

225mW, 50nS SOT-23 Plastic-Encapsulate Switching Diode

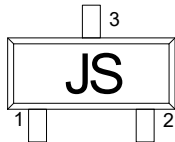
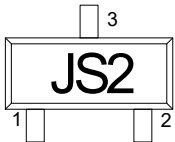
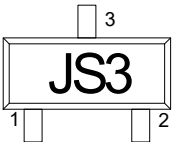
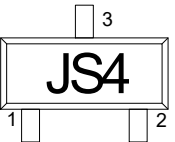
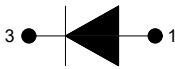
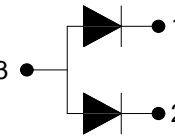
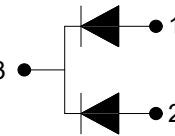
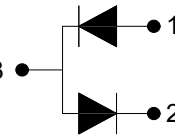
1. Features

- Fast switching device ($T_{rr} < 50\text{ns}$)
- Power dissipation of 225mW
- High stability and high reliability
- Low reverse leakage

2. Mechanical Data

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

3. Marking and Circuit

BAS21	BAS21A	BAS21C	BAS21S
			
			

4. Specification

Absolute Maximum Rating & Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

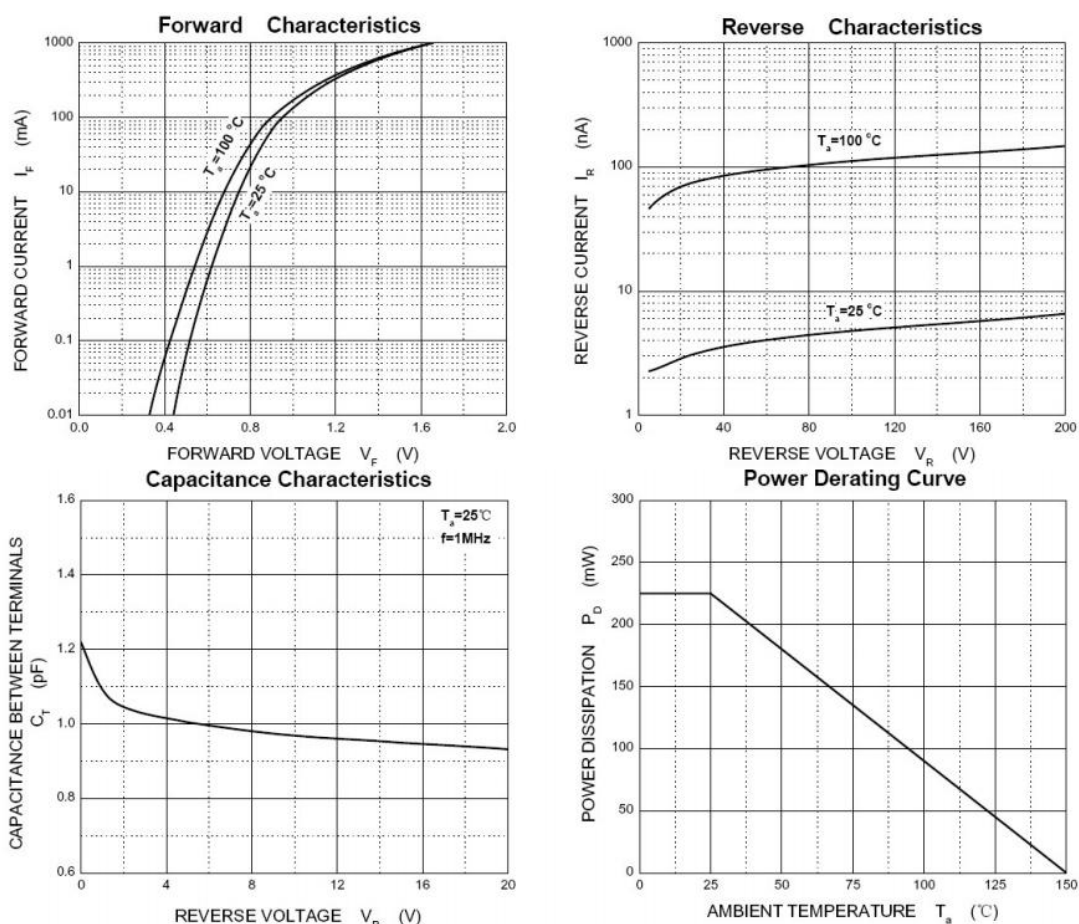
Parameters	Symbol	Limit	Unit
Reverse voltage	V_R	250	V
Peak Repetitive Reverse Voltage	V_{RRM}	250	V
Power Dissipation	P_D	225	mW
Non-repetitive peak forward current	I_{FM}	400	mA
Repetitive peak forward surge current	I_{FRM}	625	mA
Peak forward surge current @ $t_p=8.3\text{ms}$	I_{FSM}	2.5	A
Operating junction temperature	T_j	150	°C
Storage temperature range	T_s	-55~150	°C
Typical thermal resistance	$R_{\theta JA}$	555	°C/W

