

General Characteristics

VR	VF(Max)	IFM	TjMax
70V	1000mV@IF=15mA	100mA	125℃

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

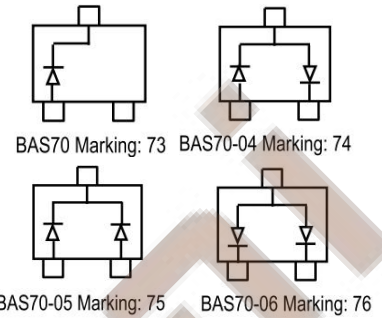
- Extreme fast switches
- Automotive

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BAS70	SOT-23	73	3000
BAS70-04	SOT-23	74	3000
BAS70-05	SOT-23	75	3000
BAS70-06	SOT-23	76	3000

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

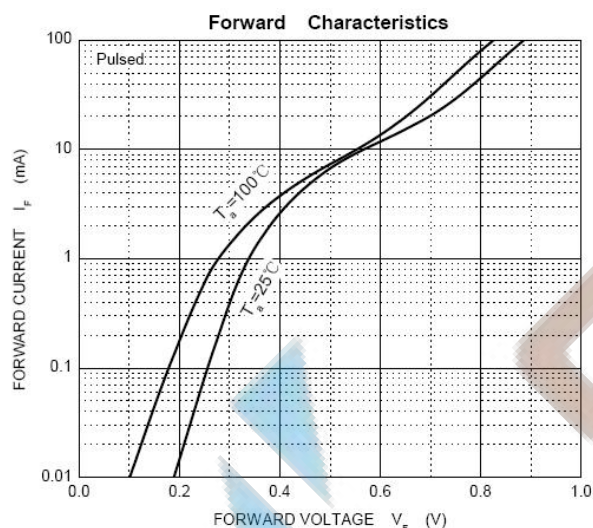
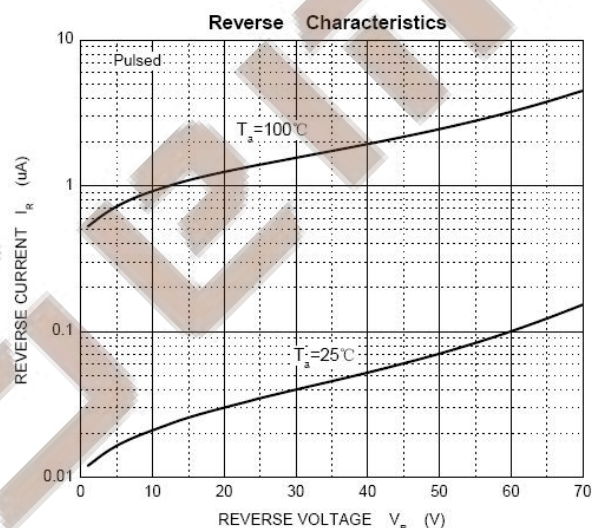
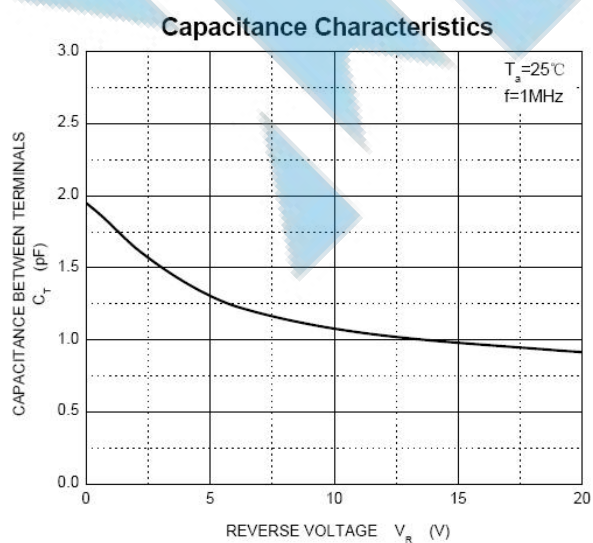
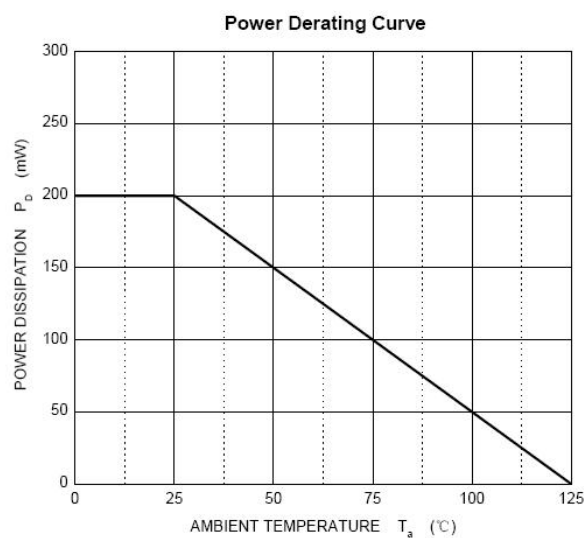
Parameter	Symbols	Value	Units
DC voltage	VR	70	V
Forward Continuous Current	IF	70	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	IFSM	100	mA
Power Dissipation	PD	200	mW
Typical thermal resistance	RθJA	500	℃/W
Junction Temperature	Tj	-40-+125	℃
Storage temperature range	TSTG	-50-+150	℃



