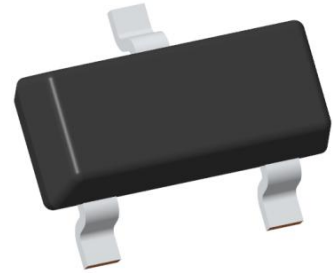


General Characteristics

V_R	I_F	$V_{F(Max)}$	I_{FSM}	T_{jMax}
75V	200mA	1.25V	2A	150°C

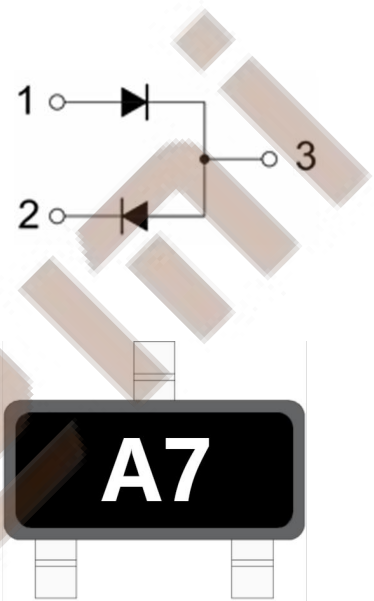


Features

- SOT23 Package
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 3
- High temperature soldering guaranteed 260°C/10seconds at terminals

Applications

- Extreme fast switches
- Automotive



Package Marking and Ordering Information

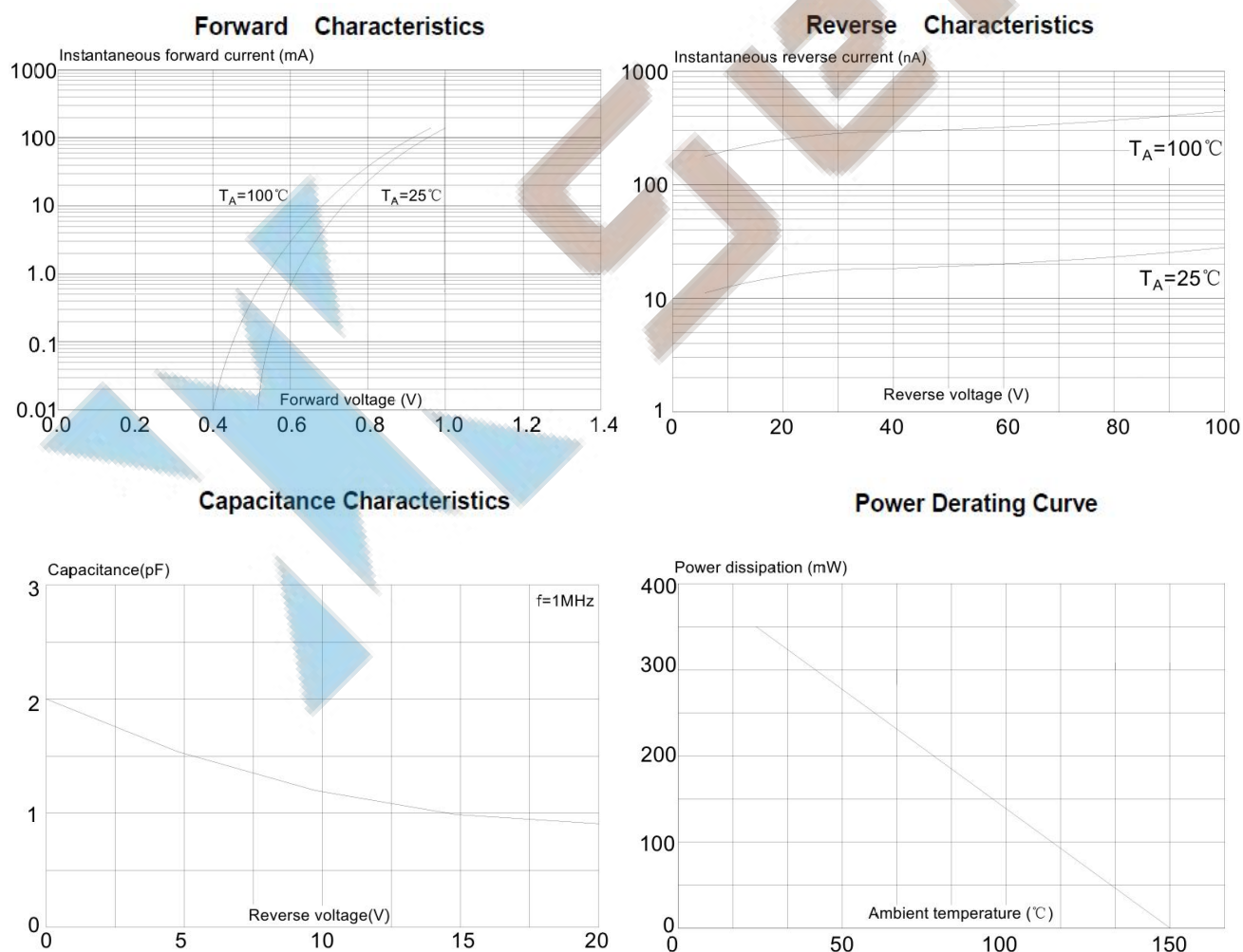
Product ID	Pack	Marking	Qty(PCS)
BAV99	SOT-23	A7	3000

