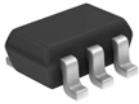


**Small Signal Diode**

**Features**

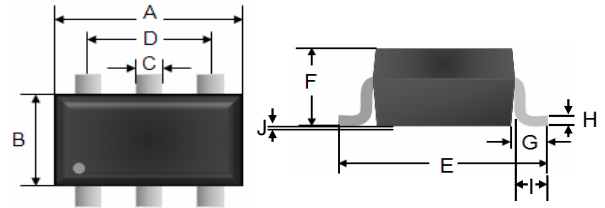
- ↪ Fast Switching Speed
- ↪ High Reverse Breakdown Voltage Rating
- ↪ Moisture sensitivity level 1
- ↪ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ↪ Pb free version and RoHS compliant
- ↪ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

**Mechanical Data**

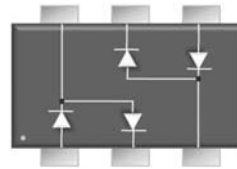
- ↪ Case : SOT-363 small outline plastic package
- ↪ Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ↪ High temperature soldering guaranteed: 260°C/10s
- ↪ Case material-UL Flammability Rating 94V-0
- ↪ Weight : 0.008 gram(approx.)
- ↪ Marking Code : K1

**Ordering Information**

Part No.	Package	Packing Code	Packing	Marking
SOT-363	BAV99S	3K / 7" Reel	RF	K1
SOT-363	BAV99S	3K / 7" Reel	RFG	K1

**SOT-363**


Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.00	0.071	0.079
B	1.15	1.35	0.045	0.053
C	0.15	0.30	0.006	0.012
D	1.30 BSC		0.051 BSC	
E	2.10 BSC		0.083 BSC	
F	-	1.10	-	0.043
G	0.42		0.017	
H	0.1 BSC		0.004 BSC	
I	0.25	0.40	0.010	0.016
J	0.02	0.10	0.001	0.004

**Pin Configuration**

**Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified.

**Maximum Ratings**

Type Number	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(Note1)	$I_{FSM}$	4.5	A
		0.5	
Junction and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 150	°C

Notes:1. Pulse Width=1μ sec & 1 sec

**Small Signal Diode**

**Electrical Characteristics**

Type Number		Symbol	Min	Max	Units
Reverse Breakdown Voltage	$I_R = 2.5\mu A$	$V_{(BR)}$	75	-	V
Forward Voltage	$I_F = 1.0mA$	$V_F$	-	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	$V_R = 75mA$ @ $T_J = 150^\circ C$	$I_R$	-	1	$\mu A$
			-	50	$\mu A$
Junction Capacitance	$V_R = 0, f = 1.0MHz$	$C_J$	-	1.5	pF
Reverse Recovery Time (Note 2)		$T_{rr}$	-	4	ns

