

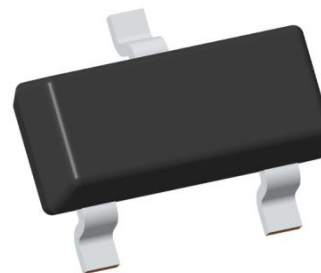
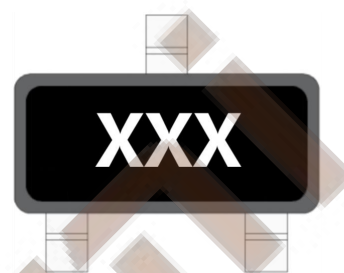
General Characteristics

VR	VF(Max)	IFSM	TjMax
250V	1.25V@IF=200mA	1.7A	150℃



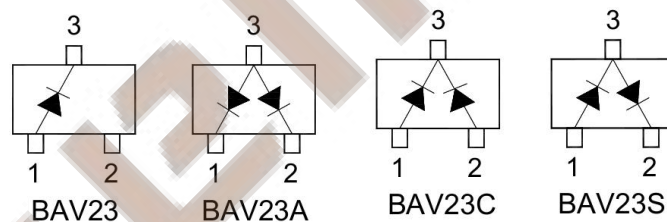
Features

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



Applications

- Extreme fast switches
- Automotive



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BAV23	SOT-23	HC	3000
BAV23A	SOT-23	KT7	3000
BAV23C	SOT-23	KT6	3000
BAV23S	SOT-23	KL31	3000

