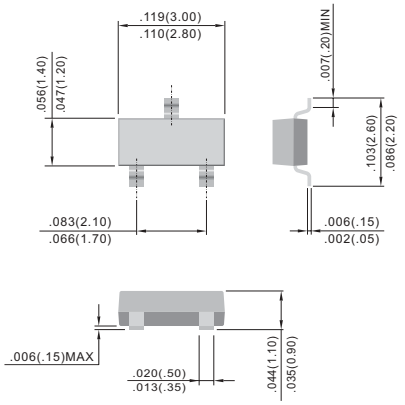
DATA SHEET

BAS21A/C/S

SURFACE MOUNT, HIGH VOLTAGE, DUAL SWITCHING DIODES

VOLTAGE	250 Volts	POWER	250mWatts

SOT-23 Unit: inch (mm)



FEATURES

- High reverse bearkdown voltage.
- Fast switching speed.
- Low reverse leakage current.
- Surface mount package ideally suited for automatic insertion.
- Galvanically isolated dual configurations to save board space.
- Both normal and Pb free product are available :

  Normal : 80~95% Sn, 5~20% Pb

  Pb free: 98.5% Sn above

MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-202, Method 208

Approx. Weight: 0.008 gram

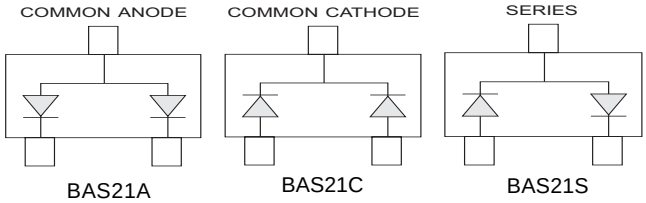
Marking : BAS21A:21A, BAS21C:21C, BAS21S:21S

ABSOLUTE RATINGS

PARAMETER	Symbol	Value	Units
Maximum Reverse Voltage	V_R	250	V
Peak Reverse Voltage	V_{RRM}	250	V
Average Rectified Current at Temp=25°C	I_O	0.2	A
Non-repetitive Peak Forward Surge Current at t=1.0 s	I_{FSM}	2.5	A

THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Power Dissipation	P_{TOT}	250	mW
Thermal Resistance, Junction to Ambient	$R\theta_{JA}$	357	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to 150	°C



ELECTRICAL CHARACTERISTICS

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	I_R=100 uA	--	--	250	V
Reverse Current	I_R	V_R=200 V V_R=200 V, T_J = 150°C	--	--	0.1 100	uA
Forward Voltage	V_F	I_F=1.0mA I_F=100mA	--	--	0.70 1.00	V
Maximum Junction Capacitance	C_J	V_R=0V, f=1.0MHz	--	--	5.0	pF
Reverse Recovery Time	Trr	I_F=I_R=30mA, R_L=100Ω	--	--	50	ns

