

PRIMARY CHARACTERISTICS

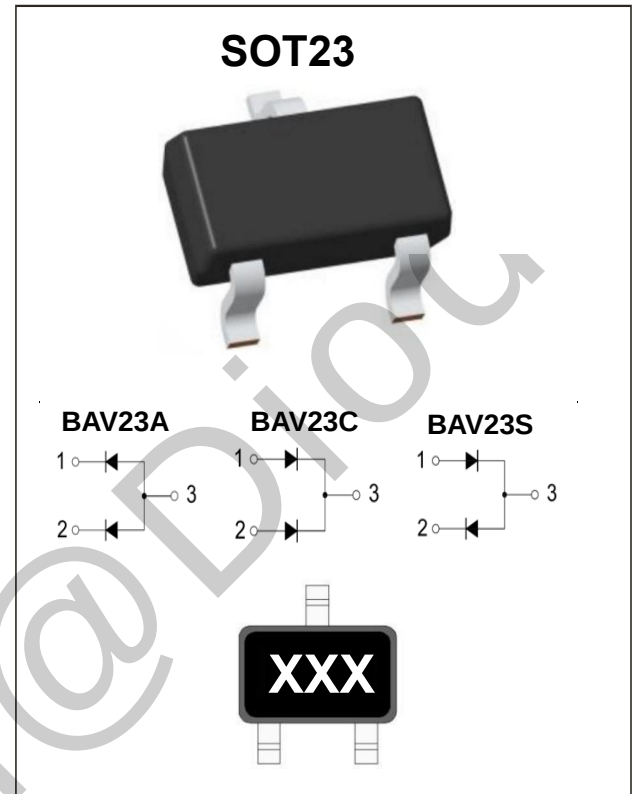
VRRM	IO	VF(type)	I FSM	Tj max
250V	225mA	1.0V	1.7A	150°C

Features

- Fast Switching Speed
- High Conductance
- For General Purpose Switching Applications
- RoHS Compliant and Halogen Free

Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any


Package Marking and Ordering Information

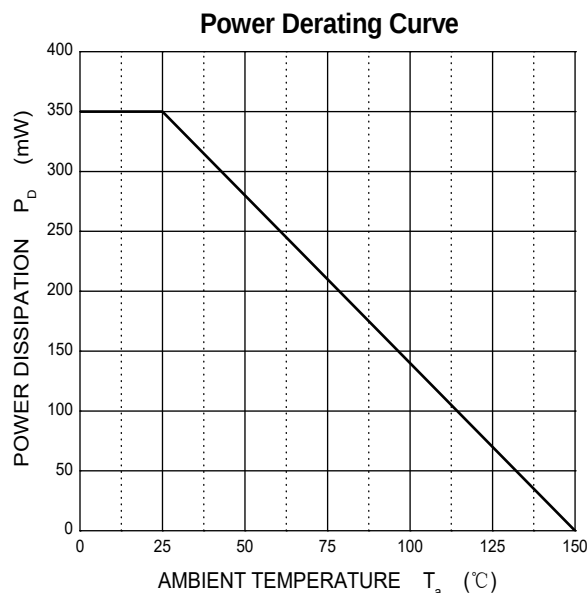
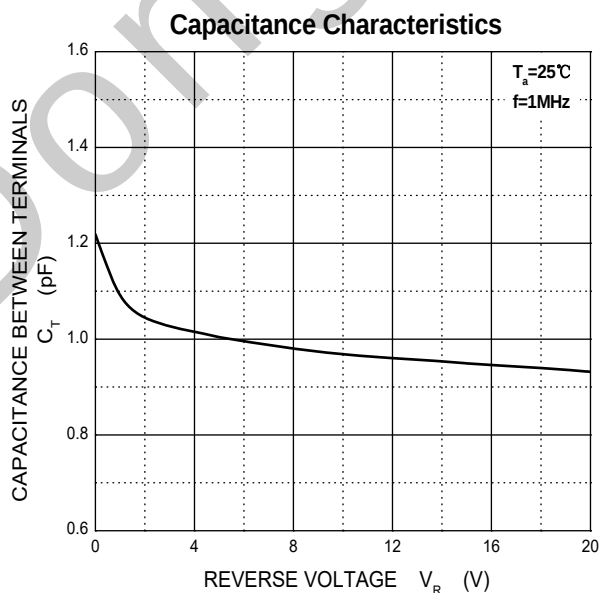
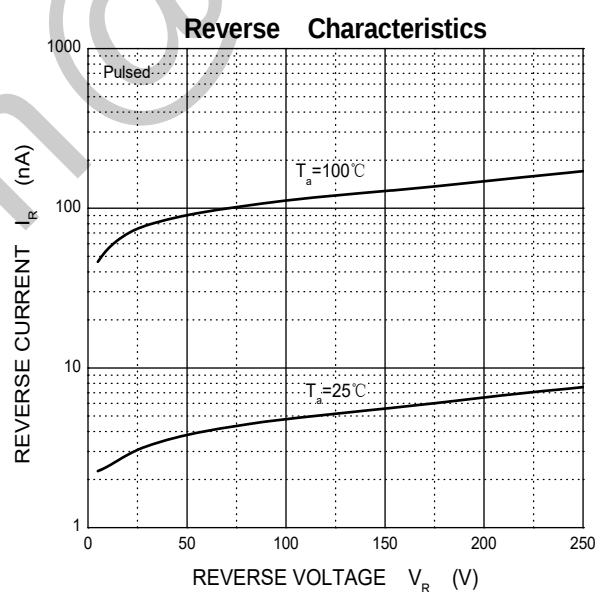
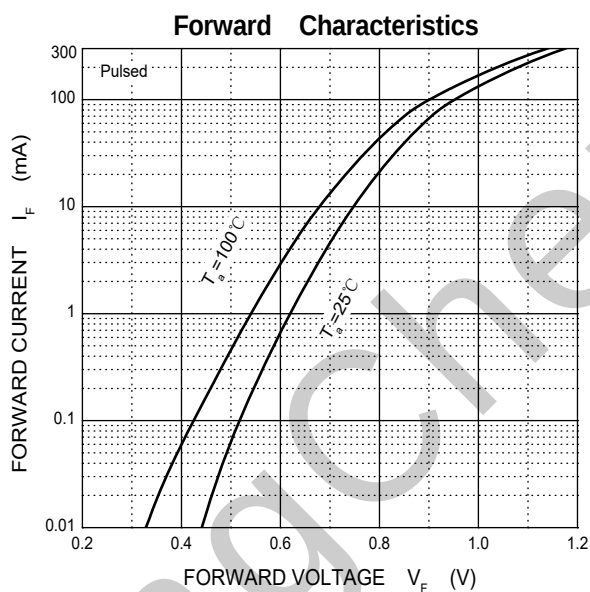
Product ID	Pack	Marking	Qty(PCS)
BAV23A	SOT-23	KT7	3000
BAV23C	SOT-23	KT6	3000
BAV23S	SOT-23	KL31	3000