Notes:2. Reverse Recovery Test Conditions:  $I = I = 10mA, R = 100\Omega$

**Rating and Sharacteristic Curves**

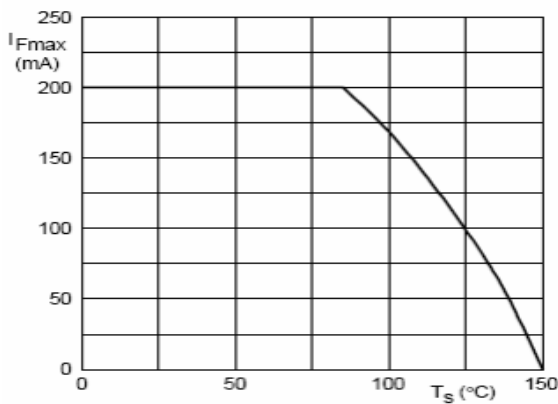
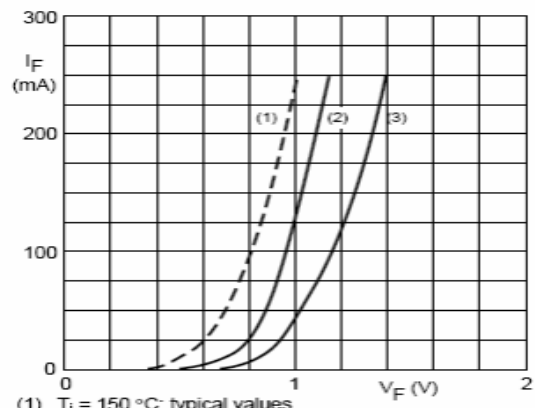
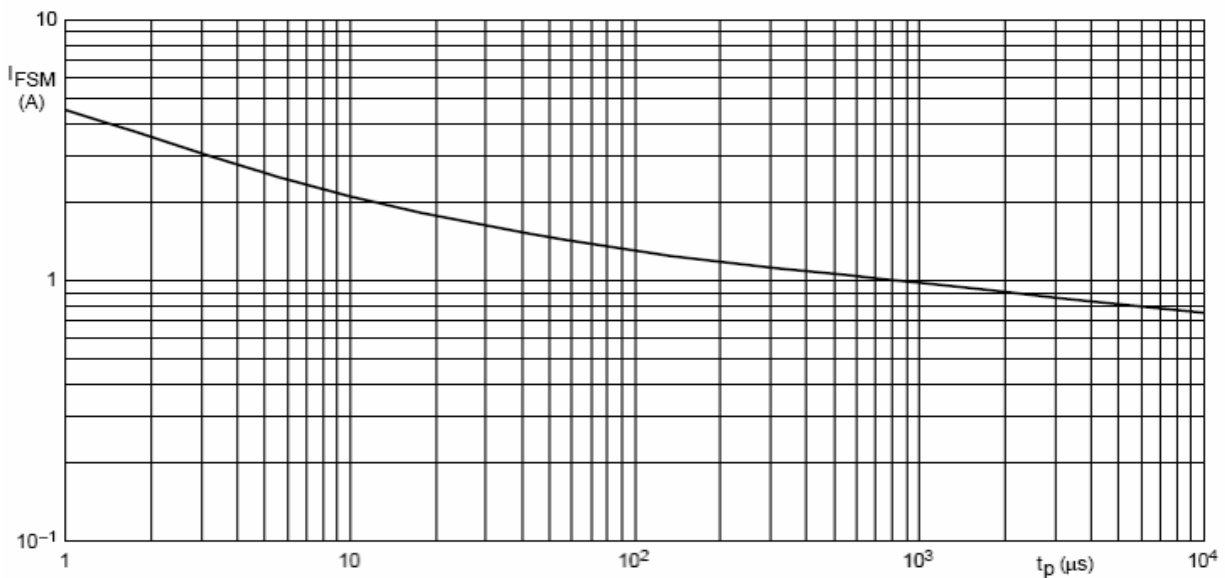


Fig. 1 Maximum permissible continuous forward current as a function of soldering point temperature.



- (1)  $T_j = 150^\circ C$ ; typical values.
- (2)  $T_j = 25^\circ C$ ; typical values.
- (3)  $T_j = 25^\circ C$ ; maximum values.

Fig. 2 Forward current as a function of forward voltage.

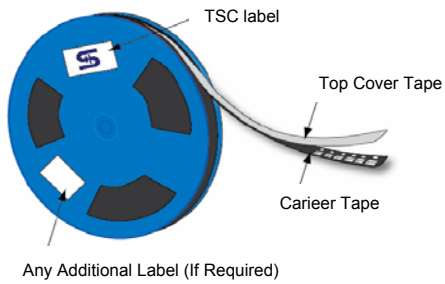


Based on square wave currents.  
 $T_j = 25^\circ C$  prior to surge.

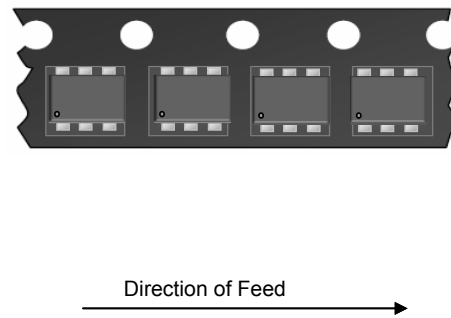
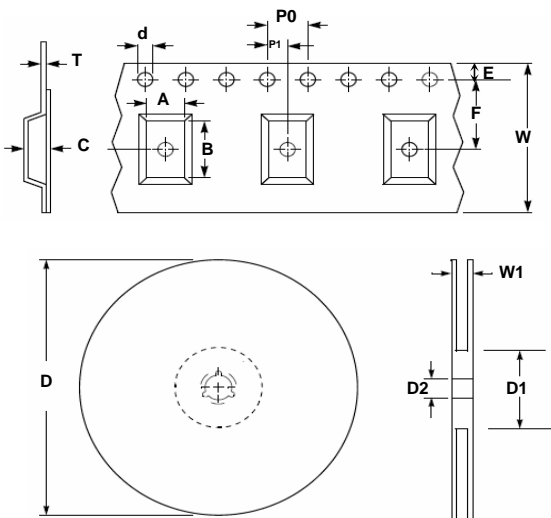
Fig. 3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

**Small Signal Diode**

**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



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