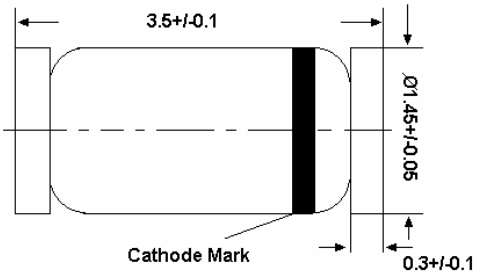
BAS32L

HIGH SPEED DIODE



Glass case MiniMELF
Dimensions in mm

FEATURES

- Small hermetically-sealed glass SMD package
- High switching speed
- Continuous reverse voltage
- Repetitive peak reverse voltage
- Repetitive peak forward current

APPLICATION

- High-Speed Switching
- Fast Logic Applications

Absolute Maximum Ratings (Ta = 25°C)

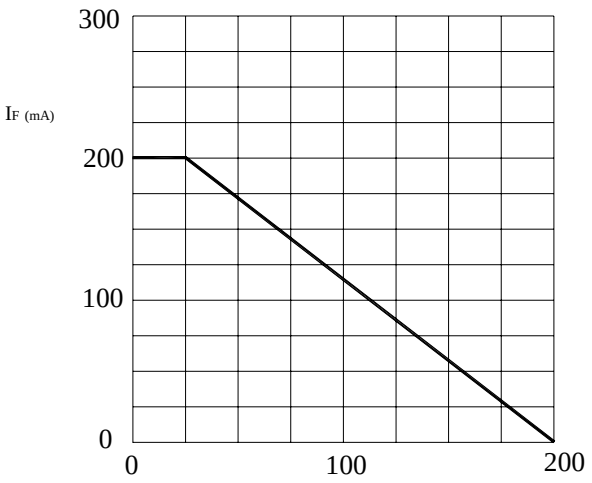
Parameter	Symbol	Limits	Unit
Repetitive peak reverse voltage	V_{RRM}	75	V
Continuous reverse voltage	V_R	75	V
Continuous forward current (note1)	I_F	200	mA
Repetitive peak forward current	I_{FRM}	450	mA
Non-repetitive peak forward current Square wave, Tj = 25 ℃ prior to surge t=1 μs t=1ms t=1s	I_{FSM}	4 1 0.5	A
Power dissipation	P_{tot}	500	mW
Junction temperature	T_j	200	°C
Storage temperature range	T_S	-65 to +200	°C
Thermal resistance from junction to tie point	R_{thjtp}	300	K/W
Thermal resistance from junction to ambient	R_{thja}	350	K/W

Note 1: Device mounted on an FR4printed- circuit board.

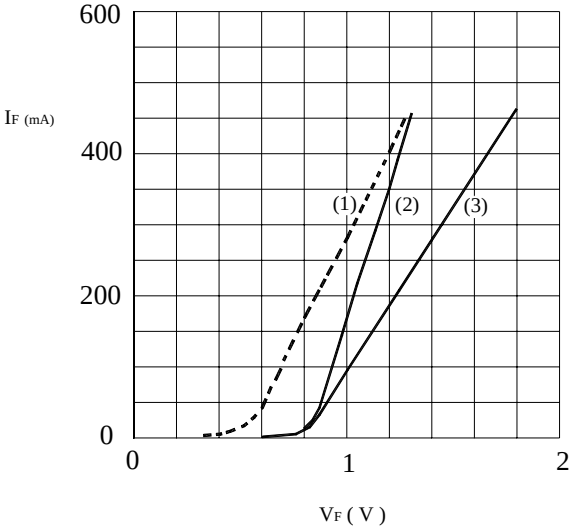
Electrical Characteristics (T_a = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward voltage					
at I_F = 5mA	V_F	620	-	750	mV
at I_F = 100mA	V_F	-	-	1000	mV
at I_F = 100mA, Tj = 100℃	V_F	-	-	930	mV
Reverse current					
at V_R = 20V	I_R	-	-	25	nA
at V_R = 75V	I_R	-	-	5	μA
at V_R = 20V, Tj = 150℃	I_R	-	-	50	μA
at V_R = 75V, Tj = 150℃	I_R	-	-	100	μA
Reverse breakdown voltage at I_R = 100μA	$V_{(BR)R}$	100	-	-	V
Diode capacitance f = 1MHz	C_d	-	-	2	pF
Reverse recovery time at I_F = 10mA, I_R = 10mA, R_L = 100Ω measured at IR = 1mA	t_{rr}	-	-	4	ns
Forward recovery voltage I_F = 50mA, t_r = 20ns	V_{fr}	-	-	2.5	V

