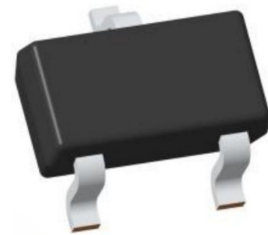


General Description

V_R	I_o	$V_{F_{max}}$	I_{FSM}	T_{jmax}
250V	200mA	1.25V@ $I_F=200mA$	2.5A	150°C

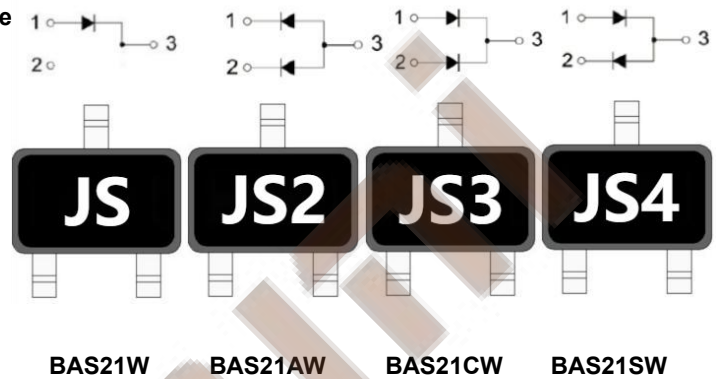


Features

- SOT-323 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

Application

- Extreme fast switches
- Automotive.



Package Marking and Ordering Information

Product ID	Package	Marking	Qty(PCS)
BAS21W	SOT-323	JS	3000
BAS21AW	SOT-323	JS2	3000
BAS21CW	SOT-323	JS3	3000
BAS21SW	SOT-323	JS4	3000

