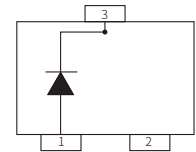


FEATURES

- | Fast Switching Device (TRR <50 nS)
- | Power Dissipation of 250mW
- | High Stability and High Reliability
- | Low Reverse Leakage



SOT-23



Schematic Symbol

MECHANICAL DATA

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

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	BAS19	BAS20	Unit
Marking		JP	JR	
Reverse Voltage	V_R	100	150	V
Peak Repetitive Reverse Voltage	V_{RRM}	120	200	V
Power Dissipation	P_D	250		mW
Average Rectified Current	I_O	200		mA
Peak Forward Surge Current @ $t_p=1\mu\text{s}$; $T_A=25^{\circ}\text{C}$	I_{FSM}	2.5		A
Operating Junction Temperature	T_J	$-55 \sim +150$		$^{\circ}\text{C}$
Storage Temperature Range	T_S	$-55 \sim +150$		$^{\circ}\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	500		$^{\circ}\text{C/W}$

Valid provided that electrodes are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Parameter	Test Condition		Symbol	Min.	Max.	Unit
Reverse Voltage	I _R = 100μA	BAS19	V _(BR)	100		V
		BAS20		150		
Reverse Leakage Current	V _R = 100V	BAS19	I _R		0.1	μA
	V _R = 150V	BAS20				
Forward Voltage	I _F = 100mA		V _F		1.00	V
	I _F = 200mA				1.25	
Reverse Recovery Time	I _F = I _R = 30mA		T _{RR}		50	nS
	R _L = 100Ω					
	I _{RR} = 0.1 X I _R					
Capacitance	V _R = 0V, f = 1MHz		C _T		2	pF