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

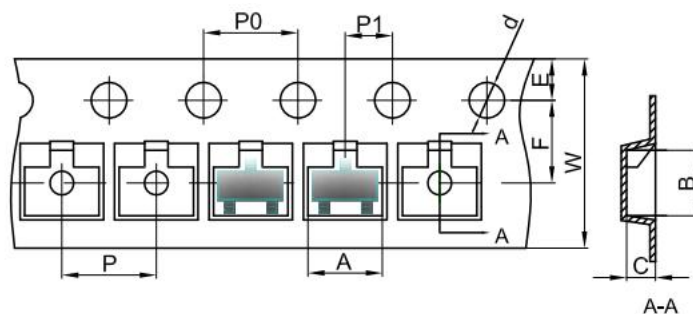
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Maximum reverse breakdown voltage	VR	IR=10uA	70			V
Maximum reverse current	IR	VR=50V			100	nA
Maximum forward voltage	VF1	IF=1mA			410	mV
	VF2	IF=15mA			1000	
Type junction capacitance	CD	VR = 0V, f=1MHz			2	pF
Reverse Recovery time	trr	IF=IR=10mA, Irr=0.1XIR, RL=100 Ω			5	ns

Typical Characteristics

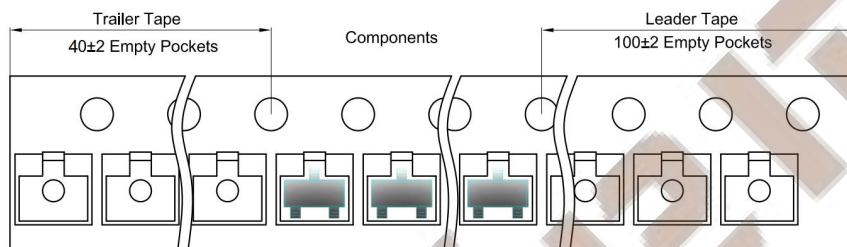


Package Information

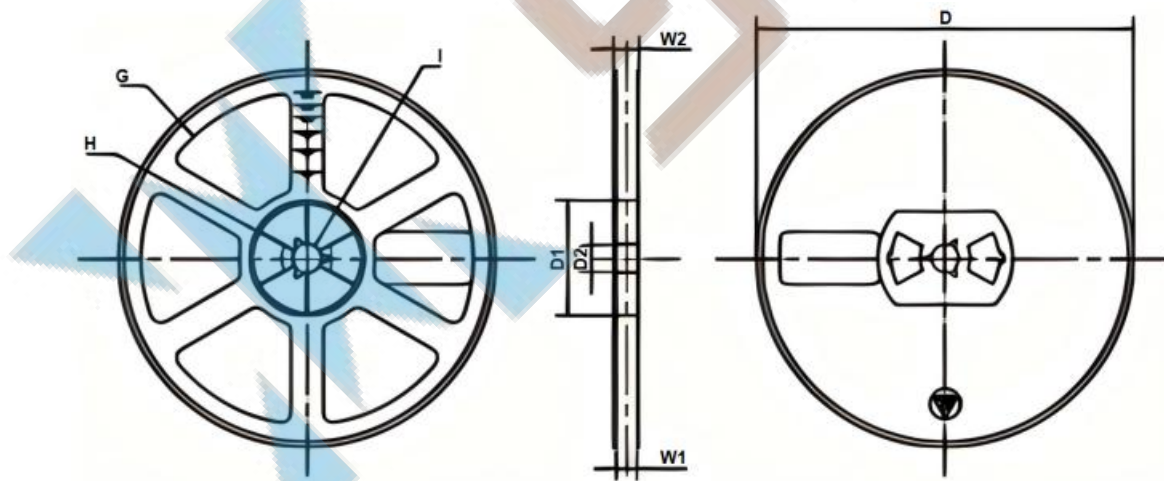
Carrier Dimension(mm)



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)