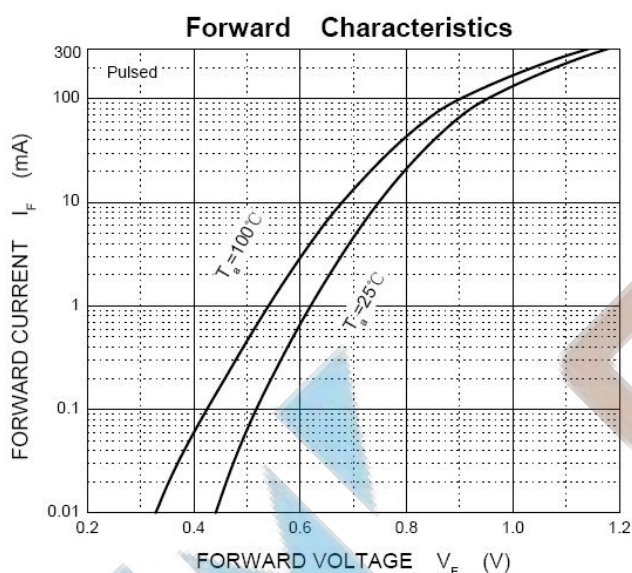
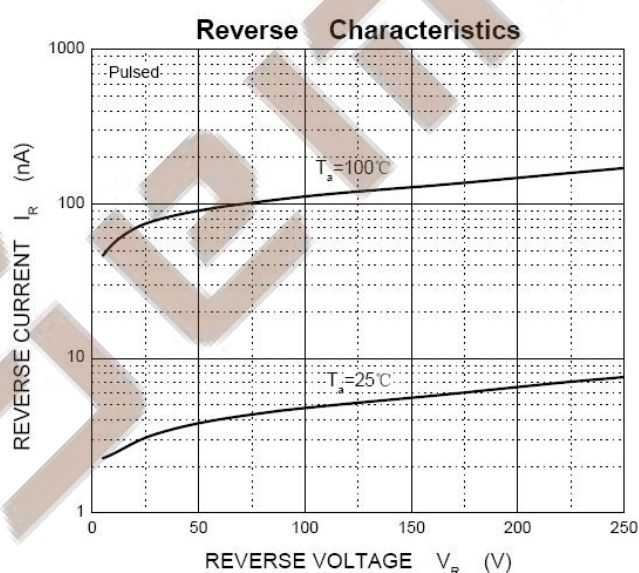
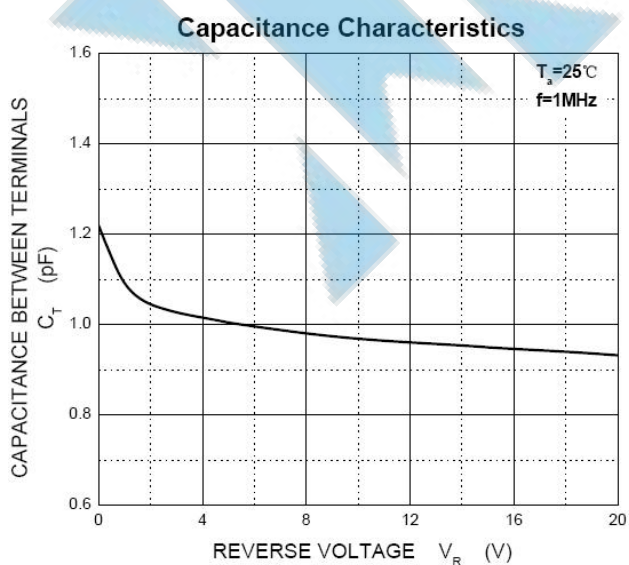
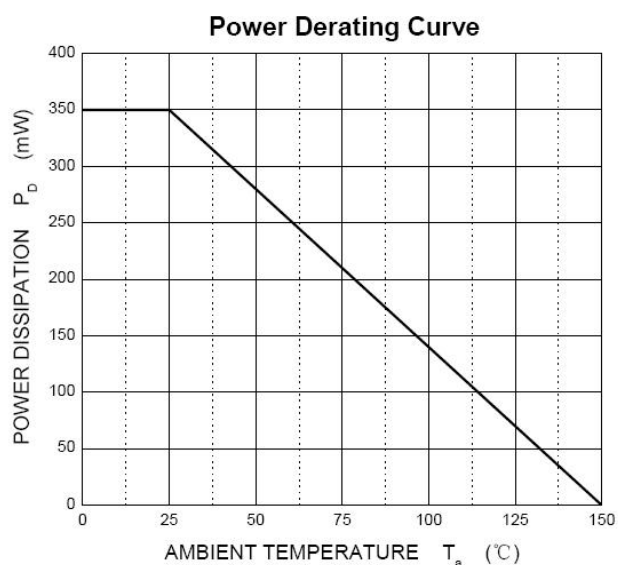
Absolute Maximum Ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbols	Value	Units
Peak Repetitive Reverse Voltage	VRRM	250	V
Working Peak Reverse Voltage	VRWM		
RMS Reverse Voltage	VR(RMS)	175	V
Average Rectified Output Current	IO	225	mA
Repetitive Peak Forward Surge Current	IFRM	625	mA
Non-repetitive Peak Forward Surge Current @ t=8.3ms	IFSM	1.7	A
Power Dissipation	PD	350	mW
Thermal Resistance from Junction to Ambient	RθJA	357	℃/W
Operation Junction and Storage Temperature Range	Tj, Tstg	-55~+150	℃

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

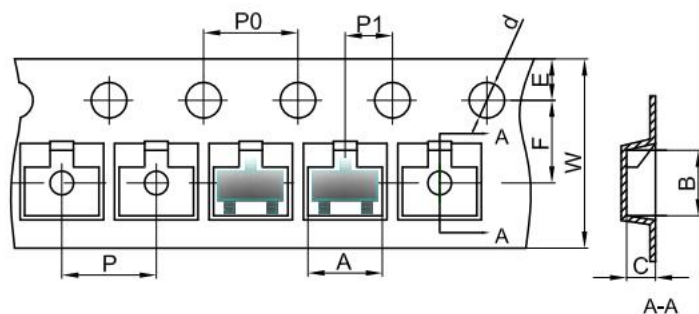
Parameter	Symbol	Conditions	Min.	Max.	Unit
Reverse Voltage	V(BR)	IR=100uA	250		V
Reverse Leakage Current	IR	VR=250V		0.1	uA
Forward Voltage	VF	IF=100mA		1.00	V
		IF=200mA		1.25	
Reverse Recovery Time	Trr	IF= IR=30mA, Irr=0.1 X IR, RL=100Ω		50	nS
Total capacitance	Ctot	VR=0V, f=1MHZ		5	pF

