

描述 / Descriptions

SOD-323 塑封封装 硅半导体二极管。
Silicon Diode in a SOD-323 Plastic Package.

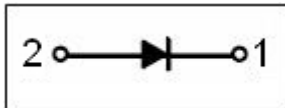
特征 / Features

小信号二极管，符合 AEC-Q101 标准高可靠性要求，无卤产品。
Small signal diode, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

用于开关电路，满足汽车应用的严格要求。
Switching diodes, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1:Cathode PIN2:Anode

印章代码 / Marking

Marking	A6Q
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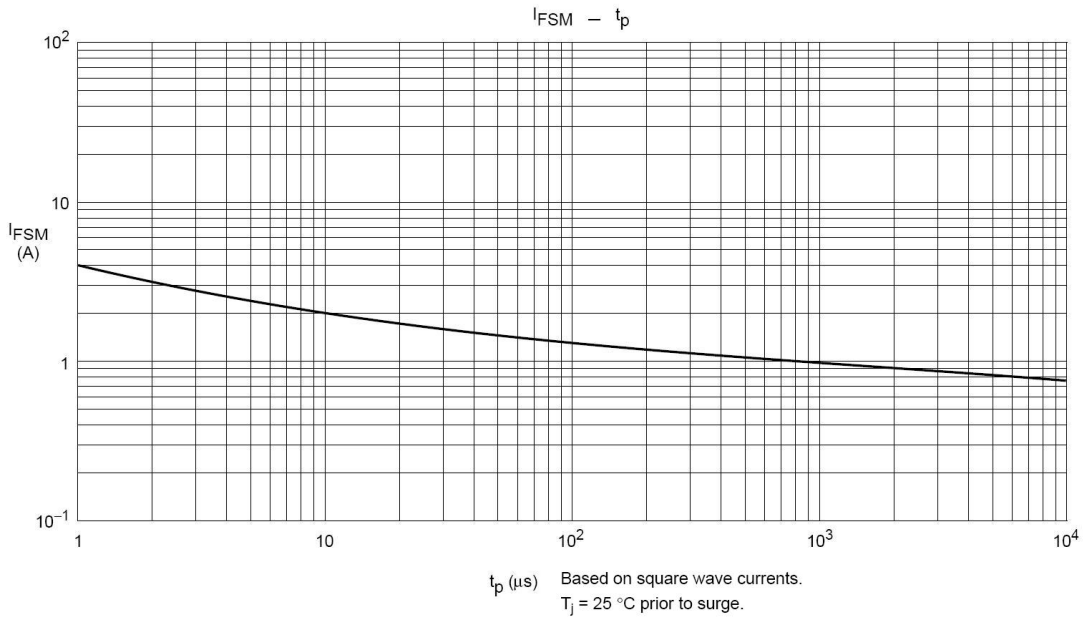
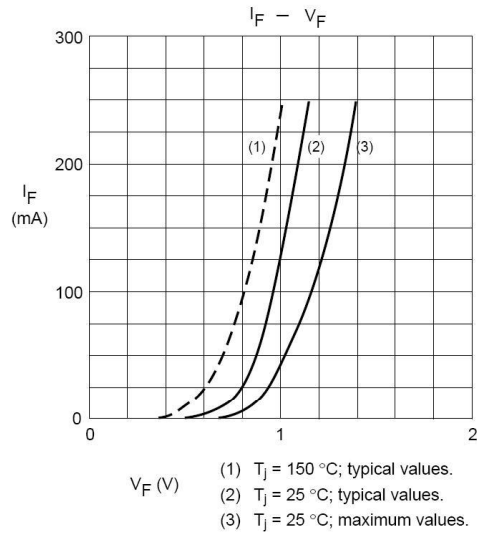
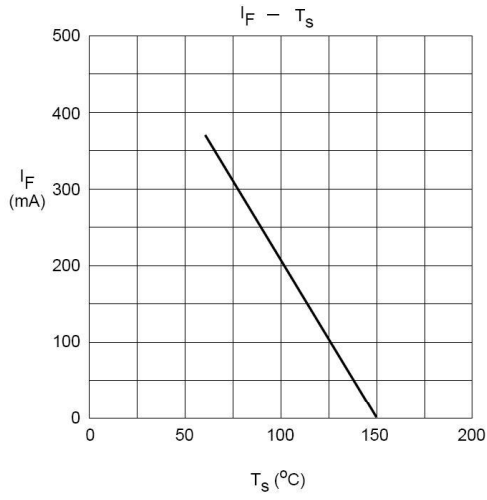
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Repetitive peak reverse voltage	V_{RRM}	85	V
Continuous forward current	$I_{F(AV)}$ (Ts=90°C)	250	mA
Non-repetitive peak forward current	$I_{FSM(1)(t=1S)}$	0.5	A
	$I_{FSM(2)(t=1mS)}$	1.0	A
Total power dissipation	P_{tot} (Ts=90°C)	400	mW
Thermal resistance from junction to soldering point	$R_{\theta J-S}$	150	K/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-65~150	°C