ELECTRICAL CHARACTERISTICS CURVES

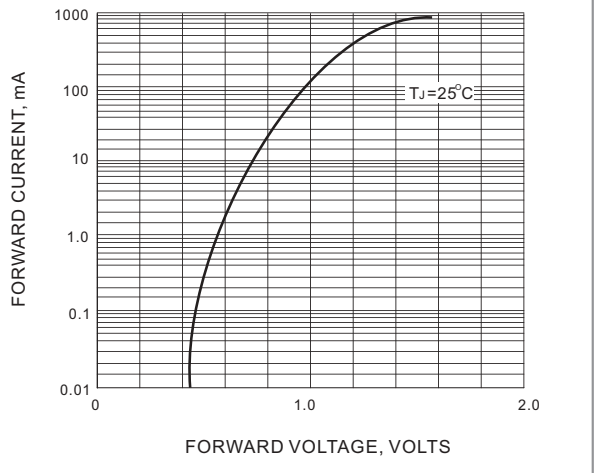


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

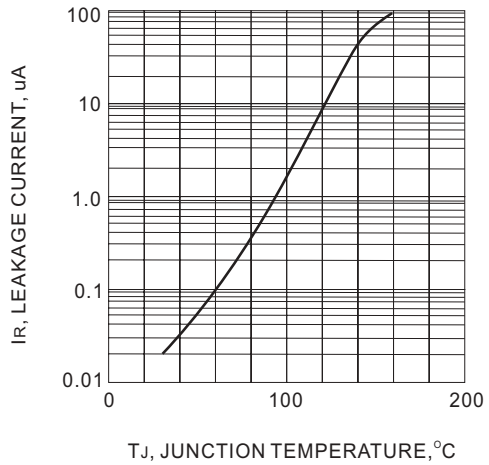


Fig.2 LEAKAGE CURRENT vs JUNCTION TEMPERATURE

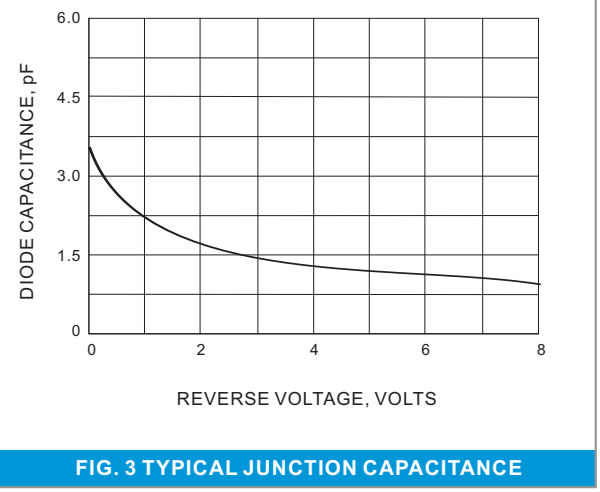


FIG. 3 TYPICAL JUNCTION CAPACITANCE

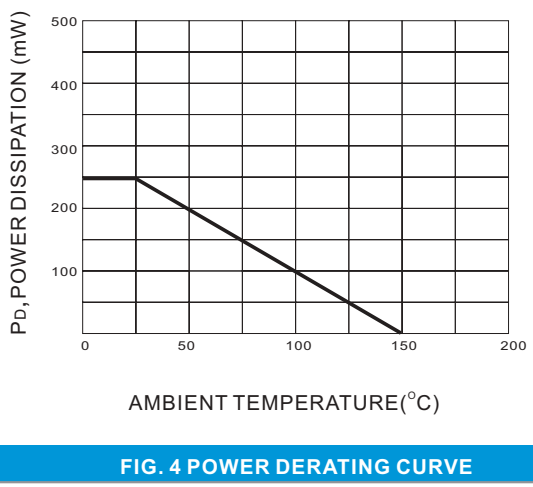
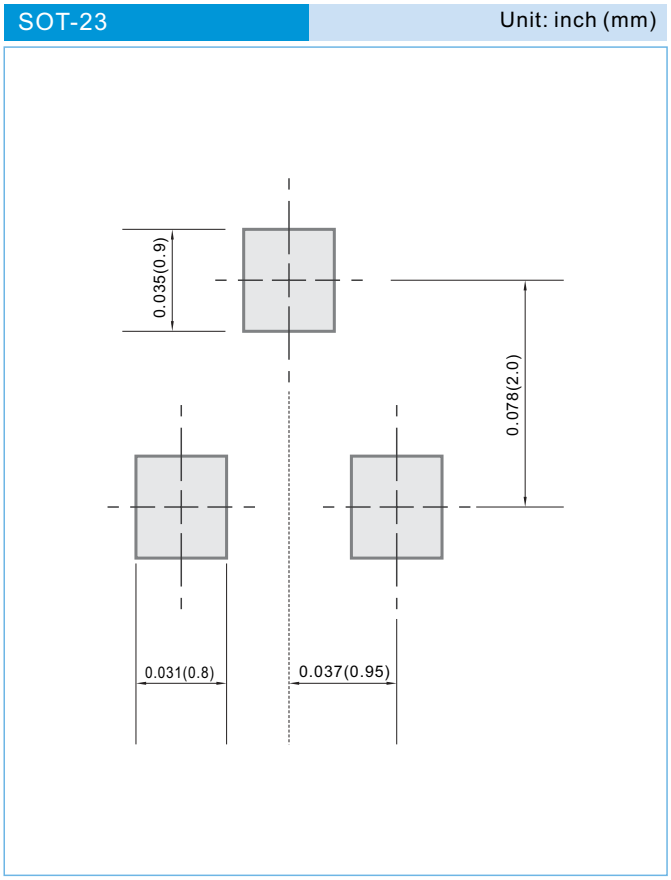


FIG. 4 POWER DERATING CURVE

MOUNTING PAD LAYOUT

SOT-23 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3.0K per 7" plastic Reel

LEGAL STATEMENT

IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.