

High voltage switching (double) diodes

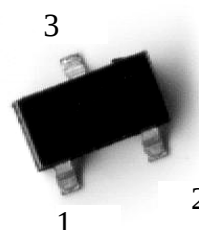
Features:

- Fast switching speed
- Low forward voltage drop
- Pb-free lead plating and halogen-free package

Description :

High voltage switching diodes encapsulated in a SOT-23 small plastic SMD package. Single diodes and double diodes with different pinning are available.

SOT-23

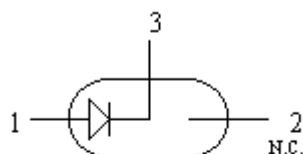


Mechanical Data:

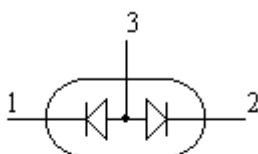
- Case : SOT-23, molded plastic
- Terminals : Solderable per MIL-STD-202 Method 208
- Weight : 0.008 grams(approx.)

Pinning

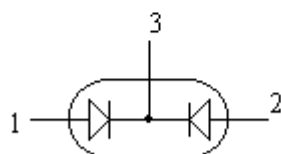
Pin	Description			
	BAS21	BAS21A	BAS21C	BAS21S
1	A	K1	A1	A1
2	NC	K2	A2	K2
3	K	A1,A2	K1,K2	K1,A1



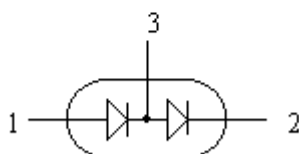
(1) BAS21



(2)BAS21A



(3)BAS21C



(4)BAS21S

Diode configuration and symbol

Marking:

Type	Marking Code
BAS21N3	JS
BAS21AN3	JS2
BAS21CN3	JS3
BAS21SN3	JS4

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

Parameter	Symbol	Limits	unit
Repetitive Peak Reverse Voltage	V _{RRM}	250	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
Forward Continuous Current	I _{FM}	400	mA
Average Rectified Output Current	I _O	200	mA
Non-repetitive Peak Forward Surge Current @ tp=1μs @ tp=100μs @ tp=1s	I _{FSM}	9 3 1.7	A
Repetitive Peak Forward Surge Current	I _{FRM}	625	mA
Power Dissipation	P _D	250	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	500	°C/W
Operating Junction Temperature Range	T _J	-65~+150	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

Characteristics (Ta=25°C)

Characteristic	Symbol	Condition	Min.	Max.	Unit
Reverse Breakdown Voltage	V _{BR}	I _R =100μA	250	-	V
Forward Voltage (Note)	V _F	I _F =100mA	-	1	V
		I _F =200mA	-	1.25	V
Reverse Leakage Current	I _R	V _R =200V	-	100	nA
		V _R =200V, T _j =150°C	-	100	μA
Diode Capacitance	C _D	V _R =0V, f=1MHz	-	5	pF
Reverse Recovery Time	t _{rr}	I _F =I _R =30mA R _L =100Ω measured at I _R =3mA	-	50	ns

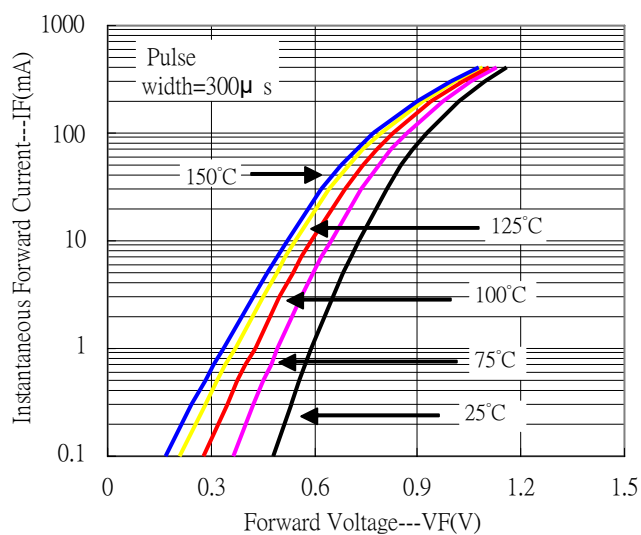
Note: Pulse test, tp=300μs, duty cycle<2%.

