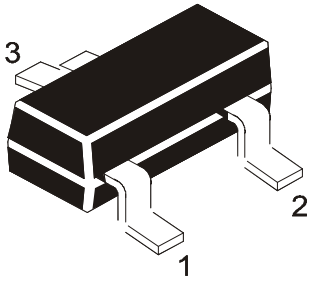
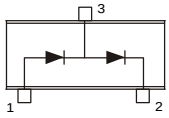
SILICON PLANAR HIGH SPEED SWITCHING DIODES

BAV99

SOT-23
Formed SMD Package





Pin Configuration
1 = ANODE
2 = CATHODE
3 = ANODE/ CATHODE

Marking
BAV99 = A7

High-Speed Switching Series Diode Pair

ABSOLUTE MAXIMUM RATINGS (Rating Per Diode)

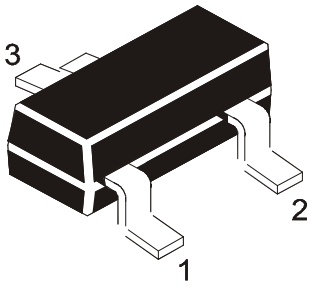
DESCRIPTION	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	100	V
Forward Current (DC)	I_F	215	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non Repetitive Peak Forward Current (per crystal)			
t=1 ms	I_{FSM}	4.0	A
t=1 ms	I_{FSM}	1.0	A
t=1 s	I_{FSM}	0.5	A
Power Dissipation up to T_a=25ºC	P_D	250	mW
Junction Temperature	T_j	150	ºC
Ambient Temperature	T_{amb}	- 65 to +150	ºC
Storage Temperature Range	T_{stg}	- 65 to +150	ºC

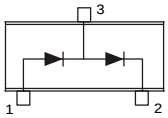
THERMAL RESISTANCE

Junction to Ambient in free air	$R_{th\ (j-a)}$	500	K/W
Junction to Solder Point	$R_{th\ (j-sp)}$	360	K/W

ELECTRICAL CHARACTERISTICS (T_a=25º C unless specified otherwise) per diode

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Forward Voltage	V_F	I_F = 1mA		0.715	V
		I_F = 10mA		0.855	V
		I_F = 50mA		1.0	V
		I_F = 150mA		1.25	V
Reverse Current	I_R	V_R=25V		30	nA
		V_R=25V, T_J=150ºC		30	µA
		V_R=80V		0.5	µA
		V_R=80V, T_J=150ºC		50	µA





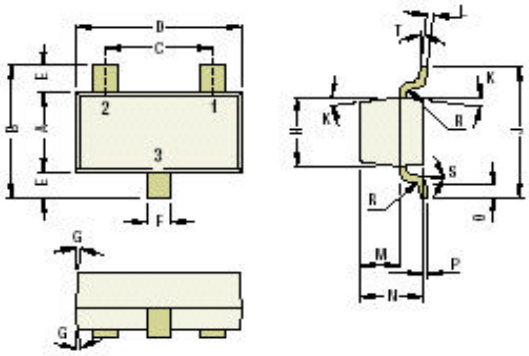
Pin Configuration
1 = ANODE
2 = CATHODE
3 = ANODE/
CATHODE

SOT-23
Formed SMD Package

ELECTRICAL CHARACTERISTICS (T_a=25° C unless specified otherwise) per diode

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Diode Capacitance	C_d	V_R=0V, f=1MHz		1.5	pF
Forward Recovery Voltage	V_{FR}	I_F=10mA, t_r=20ns		1.75	V
Reverse Recovery Time	t_{rr}	I_F=10mA, to I_R=10mA, measured at I_R=1.0mA, R_L=100Ω		4.0	ns
Reverse Charge When Switched Time	Q_S	I_F=10mA to V_R=5V, R_L=100Ω		45	pC