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbols	Value	Units
Repetitive Peak Reverse Voltage	VRRM	100	V
DC Blocking Voltage	VR	75	V
Forward Current	IF	200	mA
Non-repetitive Peak Forward Surge Current@ tp=8.3ms	IFSM	2.0	A
Power Dissipation	Pd	350	mW
Thermal Resistance from Junction to Ambient	RθJA	357	°C/W
Operation Junction and Storage Temperature Range	TJ,Tstg	-55~+150	°C

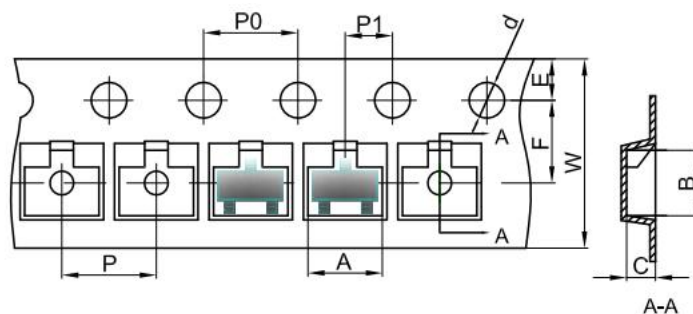
Electrical Characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Reverse Voltage	VRB	IB=100uA	100			V
Reverse Leakage Current	IR	VR=75V			2.5	uA
Forward Voltage	VF	IF=1mA			0.715	V
		IF=10mA			0.855	
		IF=50mA			1.00	
		IF=150mA			1.25	
Reverse Recovery Time	TRR	IF= R=10mA, RL=100 Ω IRR=0.1xIR			6	uS
Capacitance	CT	VR=0V, f=1MHZ		2.0		pF

Typical Characteristics


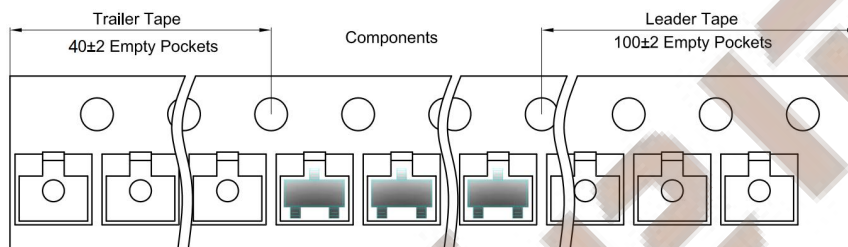
Package Information

Carrier Dimension(mm)

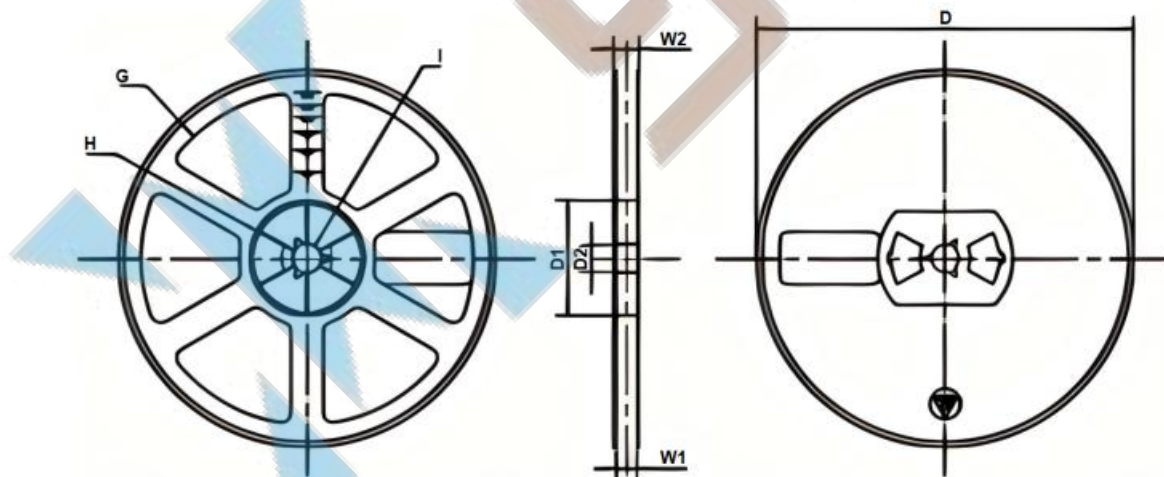


Dimensions are in millimeter

Pkg Type	A	B	C	d	E	F	P0	P	P1	10*P0	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	40.00	8.00
(Tolerance)	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.2	±0.1



Reel Dimension(mm)



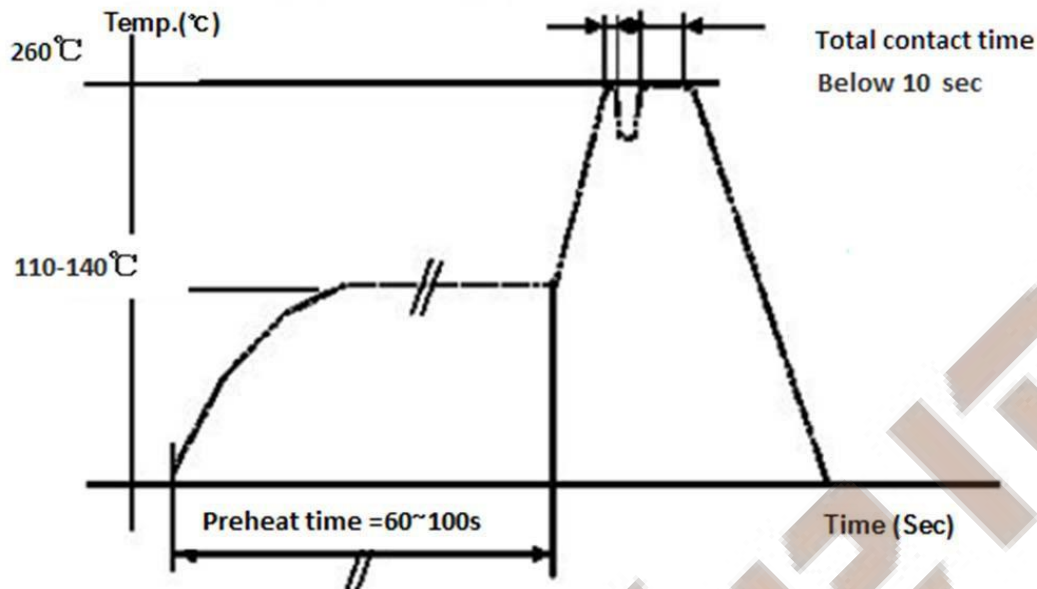
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

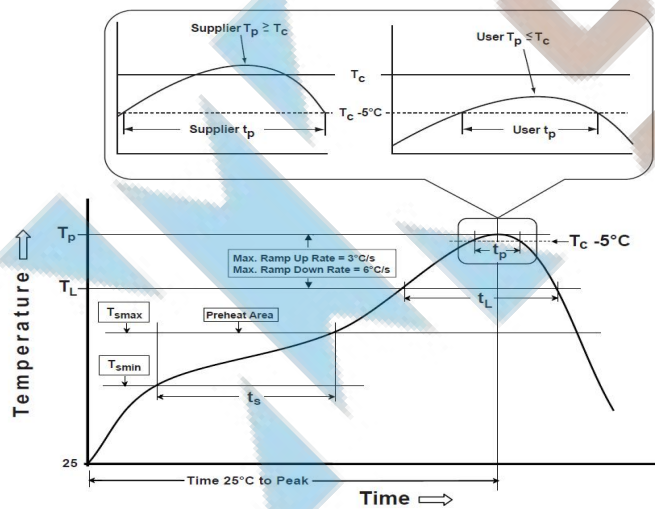
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT23	7'	178	3	210*208*203	45	440*400*230	180

Recommended Soldering Profile for Rectifier Diodes (Pb Free)

a) Wave Soldering Profile



b) Reflow Soldering Profile (Pb Free Application), refer to IPC/JEDEC J-STD-020

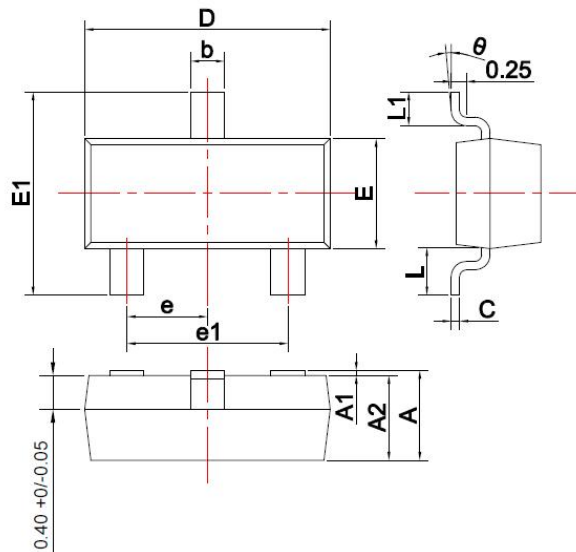


Preheat/Soak Temperature Min (Tsmin) Temperature Max (Tsmax) Time (ts) from (Tsmin to Tsmax)	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time within 5°Cbelow Peak Temp.	20~40 Sec
Cooling Rate	6°C/sec (max)
Time from 25°C to Peak Temp.	8min (max)

c) Manual Soldering

When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

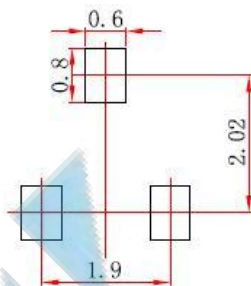
Package Mechanical Data



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

Suggested Pad Layout



Note:
 1. Controlling dimension: In millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

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