Typical Characteristics

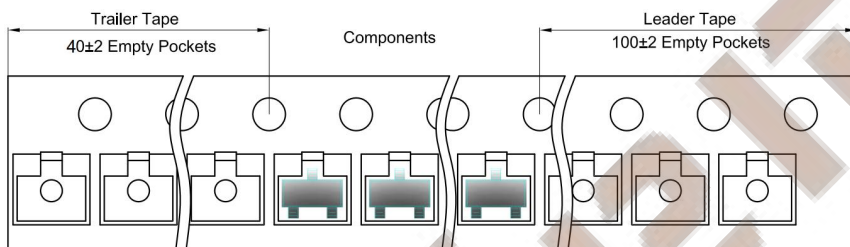


Package Information

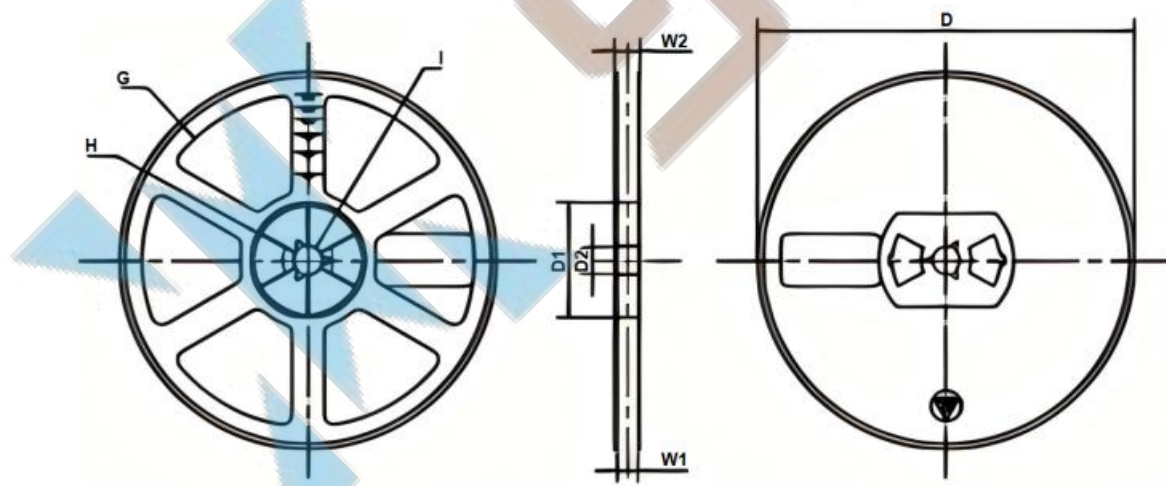
Carrier Dimension(mm)



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)