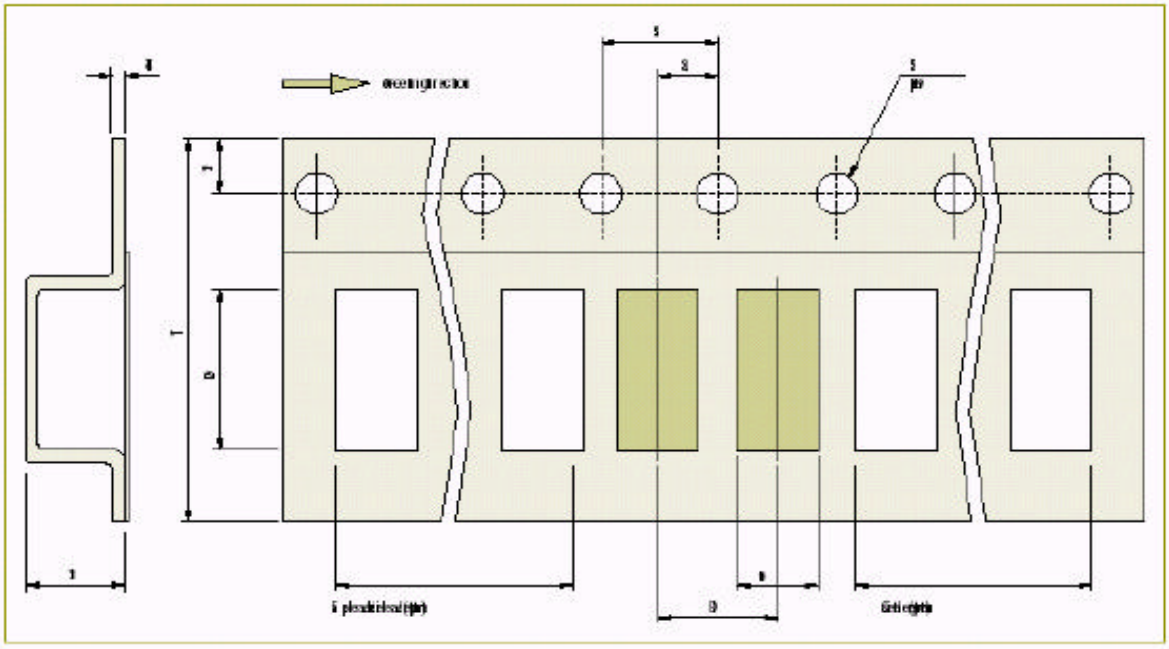
SOT-23
SMD Plastic Package



DIM	Min	Max
A	1.20	1.40
B	2.10	2.64
C	1.85	1.95
D	2.80	3.04
E	0.54	0.67
F	0.30	0.50
G	3°	
H	—	1.30
J	2.10	2.64

DIM	Min	Max
K	7°	
L	0.08	0.20
M	0.58	0.62
N	0.70	1.02
0	0.21	—
P	0.02	0.15
R	—	0.08
S	2°	8°
T	2°	10°

Packaging Tape Specifications for SMD Packages



SMD Tape Specifications (8-12 mm)

