



修订记录

			□ □		□
H	2018-4				
A	2022-5-24	all	BR Q □ AEC-Q101 , H Q 245 ±5°C 5±0.5sec 255±5°C 5±0.5sec		



Rev.A May.-2022

描述

SOD-323

Silicon Diode in a SOD-323 Plastic Package.

特征

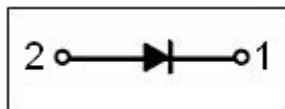
AEC-Q101

Small signal diode, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途

Switching diodes, Meet the stringent requirements of automotive applications.

内部等效电路



引脚排列



PIN1:Cathode

PIN2:Anode

印章代码

Marking	A6Q
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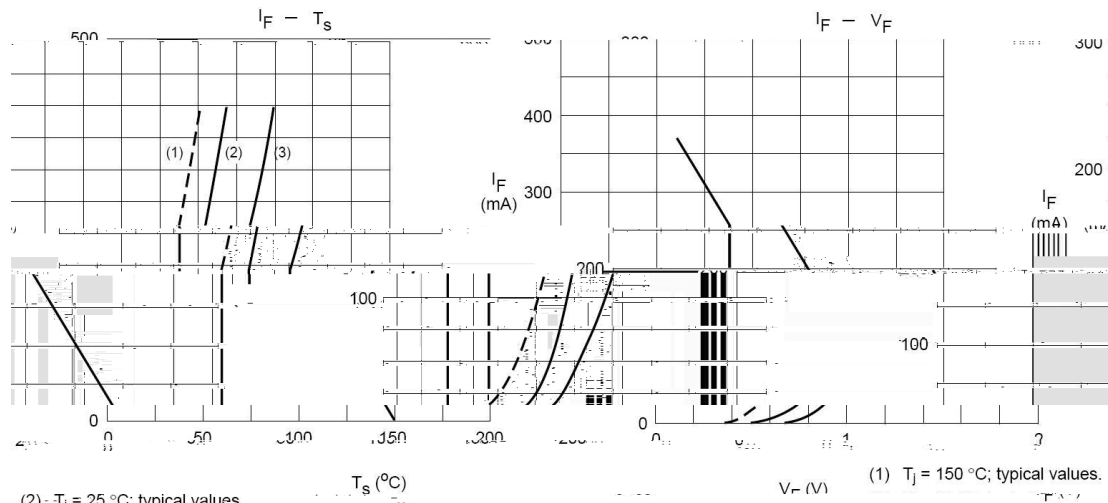
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Repetitive peak reverse voltage	V_{RRM}	85	V
Continuous forward current	$I_{F(AV)}$ ($T_s=90^{\circ}C$)	250	mA
Non-repetitive peak forward current	$I_{FSM(1)(t=1S)}$	0.5	A
	$I_{FSM(2)(t=1mS)}$	1.0	A
Total power dissipation	P_{tot} ($T_s=90^{\circ}C$)	400	mW
Thermal resistance from junction to soldering point	$R_{\theta J-S}$	150	K/W
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-65~150	$^{\circ}C$

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					



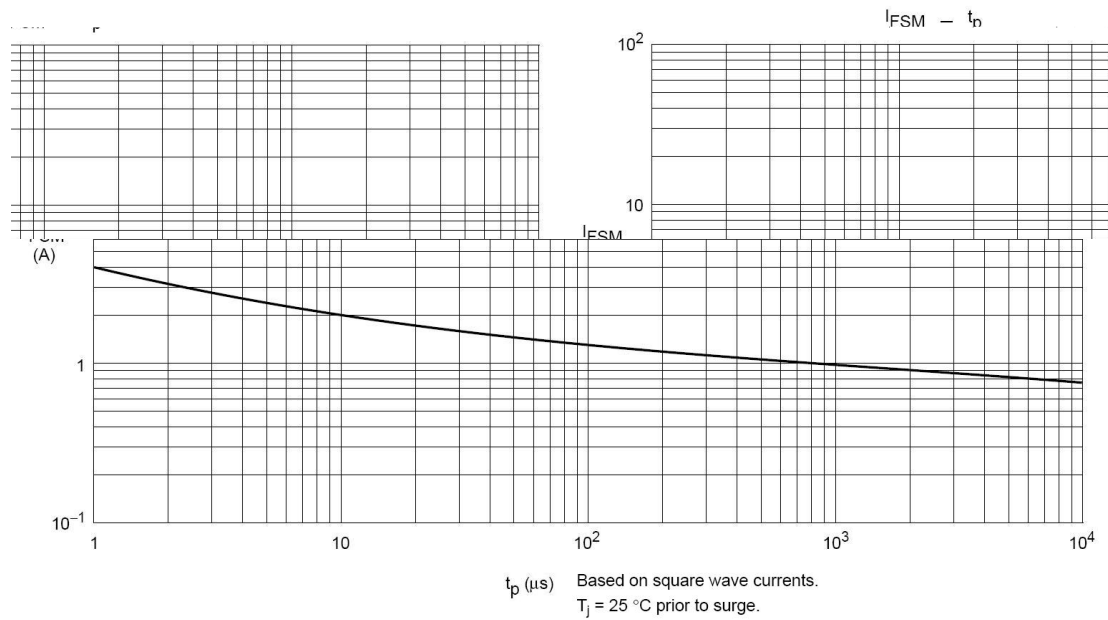
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电参数曲线图