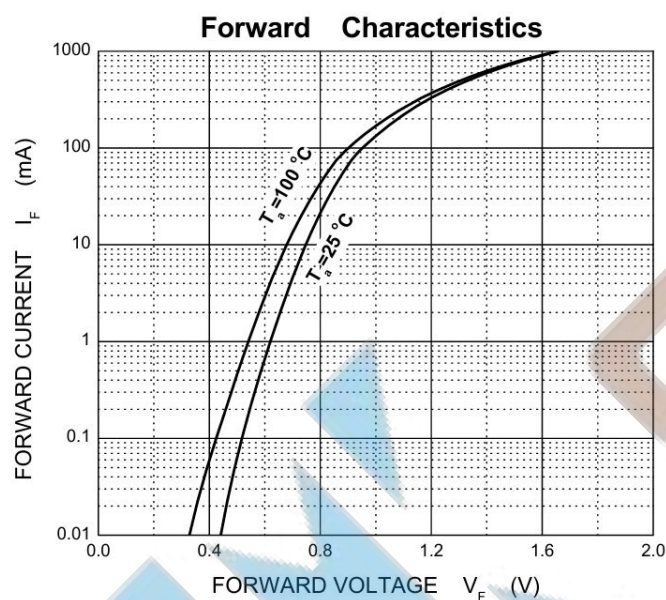
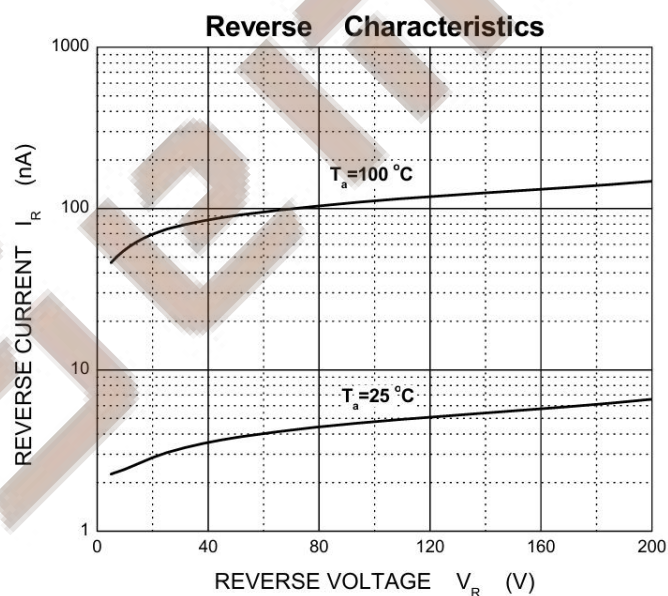
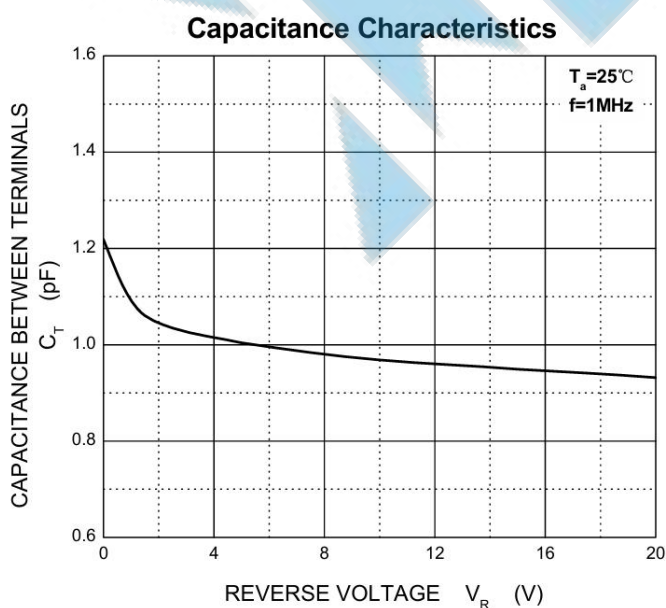
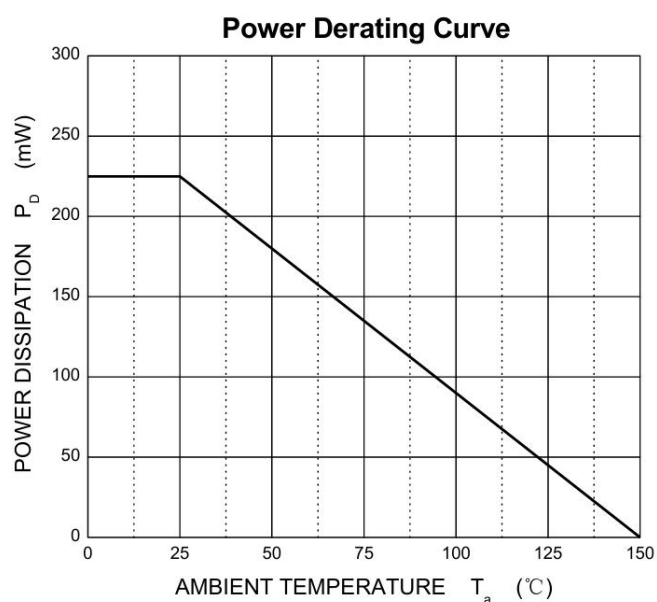
Absolute Maximum Ratings ($T_a=25^{\circ}C$ unless otherwise noted)

Parameter	Symbols	Value	Units
Peak Repetitive Reverse Voltage	VRRM	250	V
Working peak reverse voltage	VRWM		
DC blocking voltage	VR		
Power Dissipation	Pd	225	mW
Forward continuous Current	IFM	400	mA
Repetitive peak forward surge current	IFRM	625	mA
Non-Repetitive Peak Forward Surge Current @ $t=8.3ms$; $T_A=25^{\circ}C$	IFSM	2.5	A
Operating junction temperature	Tj	150	°C
Storage temperature range	Ts	-55-+150	°C
Thermal Resistance from Junction to Ambient	RθJA	555	°C/W

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

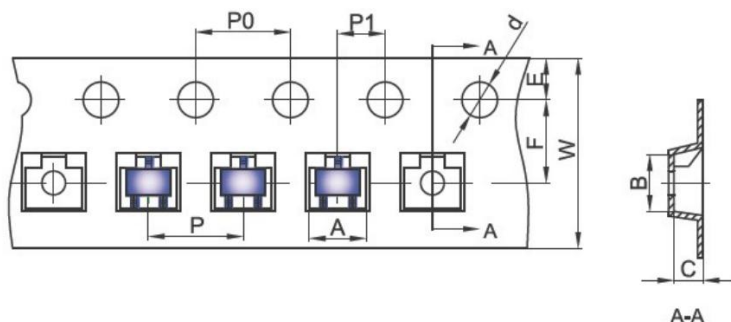
Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Reverse Voltage	V(BR)	IR=100uA	250		V
Reverse Leakage Current	IR	VR=200V		0.1	uA
Forward Voltage	VF	IF=100mA		1	V
		IF=200mA		1.25	V
	TRR	IF= IR=30mA, RL=100Ω, IRR=0.1 X IR		50	ns
Capacitance	CT	VR=0V, f=1MHZ		5	pF