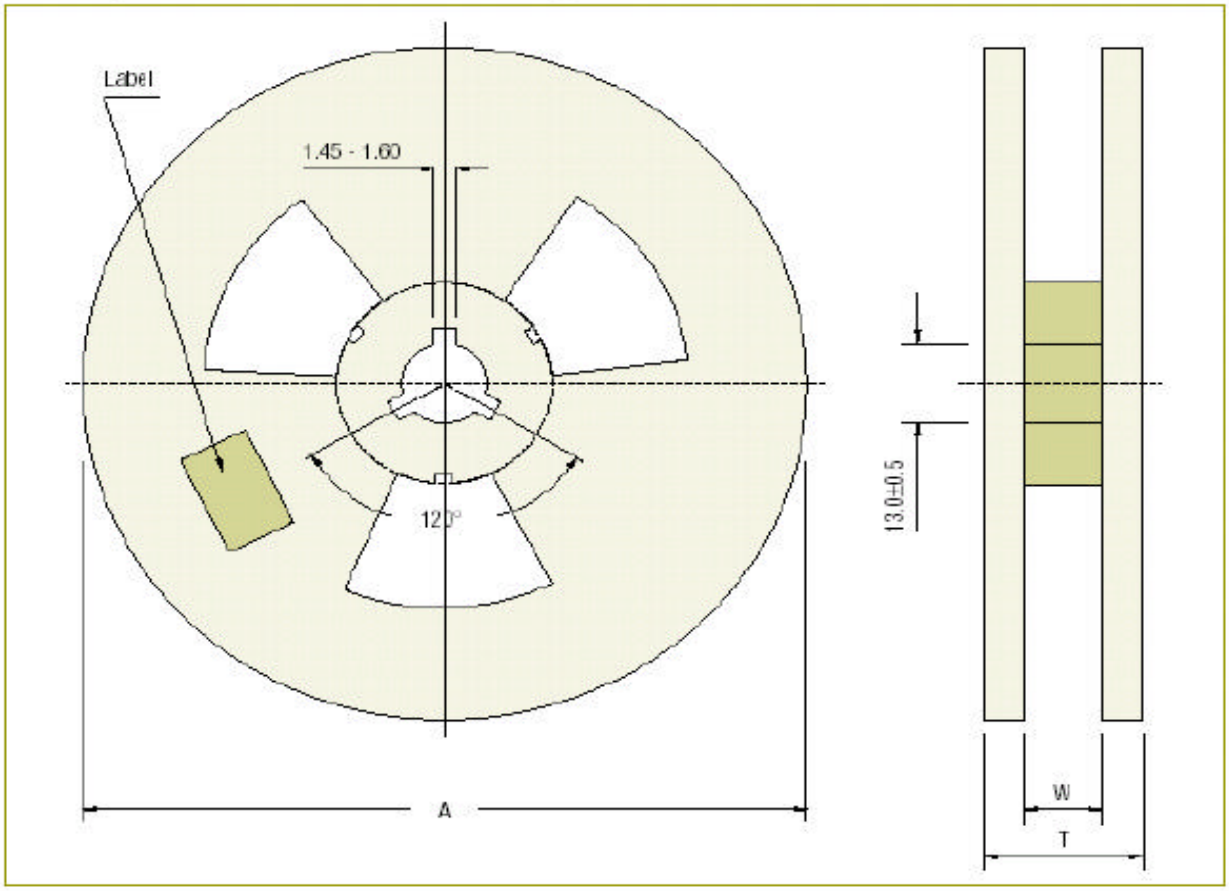
Device	D1	D2	D3	T1	T2	T3	T4	S1	S2	S3
						Max	Max			Dia
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SOT-23	3.2±0.1	2.8±0.1	4.0±0.1	1.0±0.2	1.75±0.1	1.90	0.35	4.0±0.1	2.0±0.1	1.5±0.1

Packaging Specifications ...

T & A: Tape and Ammo Pack; T & R: Tape and Reel; Bulk: Loose in Poly Bags; Tube: Tube and Carton; K: 1,000

Package / Case Type	Packaging Type	Std. Packing	Inner Carton			Outer Carton		
		Qty	Qty	Size L x W x H (cm)	Gross Weight (Kg)	Qty	Size L x W x H (cm)	Gross Weight (Kg)
SOT-23	T & R	3,000	15K	19 x 19 x 8	0.6	51K	23 x 13 x 23	2.2
	T & R	3,000	15K	19 x 19 x 8	0.6	408K	48 x 48 x 51	20.2
	T & R	10,000	50K	35.5 x 35.5 x 8.9	2.4	350K	48 x 48 x 51	19.2

Reel Specifications for SMD Packages



Reel Specifications

Package	Tape Width	Reel Dia. A - Max	Devices per Reel and MOQ	Inside Thickness W	Reel Thickness T - Max
SOT-23	8	180	3,000	8.4±2	14.4
	8	330	10,000	8.4±2	14.4

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

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