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

Parameters	Symbols	Limits	Units
Maximum repetitive peak reverse voltage	VRRM	250	V
Maximum RMS voltage	VRMS	175	V
Reverse Voltage	VR	250	V
Non-repetitive Peak Forward Current	IFM	625	mA
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	IFSM	1.7	A
Average Rectified Current	IO	225	mA
Power Dissipation	PD	350	mW
Typical junction capacitance (Note1)	CJ	5	pF
Typical thermal resistance (Note2)	RthJA	357	°C/W
Operating junction temperature range	TJ	-55~+150	°C
Storage temperature range	TSTG	-55~+150	°C

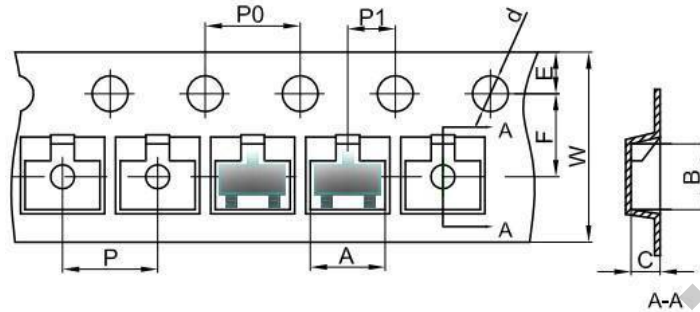
Electrical Characteristics ($T_J=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbols	Test Conditions	Min	Type	Max	Units
Minimum reverse breakdown voltage	VR	IR=100 μ A	250	-	-	V
Maximum instantaneous forward voltage	VF	IF=100mA	-	-	1.0	V
		IF=200mA	-	-	1.25	
Maximum DC reverse current at rated DC blocking voltage	IR	VR=250V	-	-	0.1	μ A
Reverse Recovery Time	TRR	IF=IR=30mA, Irr=0.1 $\times$ IR, RL=100 Ω	-	-	50	ns
Capacitance between terminals	CT	VR=0V, f=1MHz	-	-	5	pF