Typical Characteristics



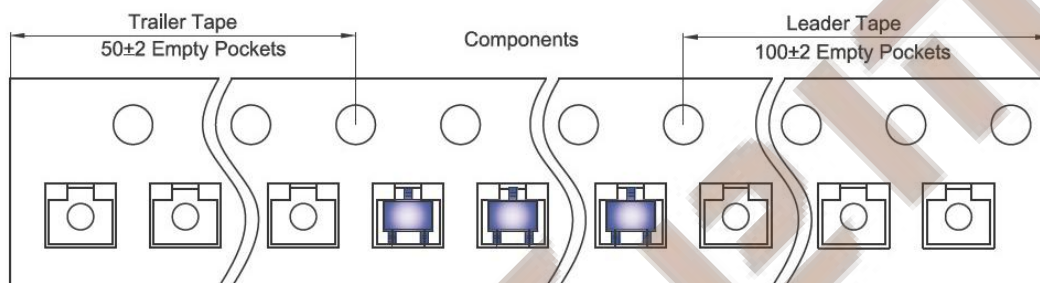
Package Information

Carrier Dimension(mm)

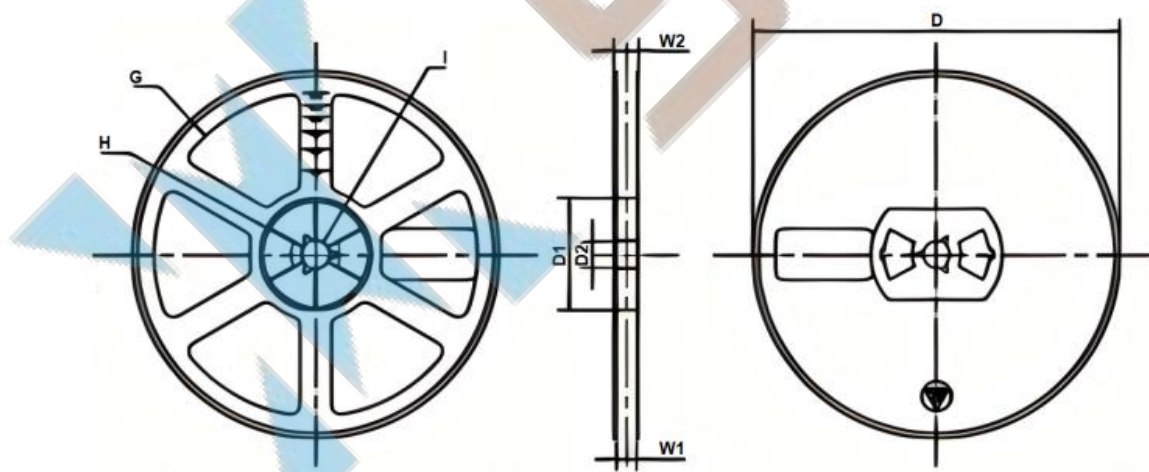


Dimensions are in millimeter

Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOT-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00



Reel Dimension(mm)