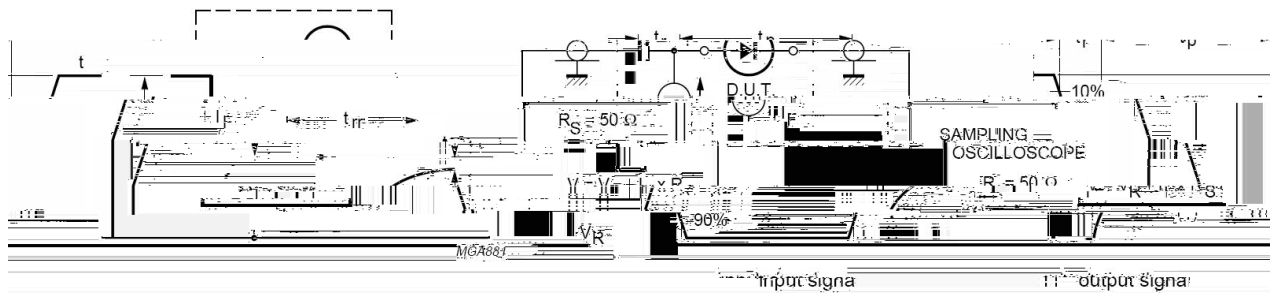


(2) - $T_j = 25^\circ\text{C}$; typical values.
(3) $T_j = 25^\circ\text{C}$; maximum values.

(1) $T_j = 150^\circ\text{C}$; typical values.



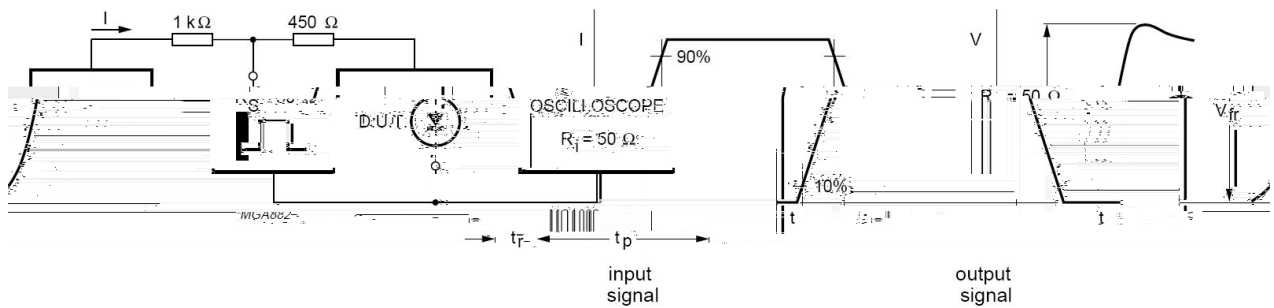
测试电路和波形



(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 $\delta = 0.05$;

Sampling oscilloscope: time base $t_{\text{base}} = 0.05 \text{ ns/div}$; vertical scale $V_{\text{div}} = 1 \text{ V}$; horizontal scale $t_{\text{div}} = 0.05 \text{ ns}$.