Maximum permissible continuous forward current as a function of ambient temperature

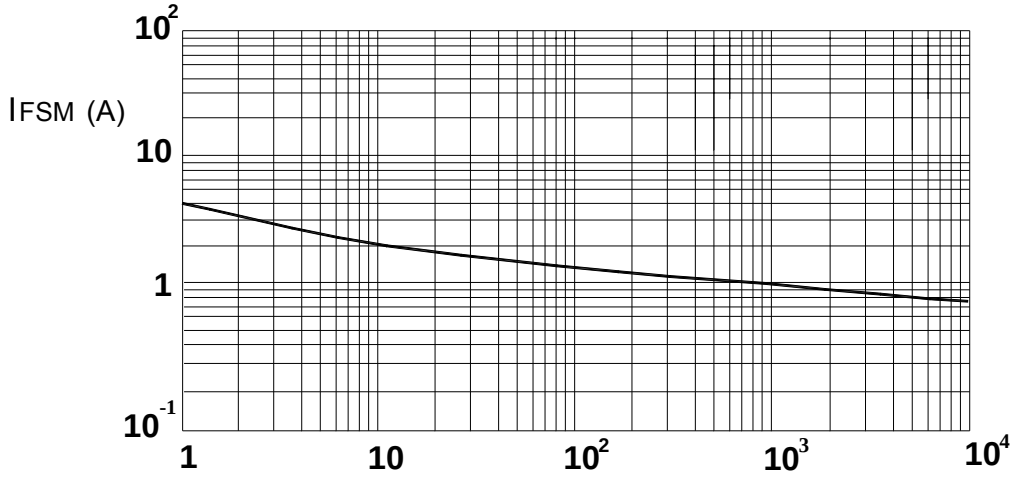


forward current as a function of forward voltage



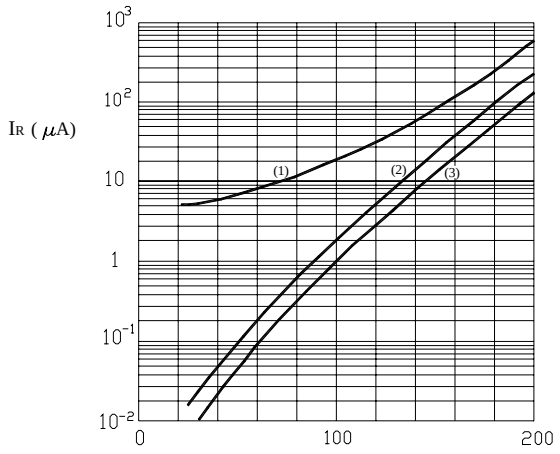
(1) Tj=175 °C ; typical values
(2) Tj=25 °C ; typical values
(3) Tj=25 °C ; maximum values

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



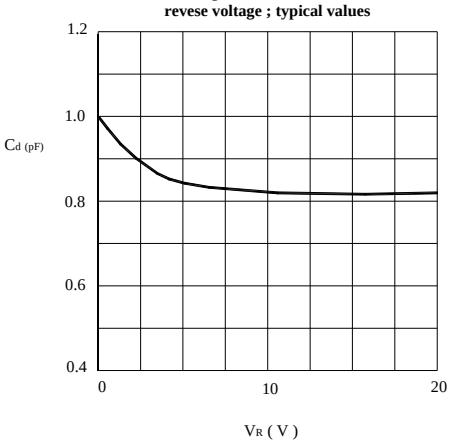
Based on square wave current
Tj = 25 °C prior to surge

REVERSE CURRENT AS A FUNCTION
OF JUNCTION TEMPERATURE



(1) VR=75V; maximum values
(2) VR=75V; typical values
(3) VR=20V; typical values

Diode capacitance as a function of revese voltage ; typical values



f=1MHz; Tj=25 °C