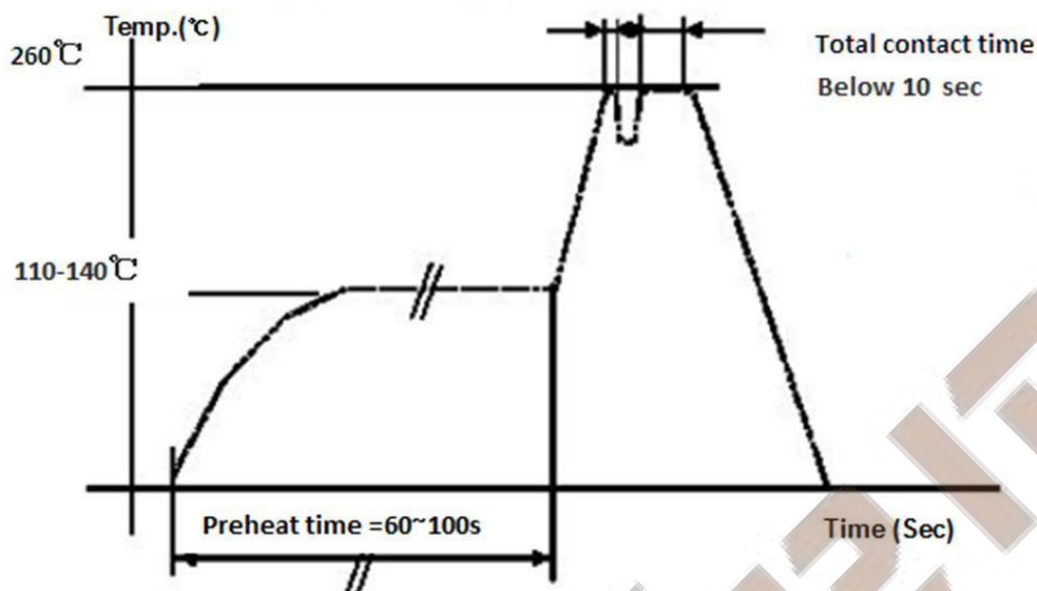
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

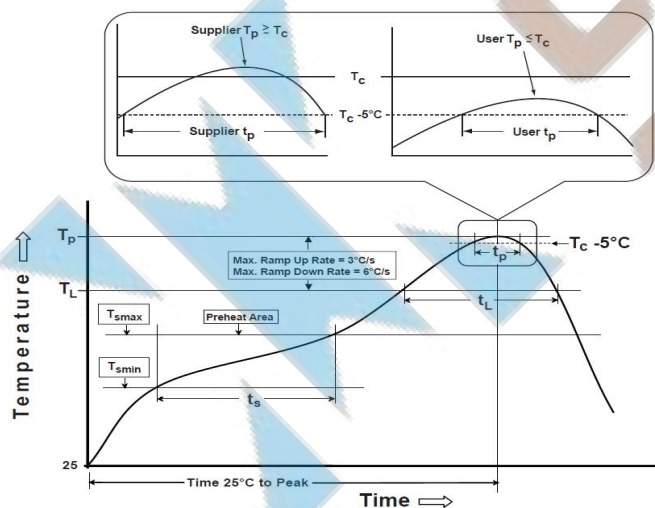
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT323	7'	178	3	210*208*203	45	440*400*230	180

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

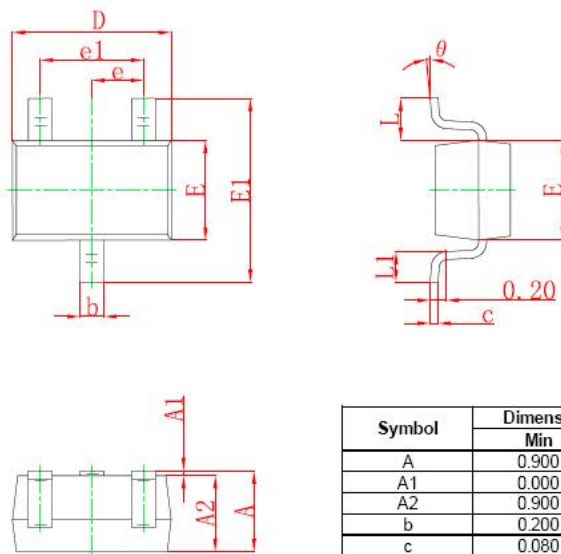


Preheat/Soak Temperature Min (T _{smin}) Temperature Max (T _{smax}) Time (t _s) from (T _{smin} to T _{smax})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature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

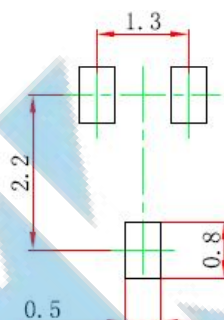
When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

Package Mechanical Data



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

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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