

/ Revised record

G	2020-7-28	1			
A	2021-12-25	all	BR Q AEC-Q101 H Q 245±5°C 5±0.5sec 255±5°C 5±0.5sec		

/ Descriptions

SOT-23

Silicon Diode in a SOT-23 Plastic Package.

/ Features

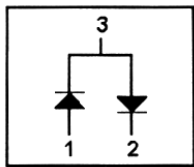
AEC-Q101

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

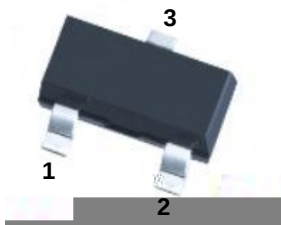
/ Applications

High Conductance Ultra Fast Diode, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN: See Equivalent Circuit.

/ Marking

Marking	QA7
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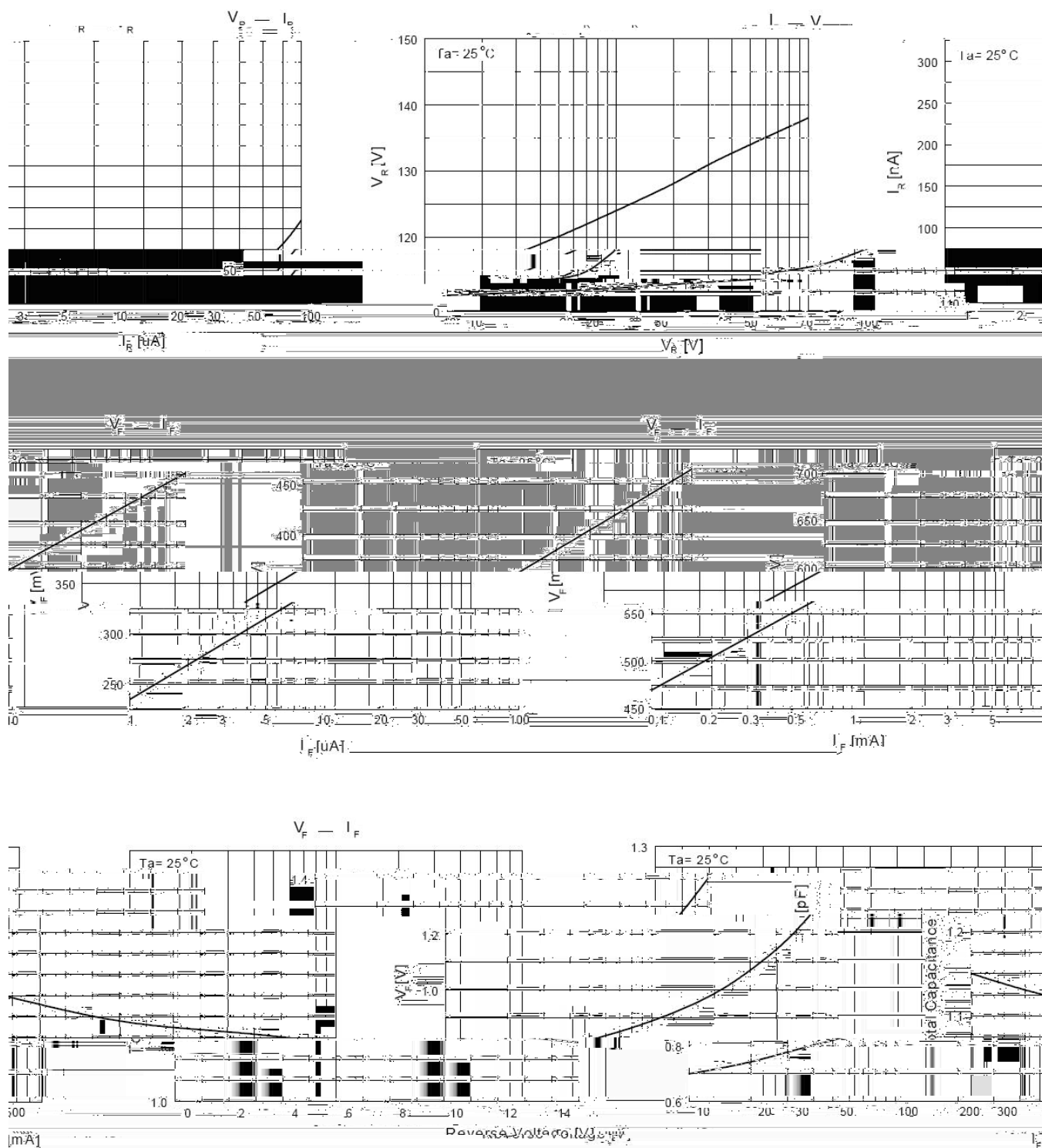
/ Absolute Maximum Ratings(Ta=25)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Maximum Repetitive Reverse Voltage	V_{RRM}	70	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM(1)}$ (pulse width=1.0S)	1.0	A
	$I_{FSM(2)}$ (pulse width=1.0mS)	2.0	A
Power Dissipation	P_D	350	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

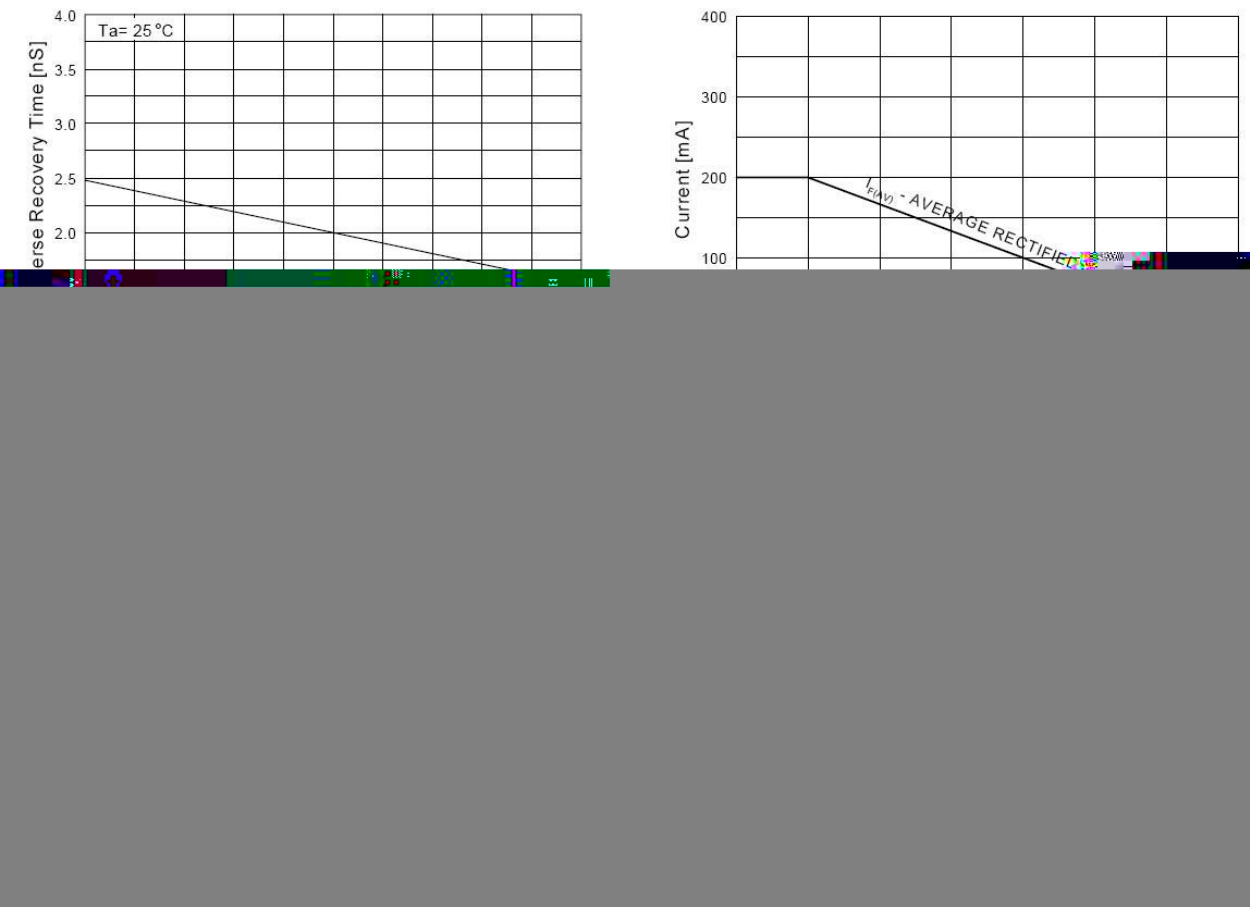
/ Electrical Characteristics(Ta=25)

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
Breakdown Voltage	V_R	$I_R=100\mu A$	70			V
Forward Voltage	V_F	$I_F=1.0mA$			715	mV
		$I_F=10mA$			855	mV
		$I_F=50mA$			1.0	V
		$I_F=150mA$			1.25	V
Instantaneous Reverse Current	I_R	$V_R=70V$			2.5	μA
		$V_R=25V \quad T_A=150^\circ C$			30	μA
		$V_R=70V \quad T_A=150^\circ C$			50	μA
Total Capacitance	C_T	$V_R=0 \quad f=1.0MHz$			1.5	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA$ $I_{RR}=1.0mA \quad R_L=100\Omega$			4.0	ns

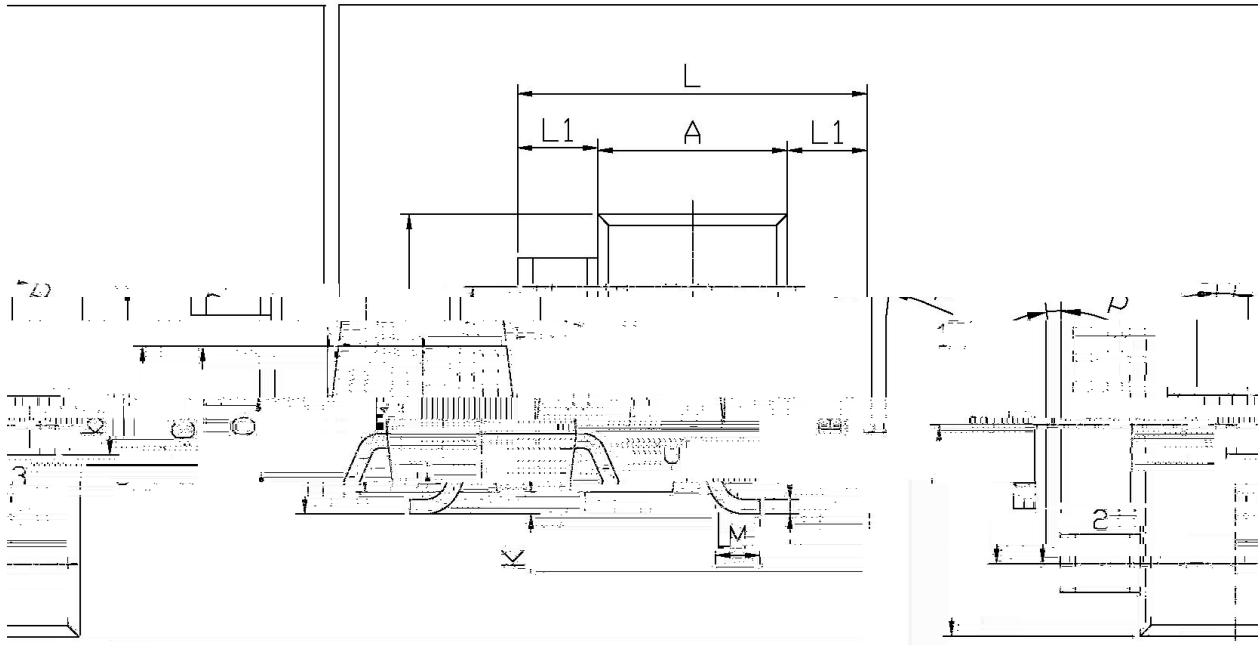
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

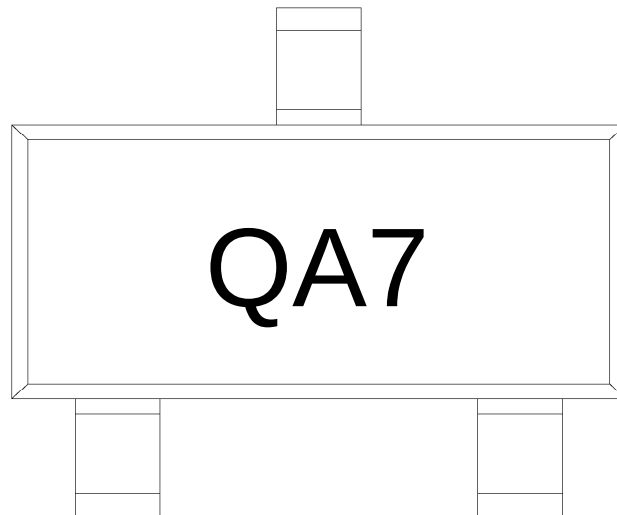


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Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E1	0.85	1.05	P	0.20	
b	0.35	0.55			

/ Marking Instructions



说明：

Q： 为汽车无卤产品标识

A7： 为型号代码

Note:

Q: Automobile halogen-free product Code

A7: Product Type Code

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

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

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ 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