

SOT-323

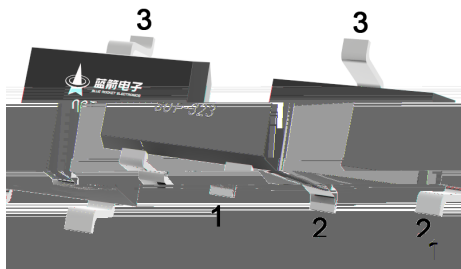
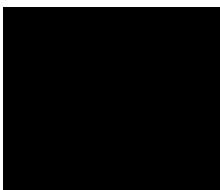
Silicon Diode in a SOT-323 Plastic Package.

SMD

AEC-Q101

Very small plastic SMD package, High switching speed, High Continuous reverse and Repetitive peak reverse voltage, High Repetitive peak forward current, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

Applications for High-speed switching, surface mounted circuits, Meet the stringent requirements of automotive applications.



PIN: See Equivalent Circuit.

Marking	QA7
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Table 1: Absolute Maximum Ratings (Ta=25 °C ;)

Parameter	Symbol	Rating	Unit
Repetitive Reverse Voltage	V_{RRM}	85	V
Continuous reverse voltage	V_R	75	V
Continuous forward current	$I_{F(1)}$	150	mA
	$I_{F(2)}$	130	mA
Repetitive peak forward current	I_{FRM}	500	mA
Non-repetitive Peak Forward Current	$I_{FSM(1)(t=1\text{ S})}$	0.5	A
	$I_{FSM(2)(t=1\text{ mS})}$	1.0	A
	$I_{FSM(3)(t=1\text{ S})}$	4.0	A
Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 +150	

Table 2: Electrical Characteristics (Ta=25 °C ;)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=1\text{mA}$			715	mV
		$I_F=10\text{mA}$			855	mV
		$I_F=50\text{mA}$			1	V
		$I_F=150\text{mA}$			1.25	V
Instantaneous Reverse Current Total Capacitance	I_R	$V_R=25\text{V}$			30	nA
		$V_R=75\text{V}$			1	A
		$V_R=25\text{V}$ $T_j=150$			30	A
		$V_R=75\text{V}$ $T_j=150$			50	A
Diode capacitance	C_d	$V_R=0$ $f=1\text{MHz}$			1.5	pF
Reverse Recovery Time	t_{rr}	$I_R=1\text{mA}$ $R_L=100$ $I_F=10\text{mA}$			4	ns
Forward recovery voltage	V_{fr}	$I_F=10\text{mA}$ $t_r=20\text{ns}$			1.75	V

Ô ? d • Ž ¢ / Electrical Characteristic Curve

Ø □ =) ¢ / Package Dimensions

, M y f / Marking Instructions

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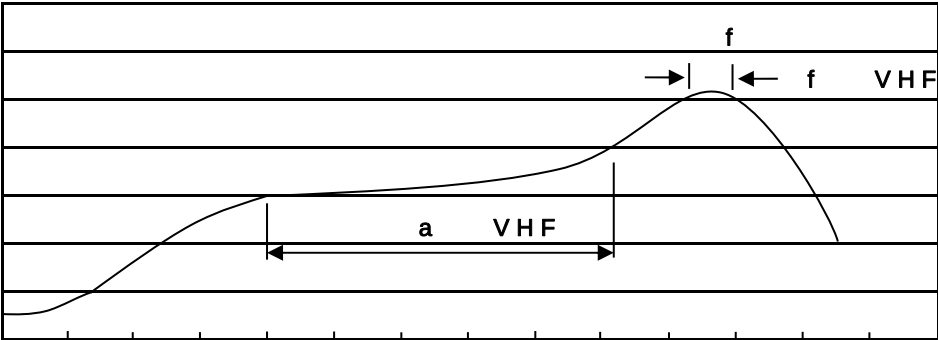
Note:

Q: Automobile halogen-free product Code

A7: Product Type Code

šWD t...•Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

7HPSHUDWXUH



7LPH VHF

ačy

Note:

- 1o•Ä½“† 150½200 - kž• 60½120sec;
- 2o•Q>“† 255 r5 - kž•4 Ò 5 r0.5sec;
- 3o•D Nò i Ò 0 ,† 2½10 - /sec.
- 1.Preheating:150~200 - , Time:60~120sec.
- 2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.
3. Cooling Speed: 2~10 - /sec.

ÂD /Că p ¯ »] / Resistance to Soldering Heat Test Conditions

“†y 260 r5 - ž•y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û H					Dimension ;>û p . (unit Åmm³)		
	Units/Reel /-	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
SOT-323	3,000	10	30,000	6	180,000	7 T×8	180×120×180	390×385×205

„Đ y f / Notices