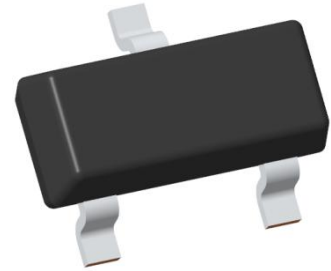
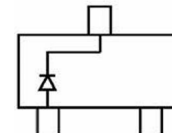


General Characteristics

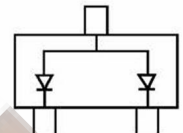
V_{RRM}	I_F	$V_{F(Max)}$	I_{FSM}	T_{jMax}
40V	200mA	1000mV	600mA	150°C

Features

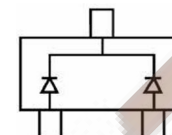
- SOT23 Package
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- High temperature soldering guaranteed 260°C/10seconds at terminals
- Low Reverse Current
- Low Stored Charge, Majority Carrier Conduction
- Low Power Loss/High Efficiency



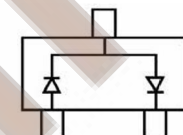
BAS40



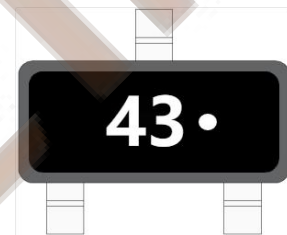
BAS40-06



BAS40-05



BAS40-04



Package Marking and Ordering Information

Product ID	Package	Marking	Qty(PCS)
BAS40	SOT-23	43 •	3000
BAS40-06	SOT-23	46	3000
BAS40-05	SOT-23	45	3000
BAS40-04	SOT-23	44	3000

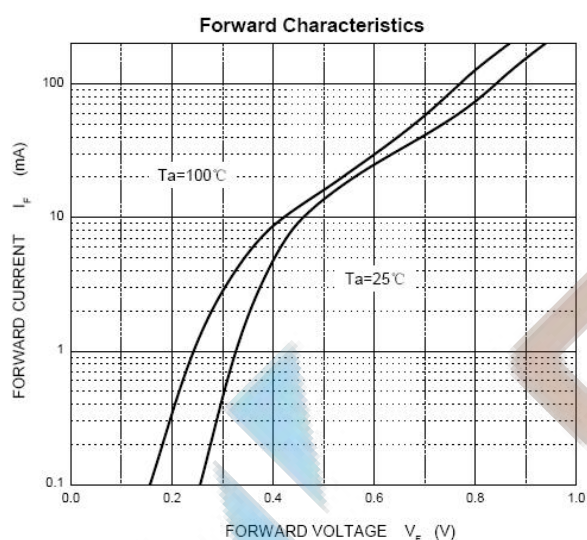
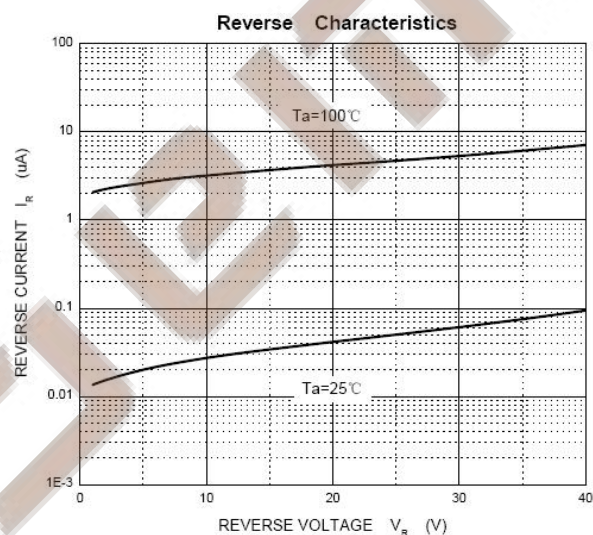
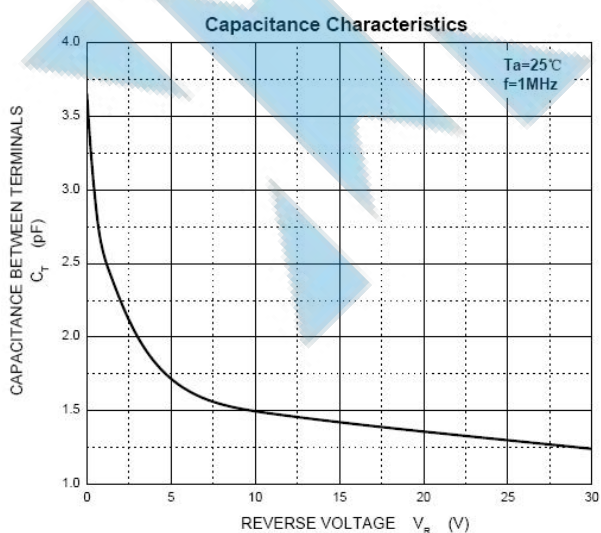
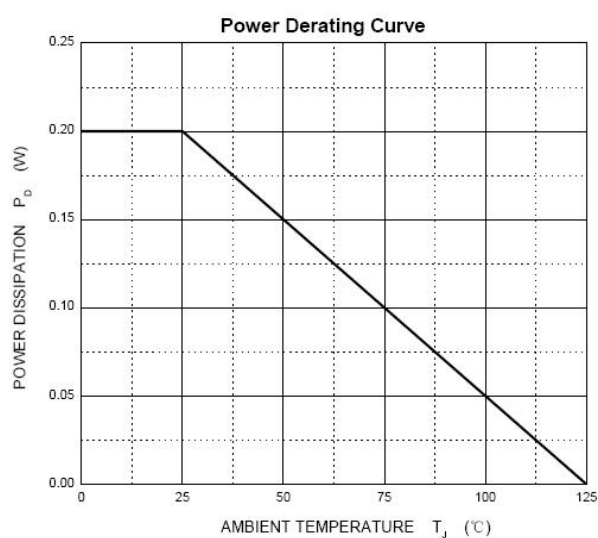
Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbols	Value	Units
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum DC blocking voltage	P_D	200	mW
Maximum average forward rectified current	I_F	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms; TA=25°C	I_{FSM}	600	mA
Operating junction temperature	T_J	125	°C
Storage temperature range	T_{STG}	-55-+150	°C
Typical thermal resistance	$R_{\theta JA}$	500	°C/W

