Low-leakage Diode **BAS416W**

FEATURES

HF

- Low leakage current
- Switching time
- Continuous reverse voltage
- Repetitive peak reverse voltage
- Repetitive peak forward current



SOD-123

APPLICATIONS

- Low-leakage current applications in surface mounted circuits

ORDERING INFORMATION

Type No.	Marking	Package Code
BAS416W	D4	SOD-123

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

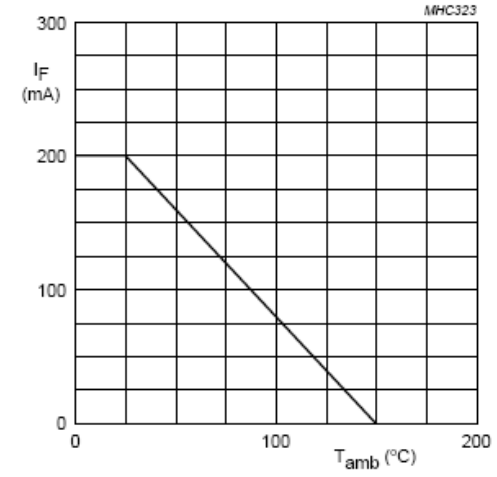
Parameter	Symbol	Limits	Unit
Peak reverse voltage	V_{RRM}	85	V
DC Reverse Voltage	V_R	75	V
continuous forward current	I_F	200	mA
repetitive peak forward current	I_{FRM}	500	mA
non-repetitive peak forward current	I_{FSM} t = 1 μs t = 1 ms t = 1 s	 4 1 0.5	A
Thermal resistance,junction to ambient air	$R_{\theta jA}$	357	℃/W
Thermal Resistance Junction-to-Case	$R_{\theta jC}$	225	℃/W
Power Dissipation	P_D	350	mW
Junction temperature	T_j	150	℃
Storage temperature	T_{STG}	-65 to +150	℃

Low-leakage Diode **BAS416W**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

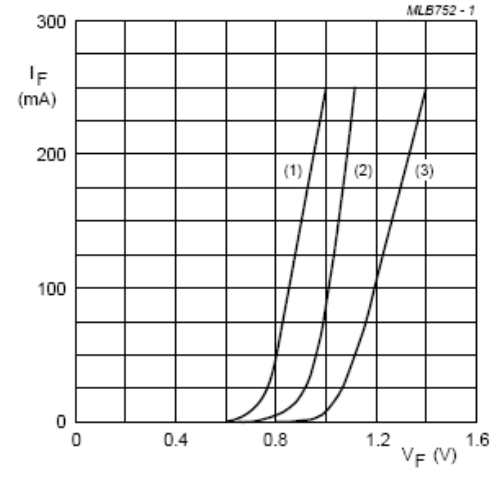
Parameter	Symbol	Min.	TYP.	Max.	Unit	Conditions
Forward voltage	V_F			0.9 1 1.1 1.25	V	I_F=1mA I_F=10mA I_F=50mA I_F=150mA
Reverse current	I_R			5 80	nA	V_R=75V V_R=75V, T_A=150℃
Capacitance between terminals	C_d		2		pF	V_R=0V,f=1MHz
reverse recovery time	trr		0.8	3	us	when switched from I_F = 10 mA to I_R = 10 mA; R_L = 100Ω measured at I_R = 1 mA

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



Device mounted on an FR4 printed-circuit board.

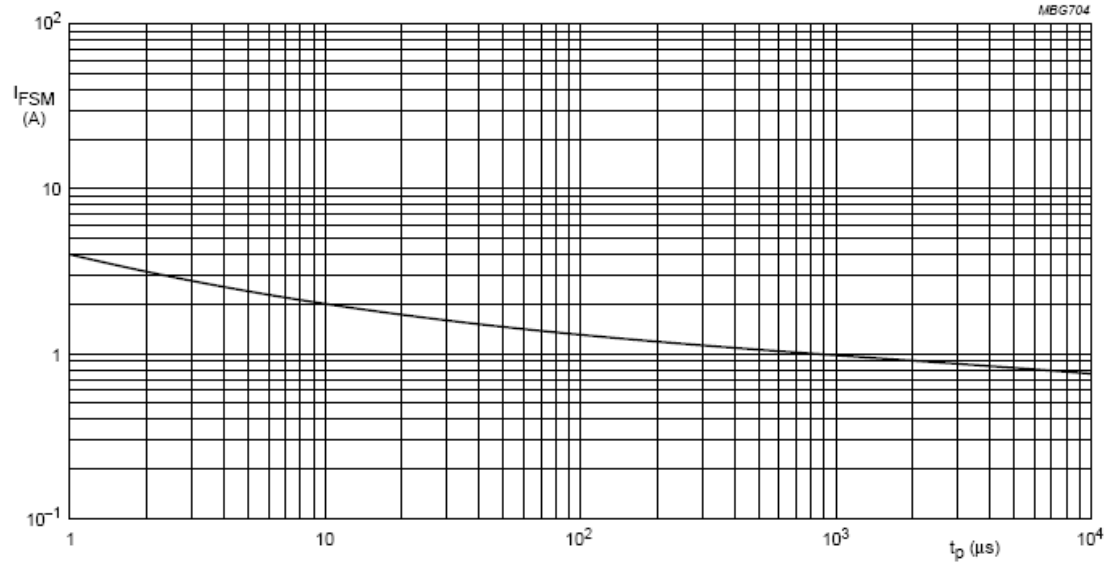
Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