Typical Characteristics


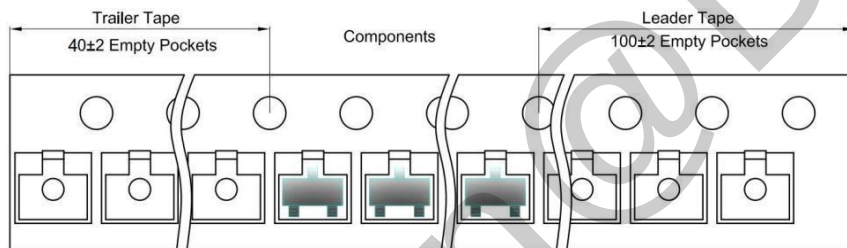
Package Information

Carrier Dimension(mm)

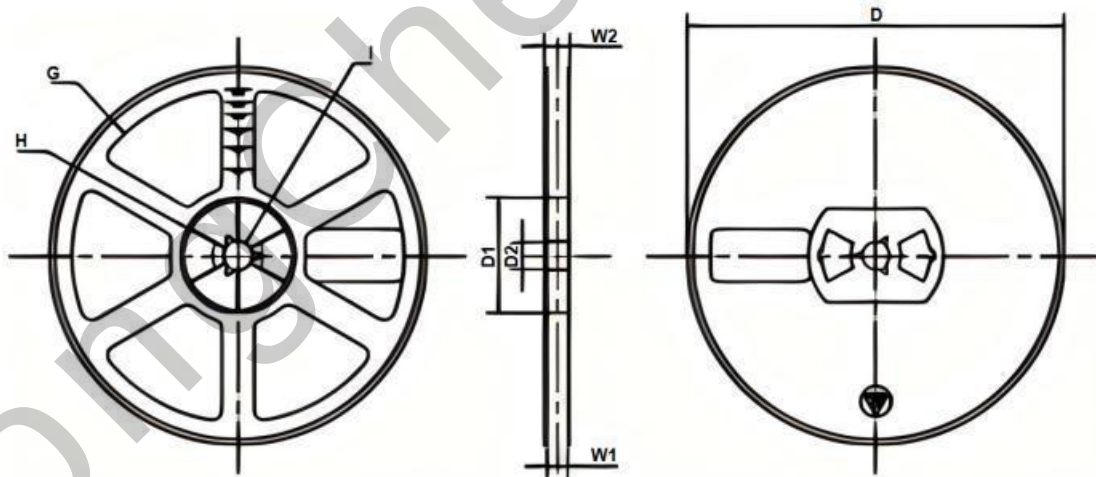


Dimensions are in millimeter

Pkg Type	A0	A1	B0	B1	K0	D0	D1	E	F	P0	P1	P2	10*P0	W	T
SOT-23	3.15	1.09	2.77	2.15	1.22	1.55	1.00	1.75	3.50	4.00	4.00	2.00	40.00	8.00	0.20
(Tolerance)	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.2	±0.1	±0.03



Reel Dimension(mm)



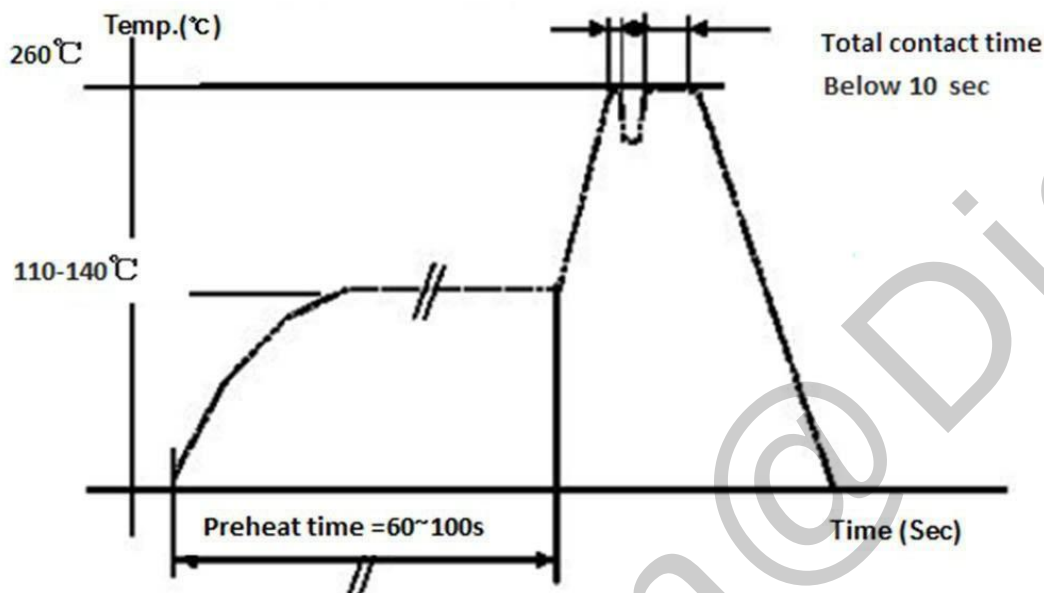
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