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

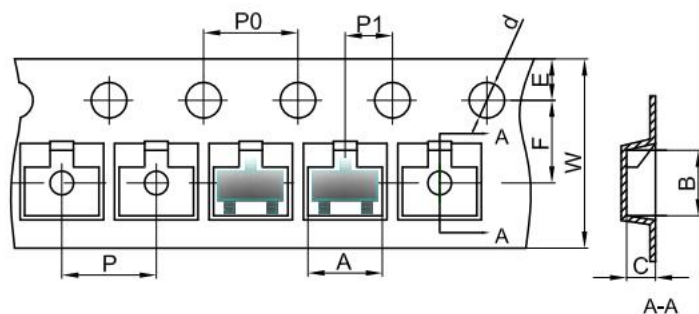
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Maximum reverse breakdown voltage	VR	IR=10uA	40			V
Maximum reverse current	IR	VR=30V			200	nA
Maximum forward voltage	VF	IF=1mA			380	mV
		IF=40mA			1000	
Reverse Recovery Time	TRR	IF= IR=10mA, RL=100Ω, IRR=0.1 X IR			5	ns
Type junction capacitance	CT	VR=0V, f=1MHZ			5	pF

Typical Characteristics



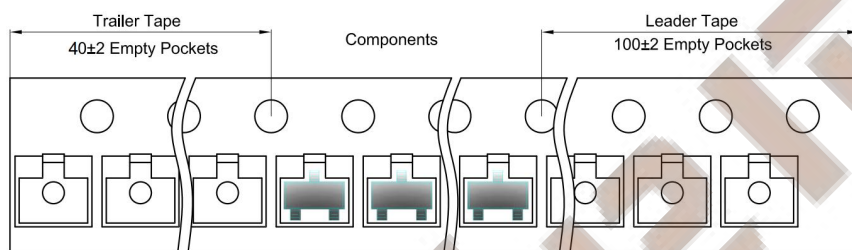
Package Information

Carrier Dimension(mm)

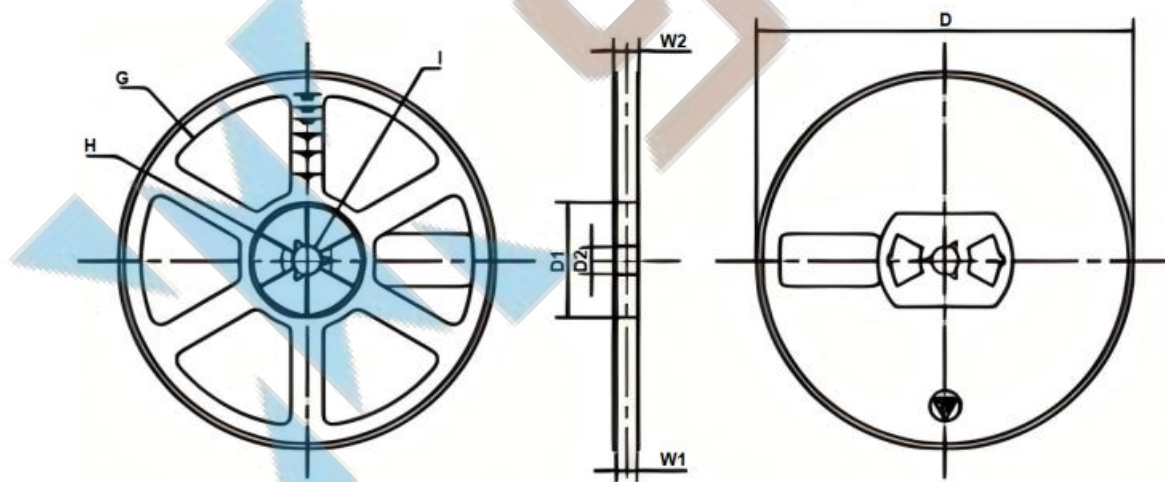


Dimensions are in millimeter

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)



