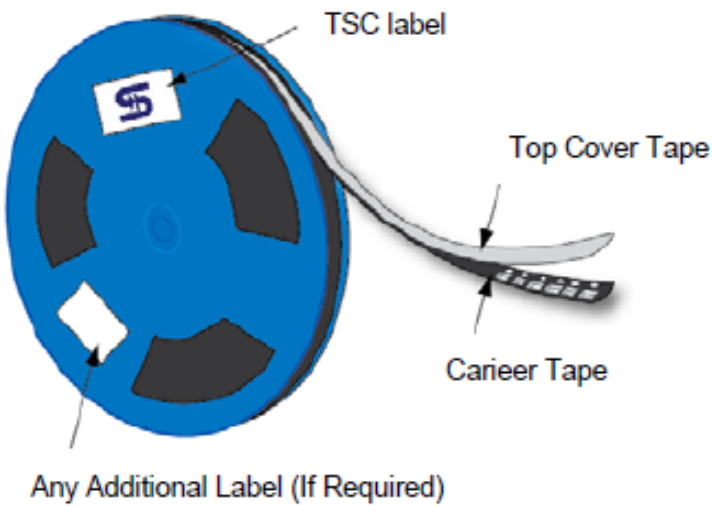


Ordering information (Detail, example)

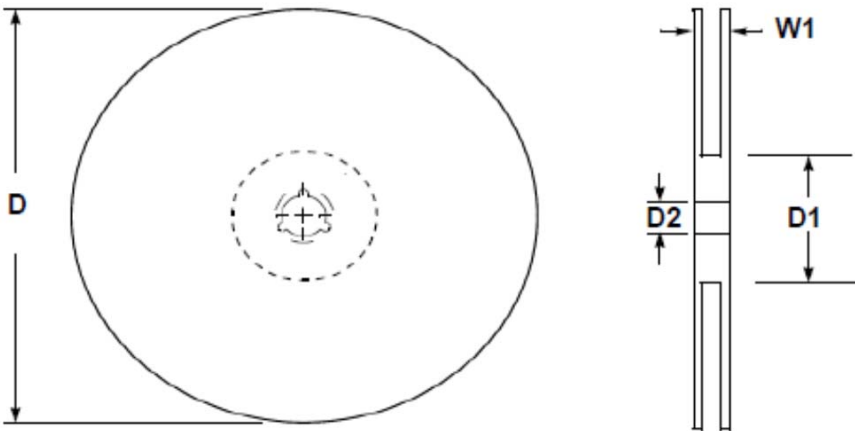
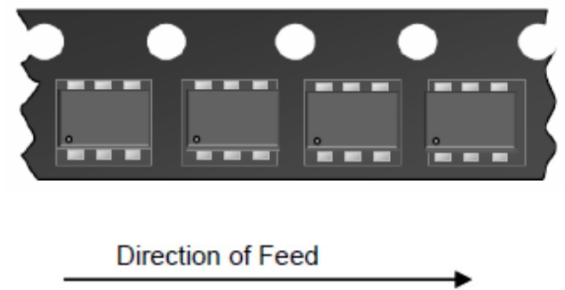
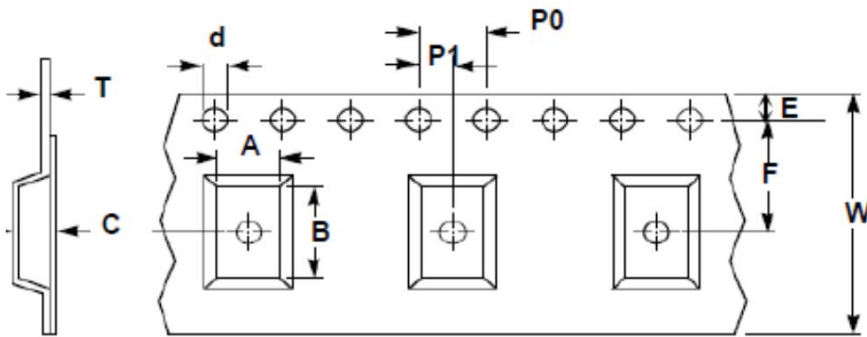
Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code (Note)
BAV99S	SOT-363	3K / 7 " Reel	RF	RFG	
BAV99S	SOT-363	3K / 7 " Reel	RF	RFG	D0

Note : Manufacture special control, if empty means no special control requirement.

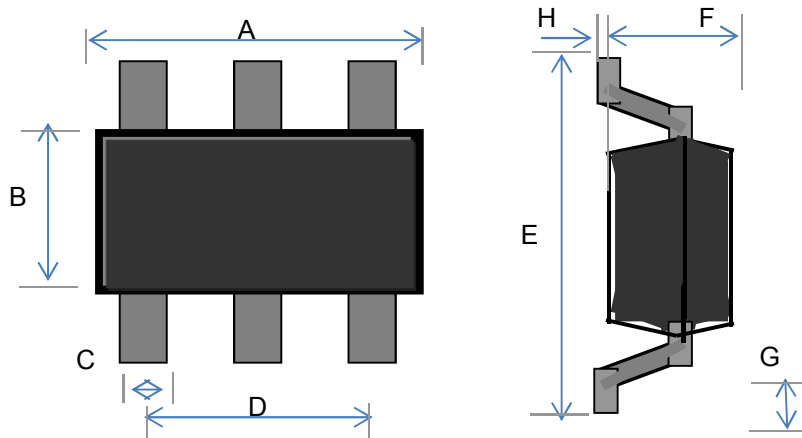
Tape & Reel specification



Item	Symbol	Dimension(mm)
Carrier width	A	3.15 ±0.10
Carrier length	B	2.77 ±0.10
Carrier depth	C	1.22 ±0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178 ± 1
Reel inner diameter	D1	55 Min
Feed hole width	D2	13.0 ± 0.20
Sprocket hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.05
Sprocket hole pitch	P0	4.00 ±0.10
Embossment center	P1	2.00 ±0.05
Overall tape thickness	T	0.229 ±0.013
Tape width	W	8.10 ±0.20
Reel width	W1	12.30 ±0.20

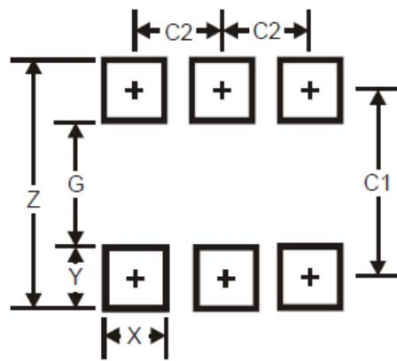


Dimensions



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.000	2.200	0.079	0.087
B	1.150	1.350	0.045	0.053
C	0.100	0.350	0.004	0.014
D	1.200	1.400	0.047	0.055
E	2.150	2.450	0.085	0.096
F	0.850	1.050	0.033	0.041
G	0.250	0.460	0.010	0.018
H	0.000	0.100	0.000	0.004

Suggested PAD Layout



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	3.20	0.126
G	1.60	0.063
X	0.55	0.022
Y	0.80	0.031
C1	2.40	0.094
C2	0.95	0.037