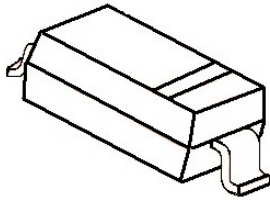


SOD-123

380mW SOD-123 Fast Switching Diode



MARKING: A1

特征 Features

- 开关速度小于 4.0nS; Fast Switching Device (TRR <4.0 nS)
- 最大功率耗散 380mW; Power Dissipation of 380mW
- 高稳定性和可靠性。High Stability and High Reliability
- 反向漏电流小。Low reverse leakage

机械数据 Mechanical Data

- 封装: SOD-123 封装 SOD-123 Small Outline Plastic Package
- 极性: 色环端为负极 Polarity: Color band denotes cathode end
- 环氧树脂 UL 易燃等级 Epoxy UL: 94V-0
- 安装位置: 任意 Mounting Position: Any

极限值和温度特性(TA = 25°C 除非另有规定)

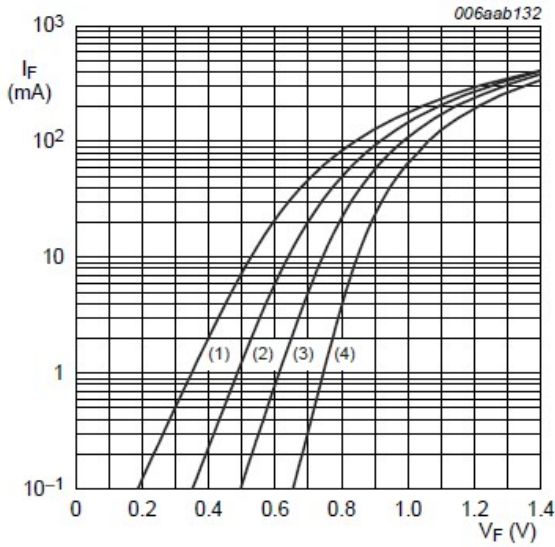
Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
反向电压 Reverse Voltage	V _R	80	V
反向峰值电压 Peak Reverse Voltage	V _{RM}	100	V
功率消耗 Power Dissipation	P _d	380	mW
工作结温 Operating junction temperature	T _j	150	°C
存储温度 Storage temperature range	T _s	-55-+150	°C
反向工作电压 Working Inverse Voltage	W _{IV}	75	V
平均整流电流 Average Rectified Current	I _o	215	mA
正向(不重复)电流 Non-repetitive Peak Forward Current	I _{FM}	500	mA
正向(不重复)浪涌电流 Peak Forward Surge Current @tp=1us; TA=25°C	I _{FSM}	2.0	A
Thermal resistance from junction to ambient	R _{th(j-a)}	330	K/W
Thermal resistance from junction to solder point	R _{th(j-sp)}	70	K/W

Valid provided that electrodes are kept at ambient temperature.

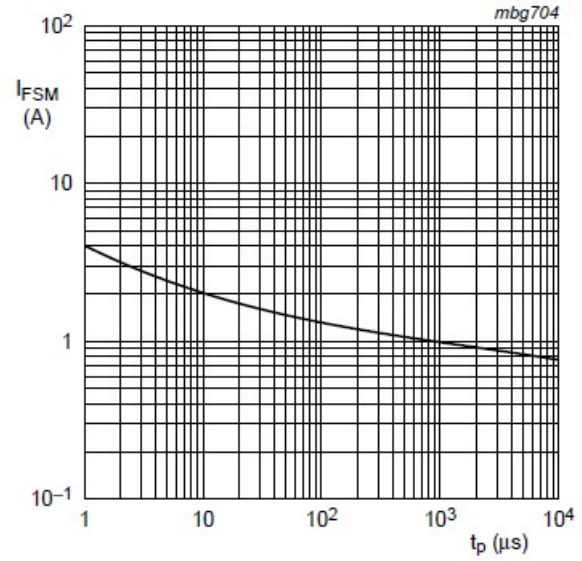
电特性 **Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified).

符号 Symbols	参数 Parameter	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
BV	反向击穿电压 Breakdown Voltage	IR=100uA	100		V
		IR=5uA	80		
IR	反向漏电流 Reverse Leakage Current	VR=25V	---	30	nA
		VR=80	---	0.5	uA
VF	正向电压 Forward Voltage	IF=150mA	---	1.25	V
		IF=50mA	---	1.00	
		IF=10mA	---	0.855	
		IF=1.0mA	---	0.715	
TRR	反向恢复时间 Reverse Recovery Time	IF= 10mA, IR=10mA RL=100Ω, IRR=1mA	---	4	nS
C	结电容 Capacitance	VR=0V, f=1MHZ	---	1.5	pF



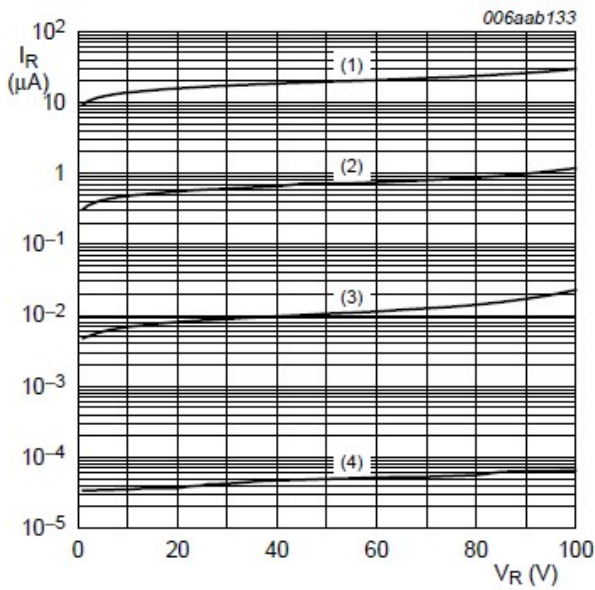
- (1) $T_{amb} = 150\text{ }^{\circ}\text{C}$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}$

Fig 1. Forward current as a function of forward voltage; typical values



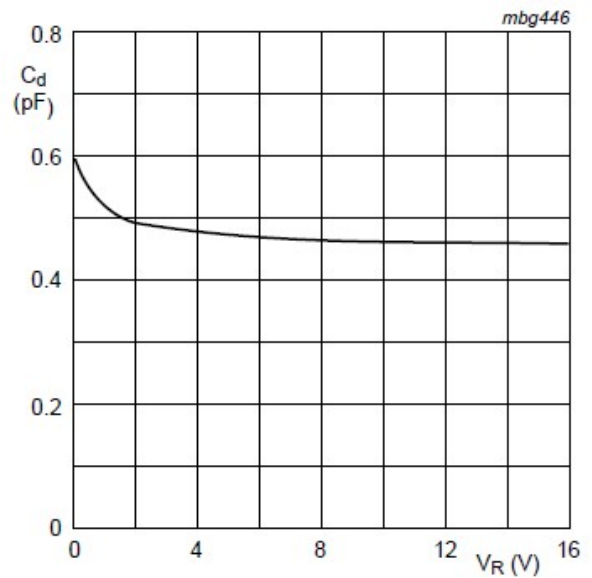
Based on square wave currents.
 $T_{j(init)} = 25\text{ }^{\circ}\text{C}$

Fig 2. Non-repetitive peak forward current as a function of pulse duration; maximum values



- (1) $T_{amb} = 150\text{ }^{\circ}\text{C}$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}$

Fig 3. Reverse current as a function of reverse voltage; typical values



$f = 1\text{ MHz}; T_{amb} = 25\text{ }^{\circ}\text{C}$

Fig 4. Diode capacitance as a function of reverse voltage; typical values