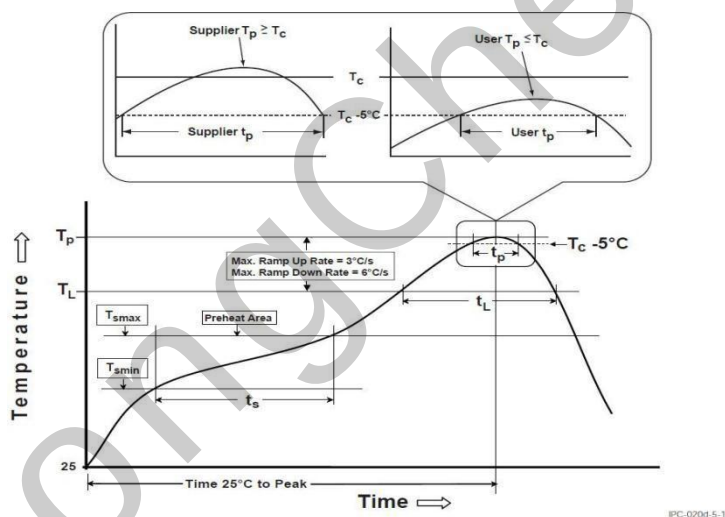
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT23	7'	178	3	210*208*203	45	440*400*230	180

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

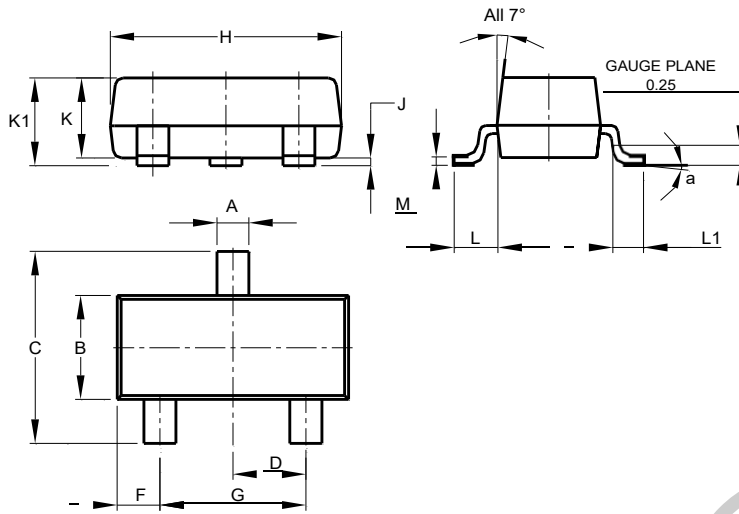


Preheat/Soak Temperature Min (T _{smin}) Temperature Max (T _{smax}) Time (ts) from (T _{smin} to T _{smax})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature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

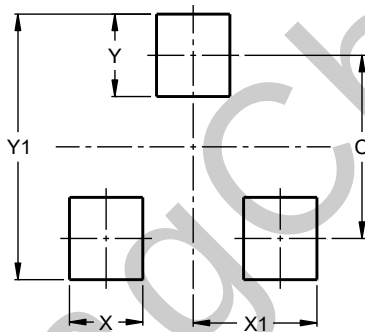
When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

Package Dimensions



SOT23			
Dim	Min	Max	Typ
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	--
All Dimensions in mm			

Pad Dimensions



Dimensions	Value (in mm)
C	2.0
X	0.8
X1	1.35
Y	0.9
Y1	2.9

Important Notice

DongChen Electronics reserves the right to make changes without further notice to any products herein.

DongChen Electronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does DongChen Electronics assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.

“Typical” parameters which may be provided in DongChen Electronics data sheets and/or specifications can and do vary in different applications and actual performance may vary over time.

All operating parameters, including “Typicals,” must be validated for each customer application by the customer’s technical experts.

DongChen Electronics does not convey any license under its patent rights nor the rights of others.

The products listed in this document are designed to be used with ordinary electronic equipment or devices.

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, aerospace machinery, nuclear-reactor controllers, fuel controllers, and other safety devices), please be sure to consult with our sales representative in advance.

Head Office

Contact Information:

DongChen Electronics Co.,Ltd.

Address: 2F., No.407, Sec. 2, Longgang Rd.,Zhongli Dist.,
Taoyuan City 32097, Taiwan (R.O.C.)

Tel: 03-284-1808

Fax: 03-284-1404

Mail:dc@dongchen.com.tw

Web:www.dongchen.com.tw