Ordering Information

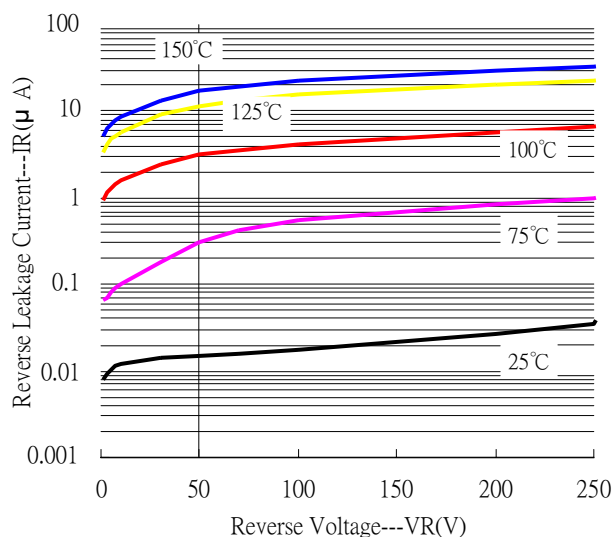
Device	Package	Shipping	Marking
BAS21N3	SOT-23 (Pb-free lead plating and halogen-free package)	3000 pcs / Tape & Reel	JS
BAS21AN3			JS2
BAS21CN3			JS3
BAS21SN3			JS4

Typical Characteristics

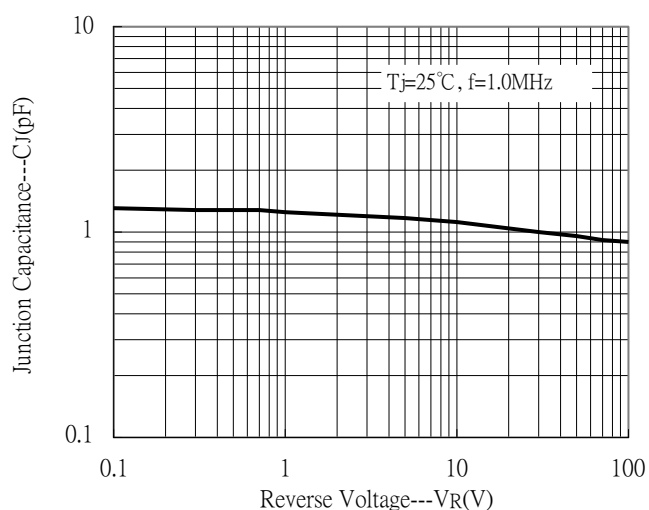
Forward Current vs Forward Voltage



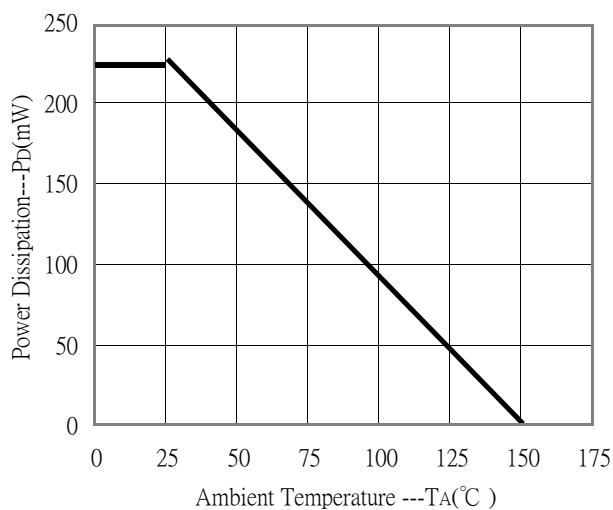
Reverse Leakage Current vs Reverse Voltage