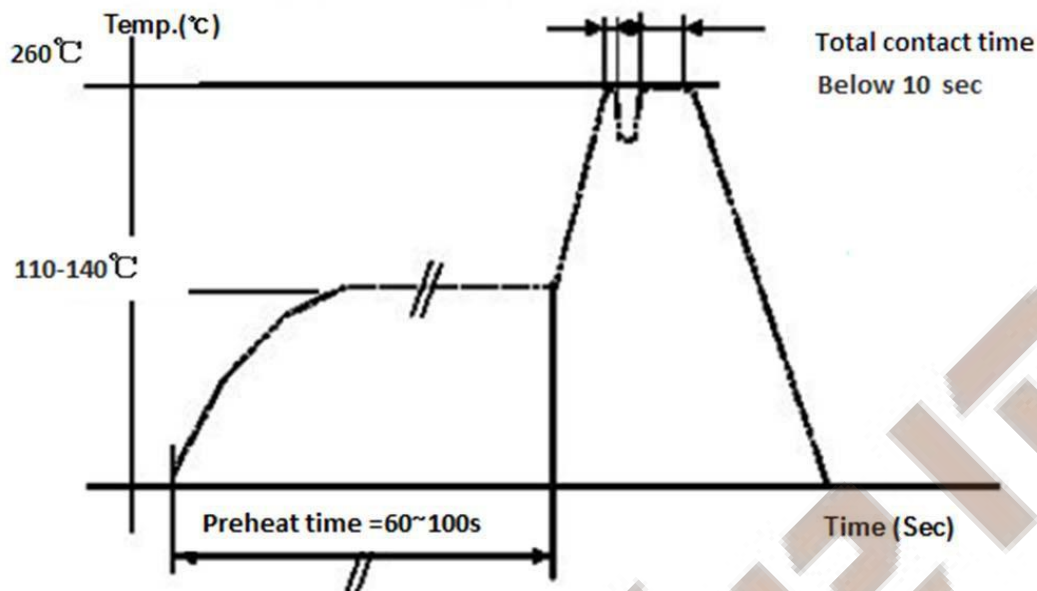
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

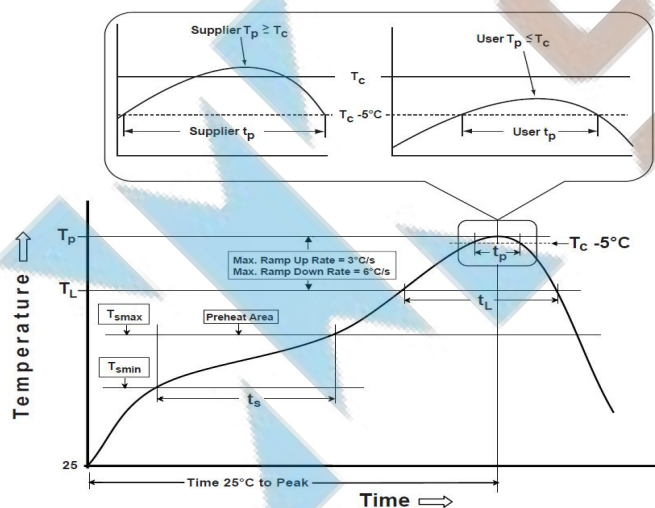
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT23	7'	178	3	210*208*203	45	440*400*230	180

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

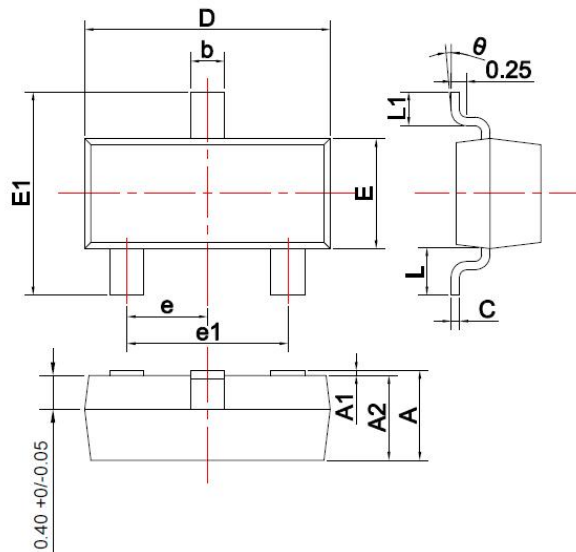


Preheat/Soak Temperature Min (T _{min}) Temperature Max (T _{max}) Time (ts) from (T _{min} to T _{max})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C (Melting Point of Solder)	3°C/sec
Time at Temp. > 217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time within 5°C below 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.

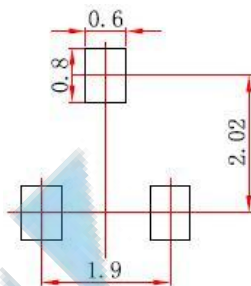
Package Mechanical Data



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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