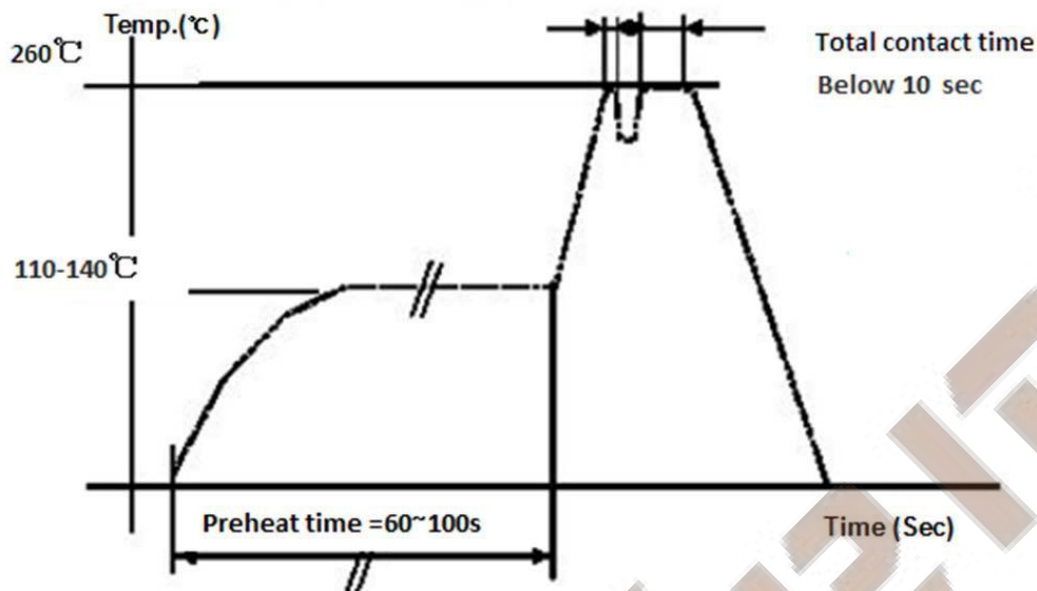
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

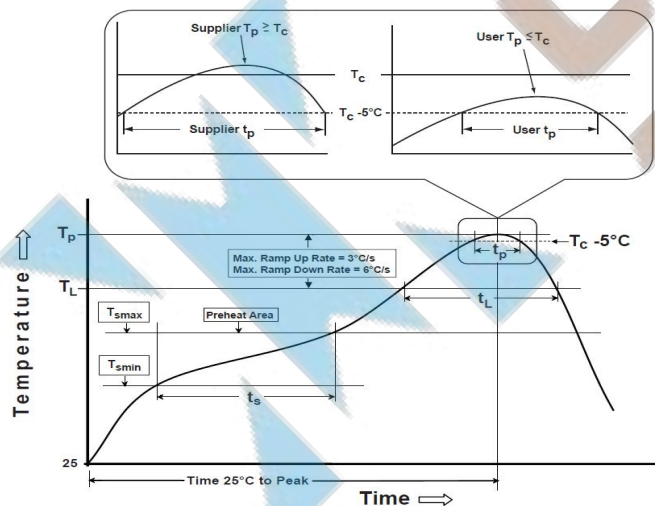
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT23	7'	178	3	210*208*203	45	440*400*230	180

Recommended Soldering Profile for Rectifier Diodes (Pb Free)

a) Wave Soldering Profile



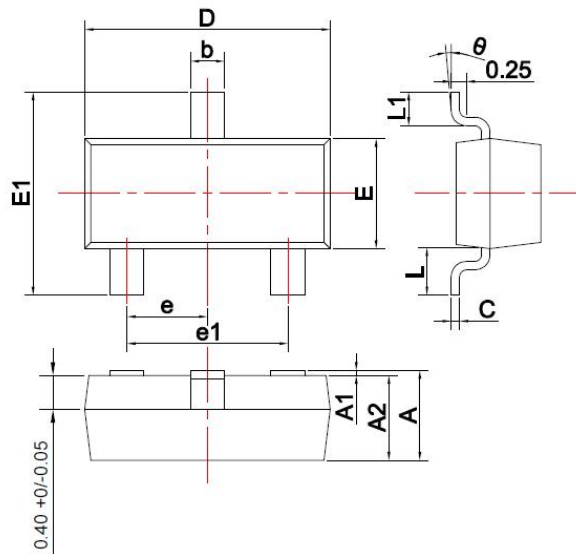
b) Reflow Soldering Profile (Pb Free Application), refer to IPC/JEDEC J-STD-020



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)

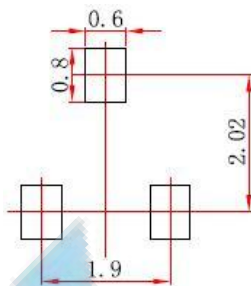
c) Manual Soldering

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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