Junction Capacitance vs Reverse Voltage

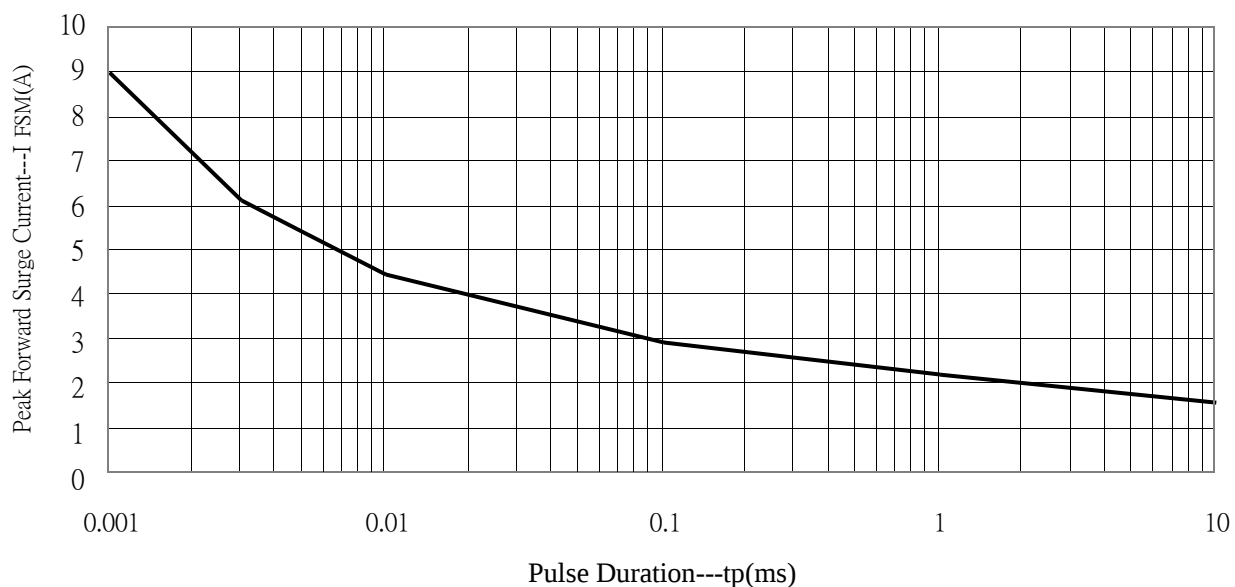


Power Derating Curve

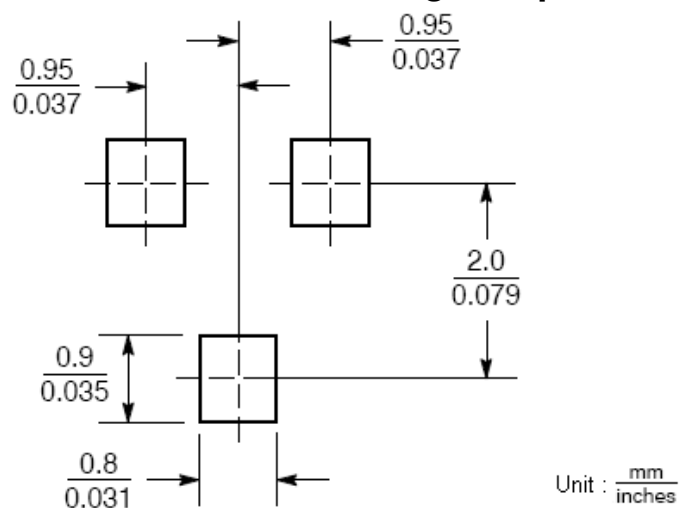


Typical Characteristics(Cont.)

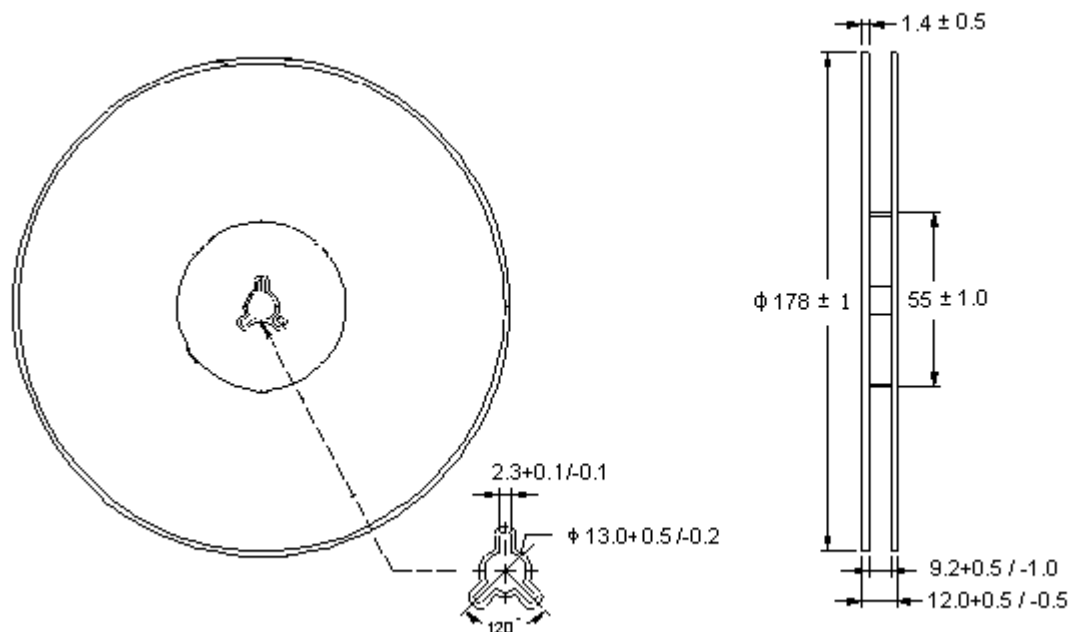
Maximum Permissible Non-repetitive Peak Forward Surge Current