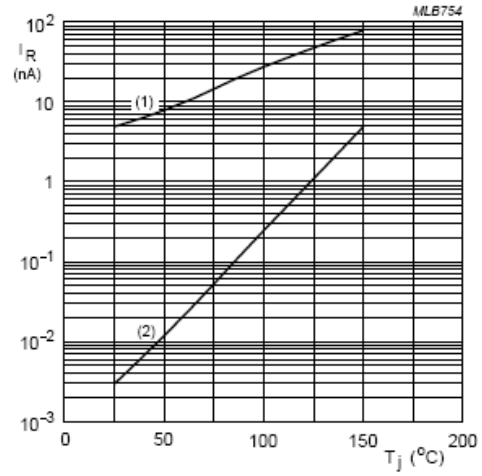
Fig.3 Forward current as a function of forward voltage.

Low-leakage Diode **BAS416W**



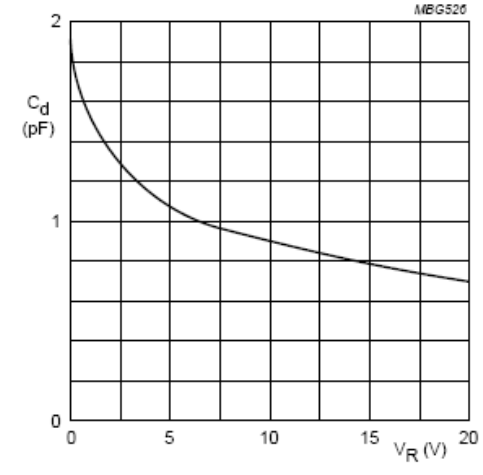
Based on square wave currents.
T_j = 25 °C prior to surge.

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



V_R = 75 V.
(1) Maximum values.
(2) Typical values.

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



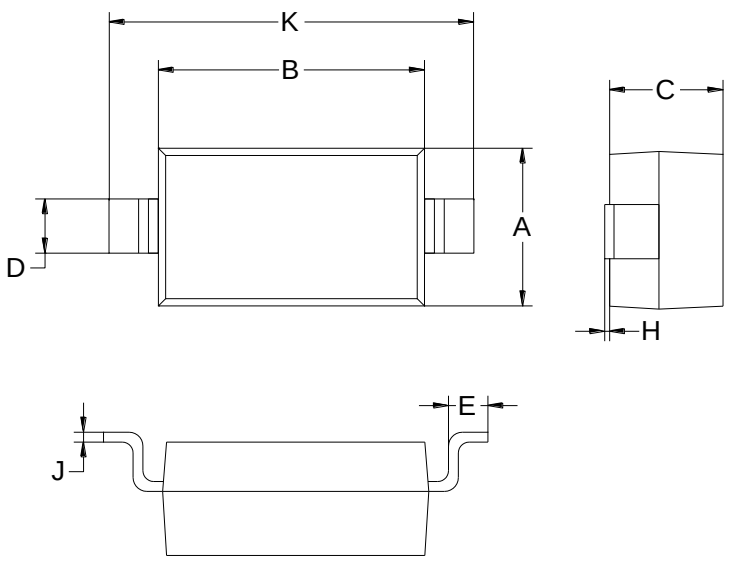
f = 1 MHz; T_j = 25 °C.

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

Low-leakage Diode **BAS416W**

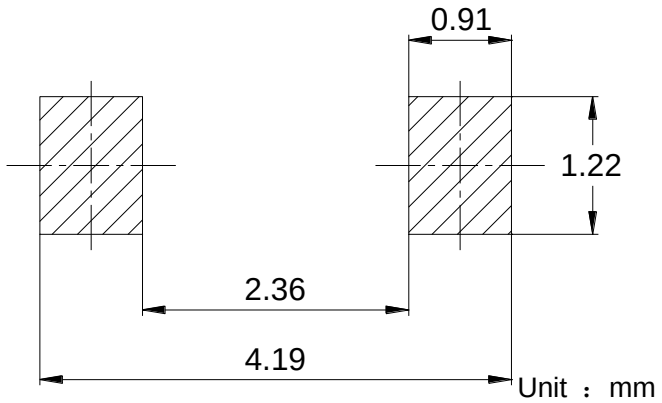
PACKAGE OUTLINE

Plastic surface mounted package SOD-123



SOD-123		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85
All Dimensions in mm		

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BAS416W	SOD-123	3000 pcs / Tape & Reel