



**FUKUCOM COMPANY LTD.**

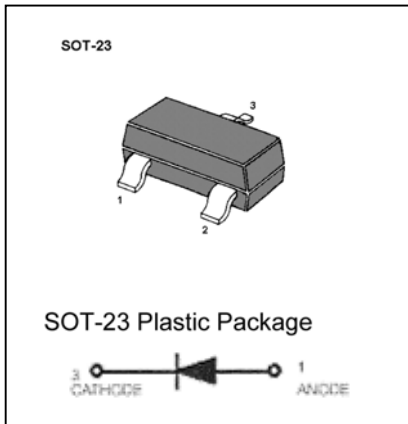
**福 靈 有 限 公 司**

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

## **BAS21**

High Voltage Switching Diode



Absolute Maximum Ratings at  $T_a=25^{\circ}\text{C}$  unless otherwise note

Symbol	Characteristic	Value	Units
$V_R$	Continuous Reverse Voltage	250	V
$I_F$	Peak Forward surge Current (Note)	200	mA
$I_F$	Peak Forward Current (Note)	200	mA
$P_F$	Forward Power Dissipation @ $25^{\circ}\text{C}$ Derate above $25^{\circ}\text{C}$	350	mW
		2.8	mW/ $^{\circ}\text{C}$
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55 ~ 150	$^{\circ}\text{C}$

Electrical Characteristics at  $T_a=25^{\circ}\text{C}$

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
$V_{BR}$	Reverse Breakdown Voltage	$I_{BR}=100\mu\text{A}$	250			V
$I_R$	Reverse Voltage Leakage Current	$V_R=200\text{V}$ $V_R=200\text{V}; T_j=150^{\circ}\text{C}$			1.0 100	$\mu\text{A}$
$V_F$	Forward Voltage	$I_F=100\text{mA}$ $I_F=200\text{mA}$			1.0 1.25	V
$C_i$	Capacitance	$V_R=0$ $f=1.0\text{MHz}$			5	pF
$T_{rr}$	Reverse Recovery Time	$I_F=I_R=30\text{mA}$ $R_L=100\Omega$			50	ns

Marking: JS

Note: Diode on Ceramic Substrate 10mm x 8.0mm 0.7mm





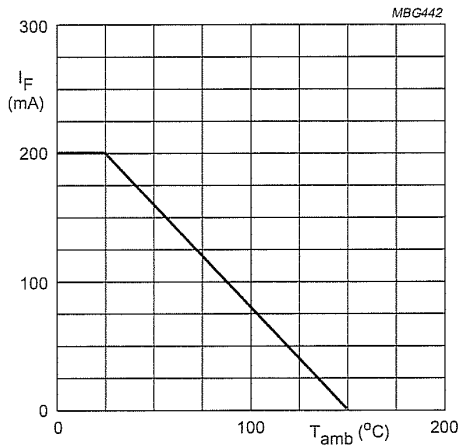
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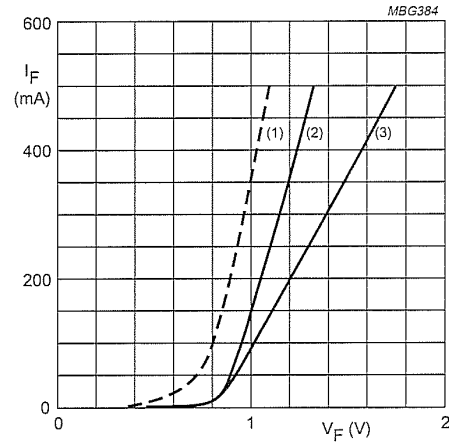
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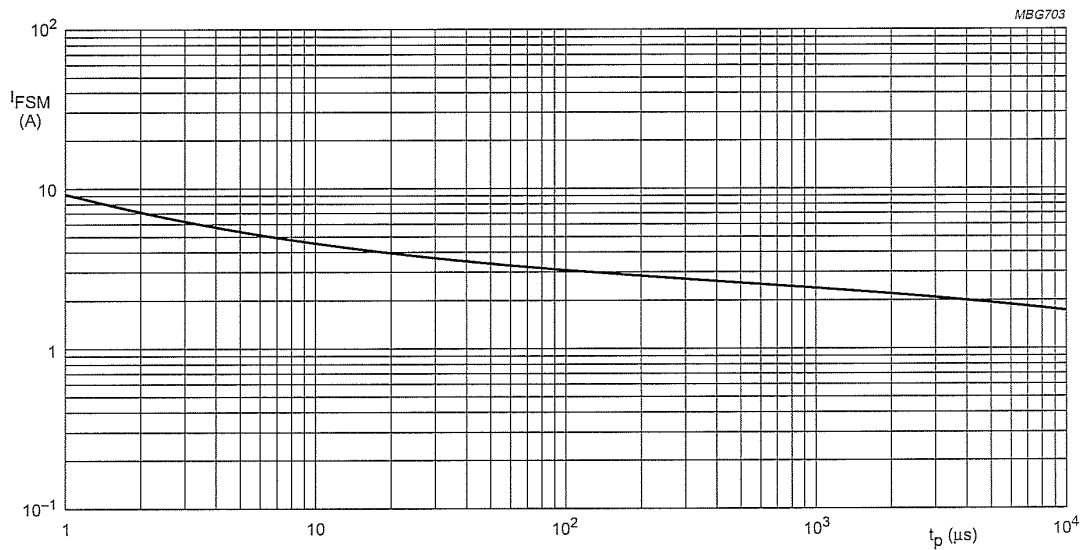
Device mounted on an FR4 printed-circuit board.

Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



- (1)  $T_j = 150^\circ\text{C}$ ; typical values.
- (2)  $T_j = 25^\circ\text{C}$ ; typical values.
- (3)  $T_j = 25^\circ\text{C}$ ; maximum values.

Fig.3 Forward current as a function of forward voltage.



Based on square wave currents.  
 $T_j = 25^\circ\text{C}$  prior to surge.

Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.





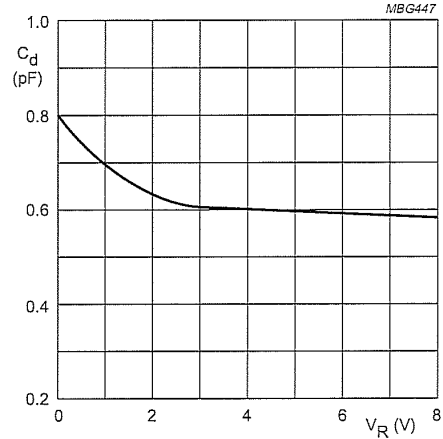
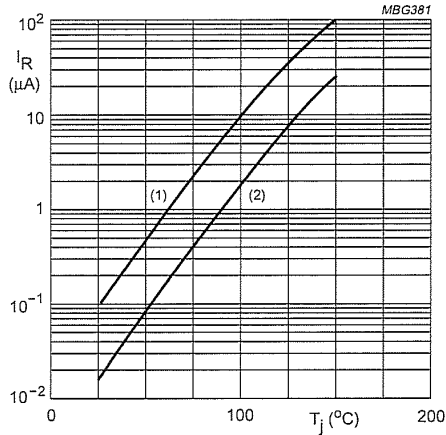
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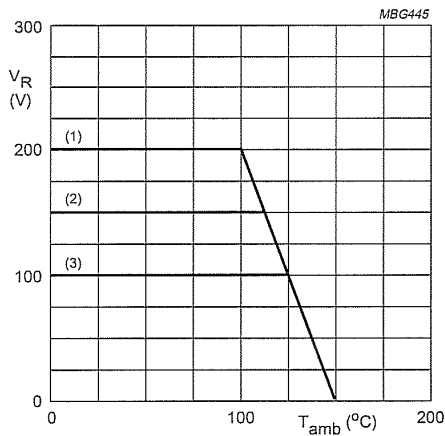


- (1)  $V_R = V_{Rmax}$ ; maximum values.
- (2)  $V_R = V_{Rmax}$ ; typical values.

$f = 1$  MHz;  $T_j = 25$  °C.

Fig.5 Reverse current as a function of junction temperature.

Fig.6 Diode capacitance as a function of reverse voltage; typical values.



- (1) BAS21.
- (2) BAS20.
- (3) BAS19.

Fig.7 Maximum permissible continuous reverse voltage as a function of the ambient temperature.