Recommended Soldering Footprint

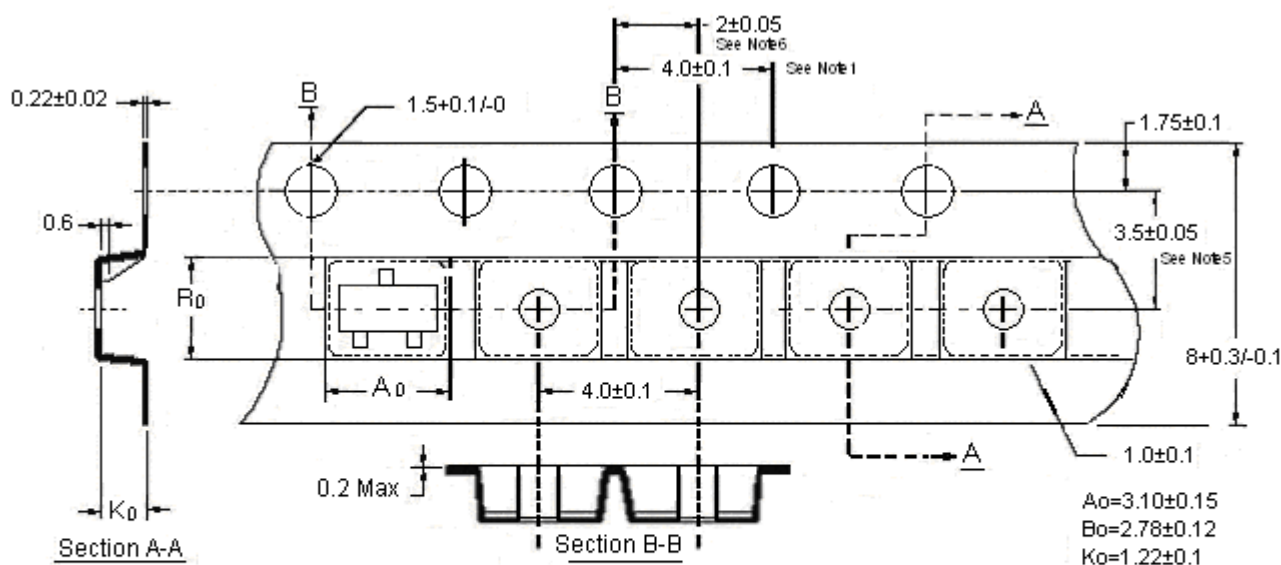


Reel Dimension



Unit: millimeter

Carrier Tape Dimension



SOT-23 Dimension

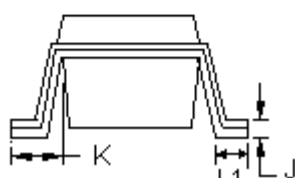
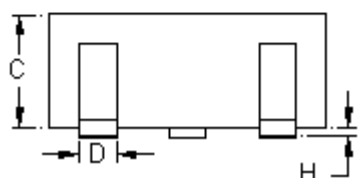
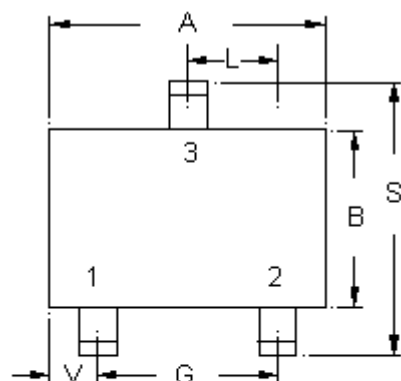
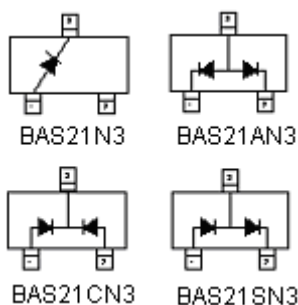
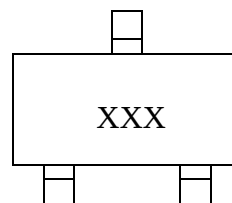


Diagram:



Marking:



3-Lead SOT-23 Plastic Surface Mounted Package. Package Code: N3

- BAS21 N3 : Single Diode (Marking Code JS)
- BAS21AN3 : Common Anode. (Marking Code JS2)
- BAS21CN3 : Common Cathode. (Marking Code JS3)
- BAS21SN3 : Series Connected. (Marking Code JS4)

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0032	0.0079	0.08	0.20
B	0.0472	0.0669	1.20	1.70	K	0.0118	0.0266	0.30	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1161	2.10	2.95
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0000	0.0040	0.00	0.10	L1	0.0118	0.0197	0.30	0.50