CHARACTERISTIC CURVES

Fig 1. Forward Characteristics

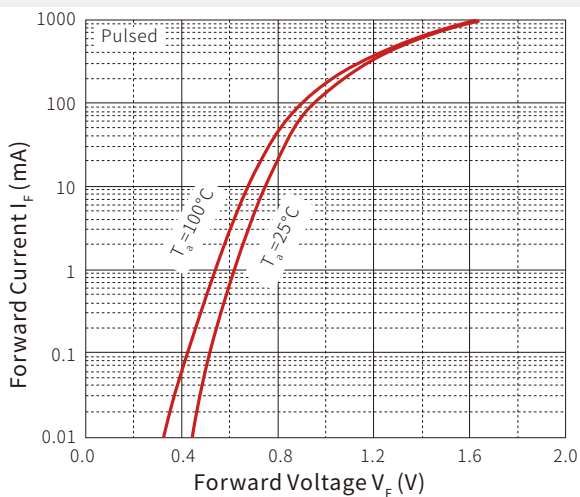


Fig 2. Reverse Characteristics

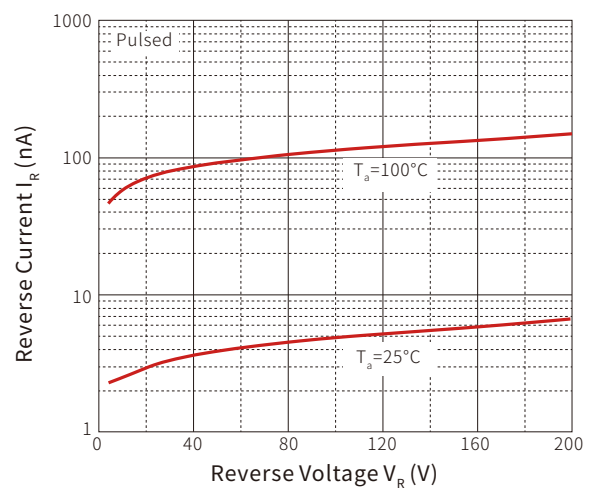




Fig 3. Capacitance Characteristics

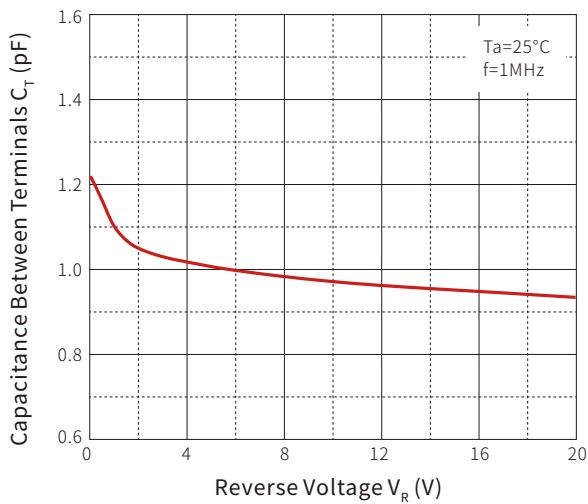
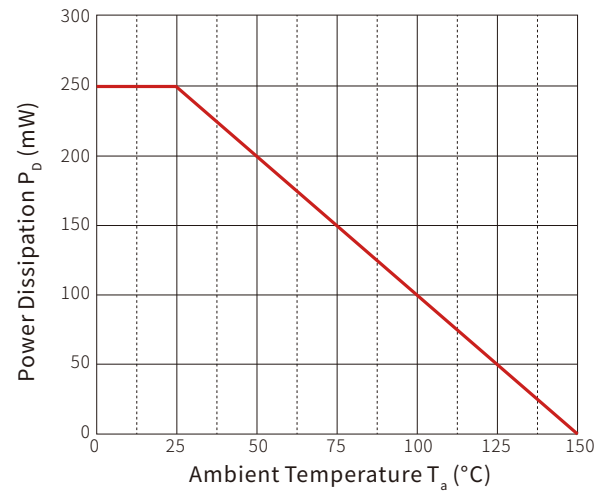
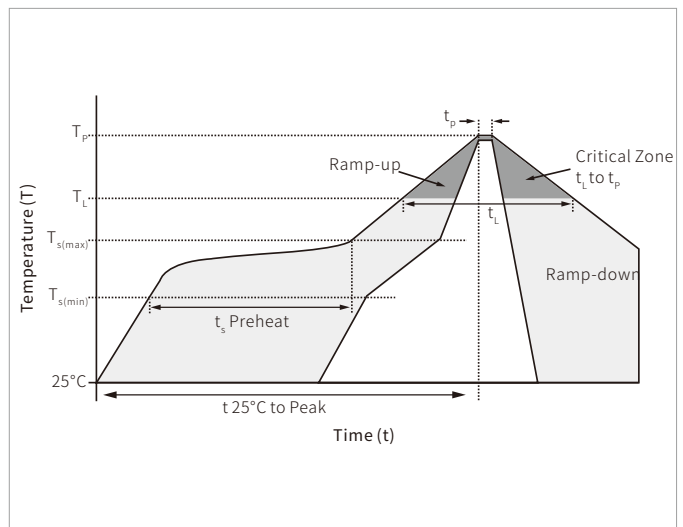


Fig 4. Power Derating Curve

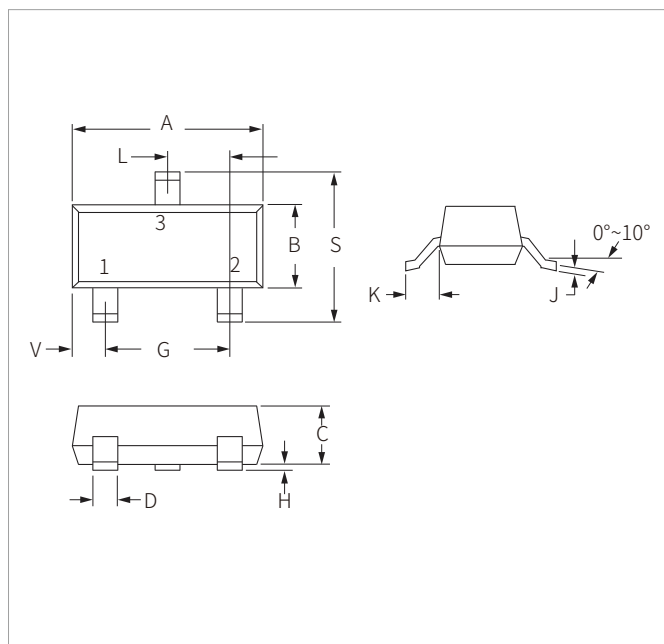


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150°C
	Temperature Max ($T_{s(\max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(\max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

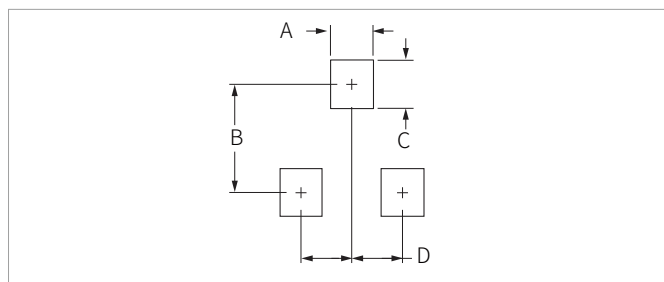


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BAS19-BAS20	SOT-23	3000PCS	7"

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By QR Code

Website



Wechat

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