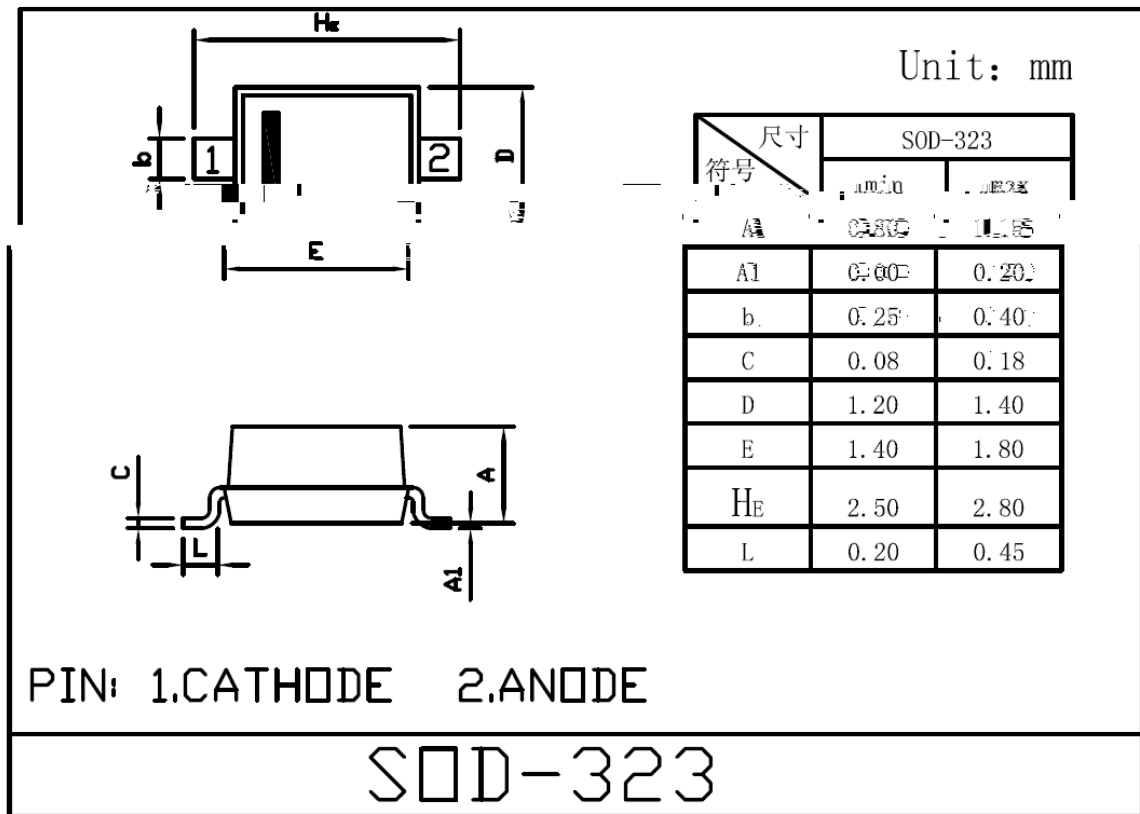


duration $t_p \geq 100 \text{ ns}$; duty factor $\delta < 0.005$.

Input signal: forward pulse rise time $t_r = 20 \text{ ns}$; forward current pulse di-

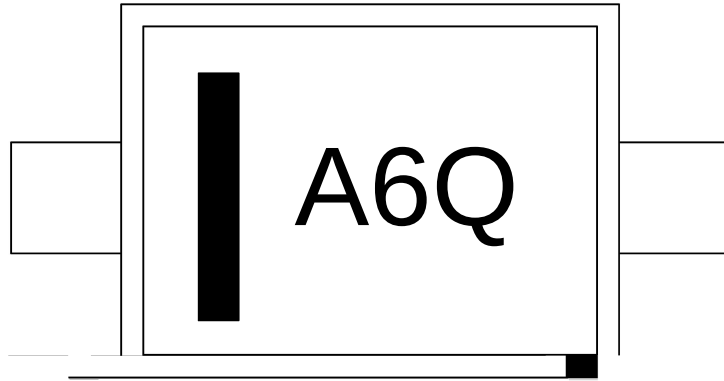


外形尺寸图





印章说明



说明：

A6： 为型号代码

Q： 为汽车无卤产品标识

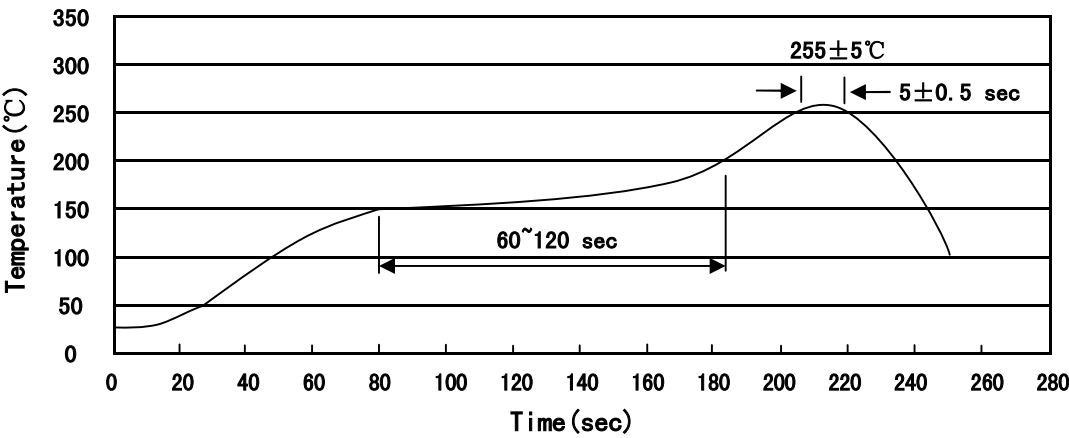
Note:

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)



Note:

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

耐焊接热试验条件

260 ± 5 10 ± 1 sec. Temp.: 260 ± 5 Time: 10 ± 1 sec

包装规格

/ REEL

Package Type	Units					Dimension (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	Outer Box
SOD-323	3,000	10	30,000	6	180,000	7" × 8	180×120×180	390×385×205

使用说明