Electrical Characteristics

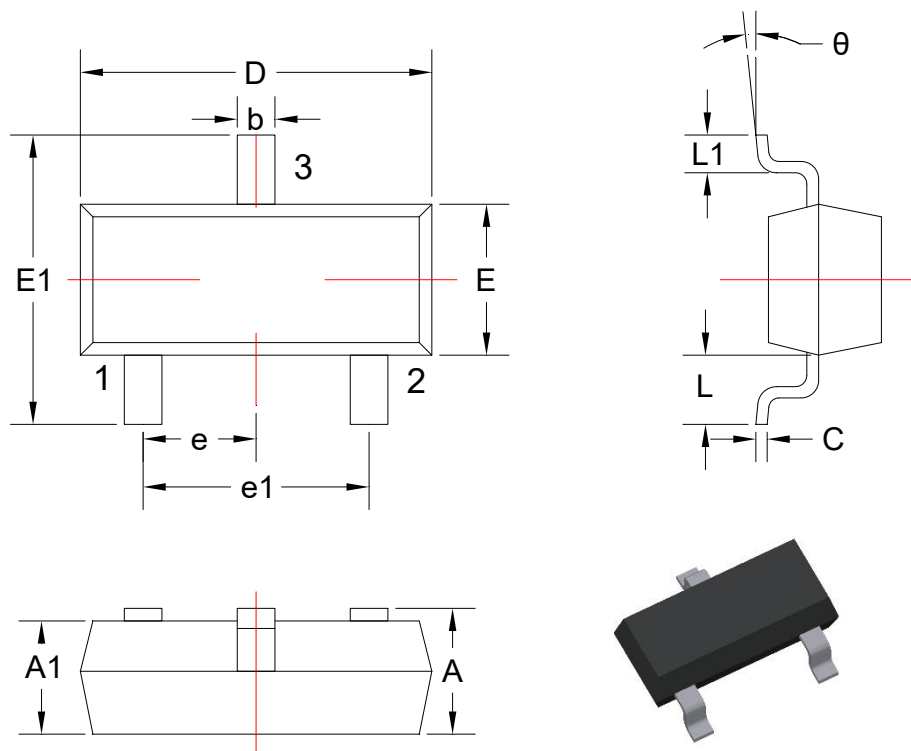
At TA = 25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Maximum forward voltage	V _F	I _F =100mA			1.00	V
		I _F =200mA			1.25	
Maximum reverse breakdown voltage	V _R	I _R =100uA	250			V
Maximum reverse leakage current	I _R	V _R =200V			100	nA
Type junction capacitance	C _j	V _R =0V, f=1MHz			5	pF
Reverse recovery time	T _{RR}	I _F =I _R =30mA I _{rr} =0.1x I _R , R _L =100Ω			50	ns

5. Typical Characteristic

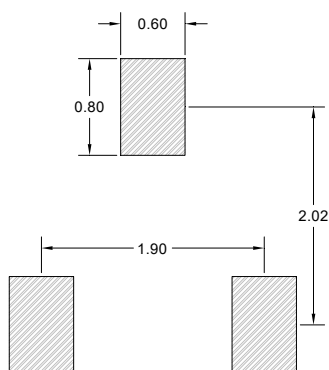


6. Dimension and Patterns (SOT-23)



Units: mm

Symbol	Dimensions		Symbol	Dimensions	
	Min.	Max.		Min.	Max.
A	0.900	1.150	E1	2.250	2.550
A1	0.900	1.050	e	0.950TYP	
b	0.300	0.500	e1	1.800	2.000
c	0.080	0.150	L	0.550REF	
D	2.800	3.00	L1	0.300	0.500
E	1.200	1.400	θ	0°	8°



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference only
4. Unit: mm

Notice

1. All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. The right to explain is owned by CCX electronics company.
2. Confirm that operation temperature is within the specified range described in the product specification.

Avoid applying power exceeding normal rated power; exceeding the power rating under steady-state loading condition may negatively affect product performance and reliability.
3. CCX shall not be in any way responsible or liable for failure induced under deviant condition from what is defined in this document.