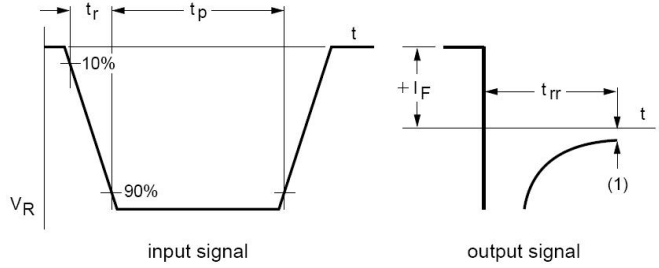
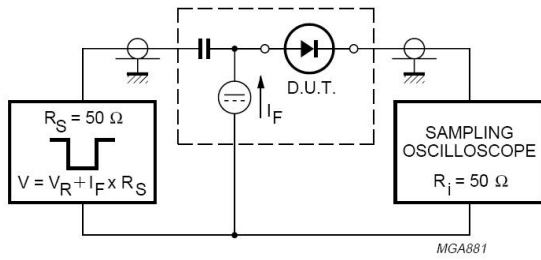
电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Forward Voltage	V_F	$I_F=1mA$			715	mV
		$I_F=10mA$			855	mV
		$I_F=50mA$			1.0	V
		$I_F=150mA$			1.25	V
Reverse Current	I_R	$V_R=25V$			30	nA
		$V_R=75V$			1.0	μA
		$V_R=25V$ $T_j=150^\circ C$			30	μA
		$V_R=75V$ $T_j=150^\circ C$			50	μA
Diode capacitance	C_d	$V_R=0$ $f=1.0MHz$			1.5	pF
Reverse Recovery Time	t_{rr}	$I_F=1R=10mA$ $I_R=1.0mA$ $R_L=100\Omega$			4.0	ns
Forward recovery voltage	V_{fr}	$I_F=10mA$ $T_r=20ns$			1.75	V

电参数曲线图 / Electrical Characteristic Curve

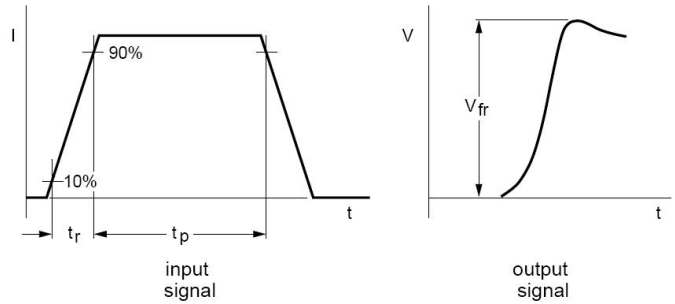
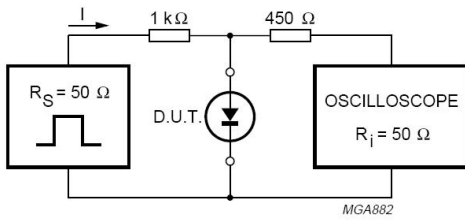


测试电路和波形 / Test circuit and waveforms.