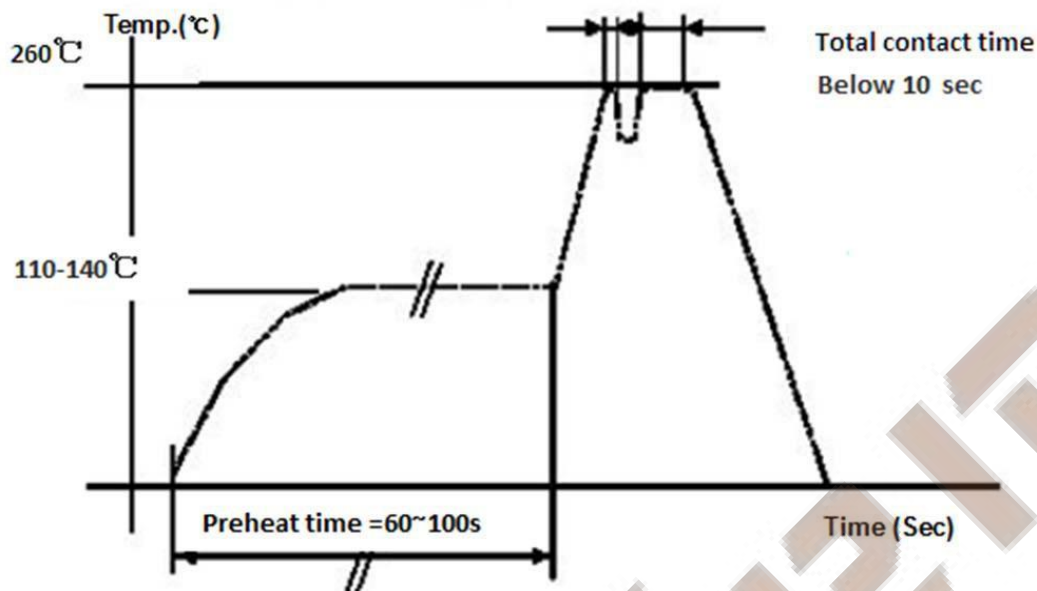
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

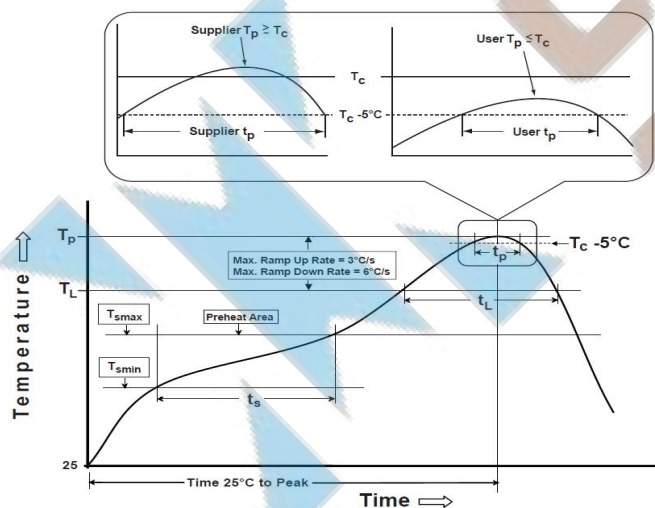
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT23	7'	178	3	210*208*203	45	440*400*230	180

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

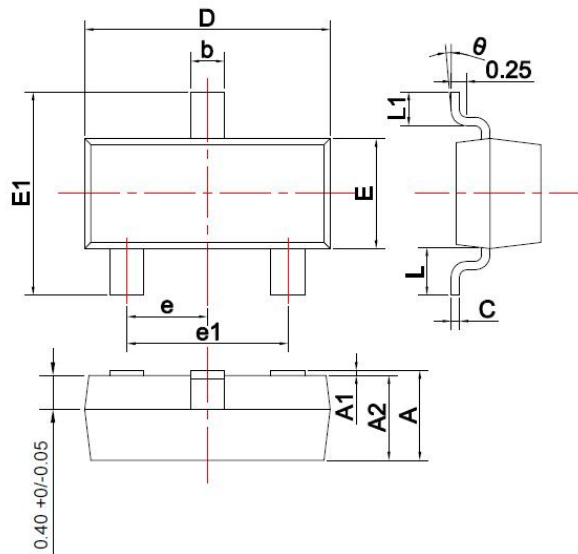


Preheat/Soak Temperature Min (T _{smin}) Temperature Max (T _{smax}) Time (t _s) from (T _{smin} to T _{smax})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	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.

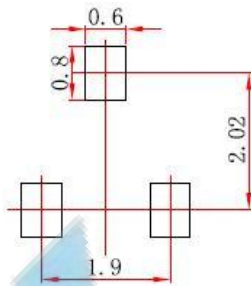
Package Mechanical Data



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: ± 0.05 mm.
3. The pad layout is for reference purposes only.

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