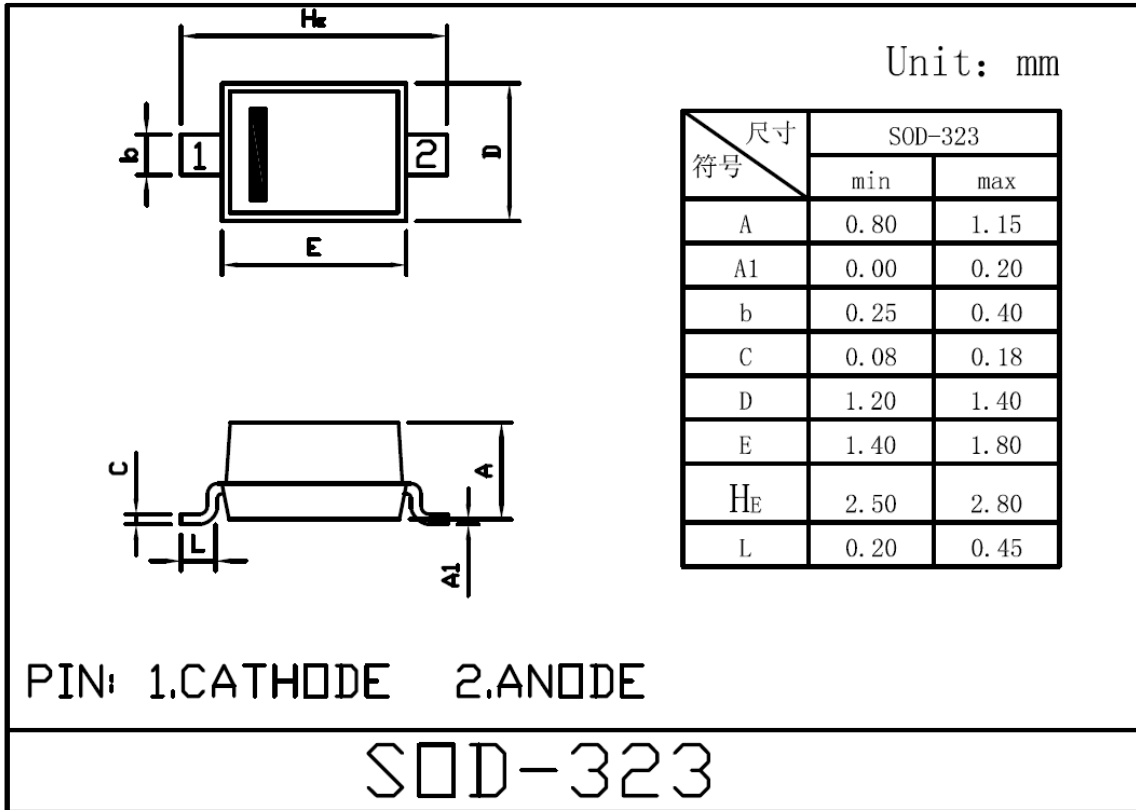
(1) $I_R = 1 \text{ mA}$.

Input signal: reverse pulse rise time $t_r = 0.6 \text{ ns}$; reverse voltage pulse duration $t_p = 100 \text{ ns}$; duty factor $\delta = 0.05$;
Oscilloscope: rise time $t_r = 0.35 \text{ ns}$.



Input signal: forward pulse rise time $t_r = 20 \text{ ns}$; forward current pulse duration $t_p \geq 100 \text{ ns}$; duty factor $\delta \leq 0.005$.

外形尺寸图 / Package Dimensions



印章说明 / Marking Instructions



说明：

A6： 为型号代码

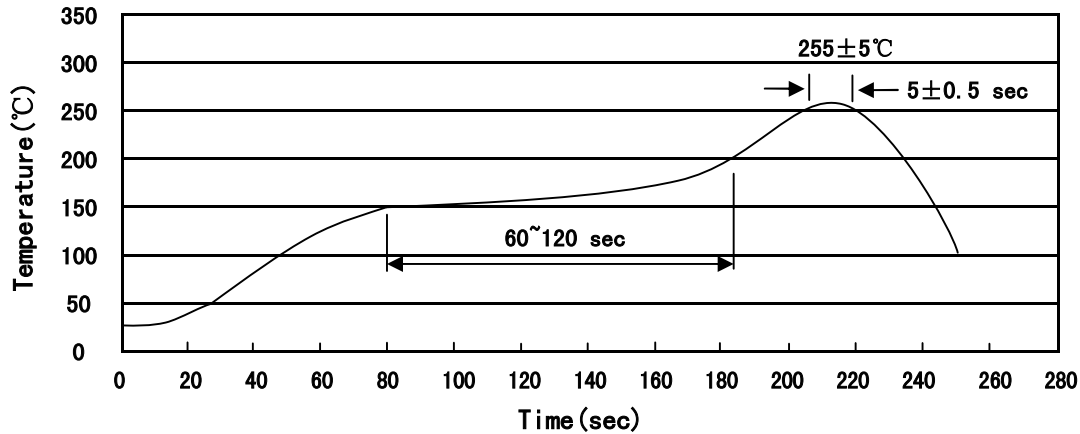
Q： 为汽车无卤产品标识

Note:

A6: Product Type Code

Q: Automobile halogen-free product Code

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150 ~ 200°C，时间 60 ~ 120sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:150~200°C, Time:60~120sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOD-323	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices