

/ 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

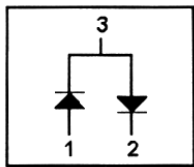
AEC-Q101

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

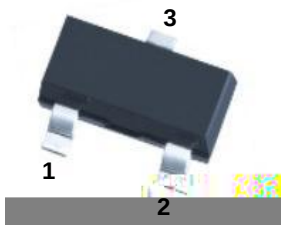
/ Applications

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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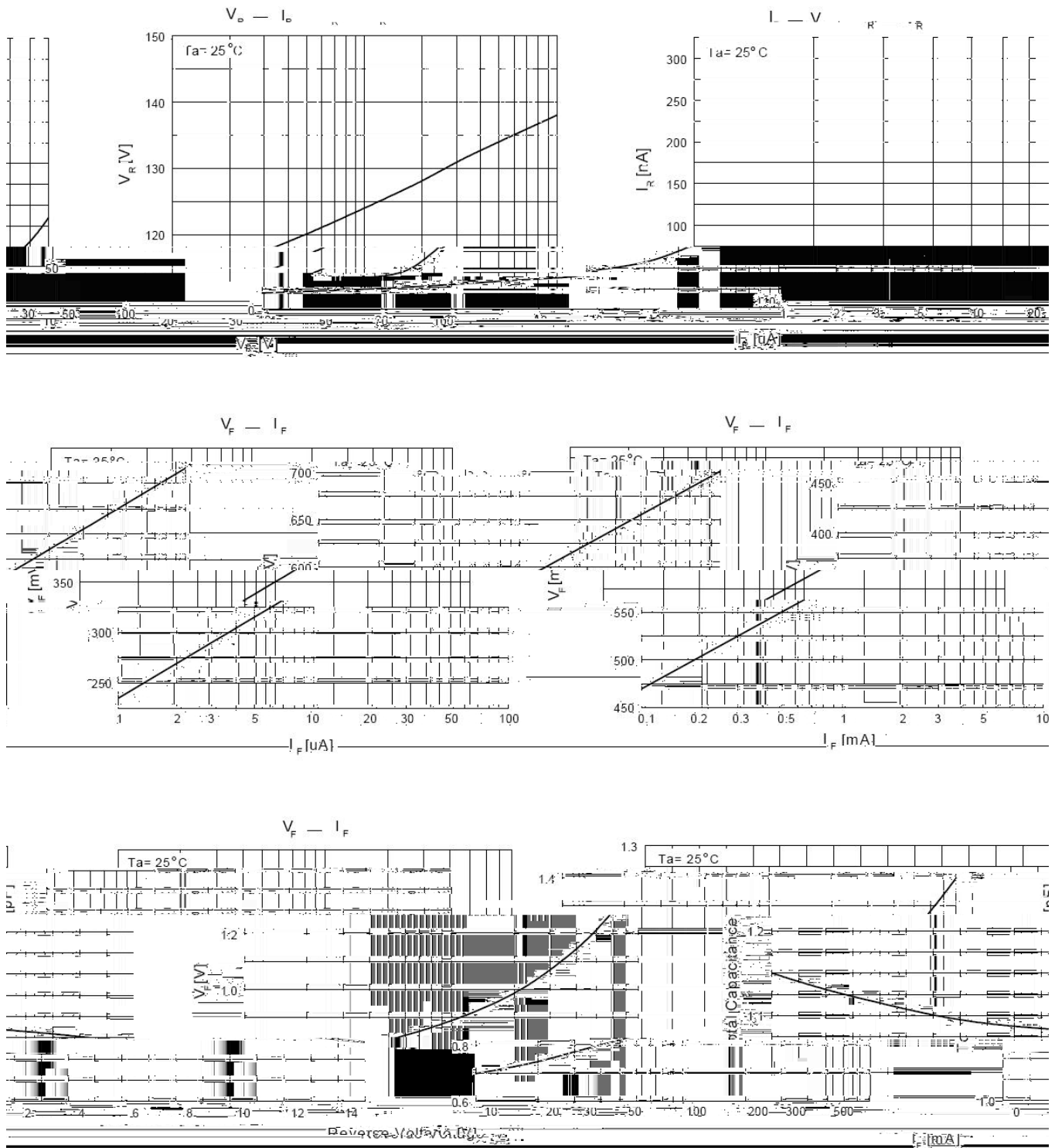
/ Absolute Maximum Ratings(Ta=25)

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

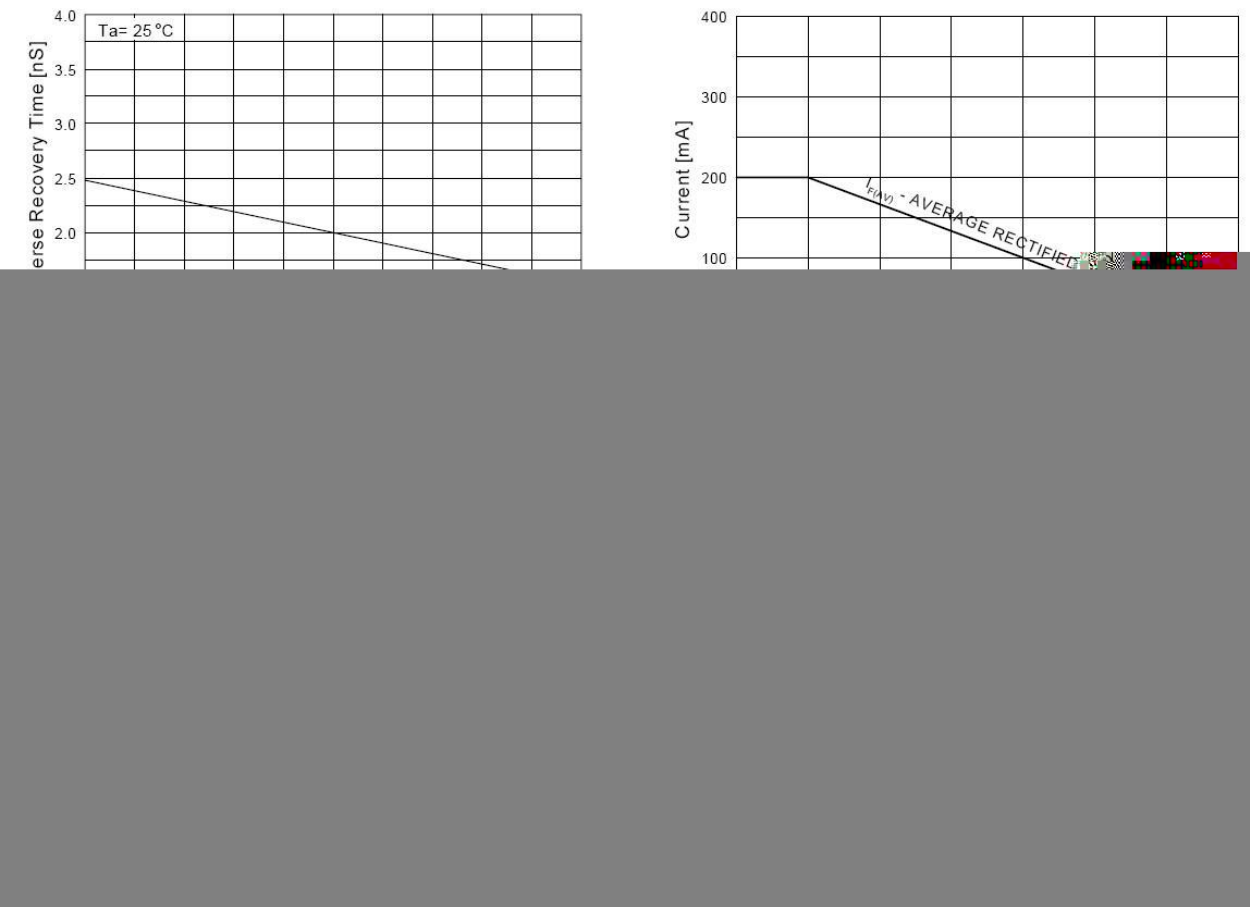
/ Electrical Characteristics(Ta=25)

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

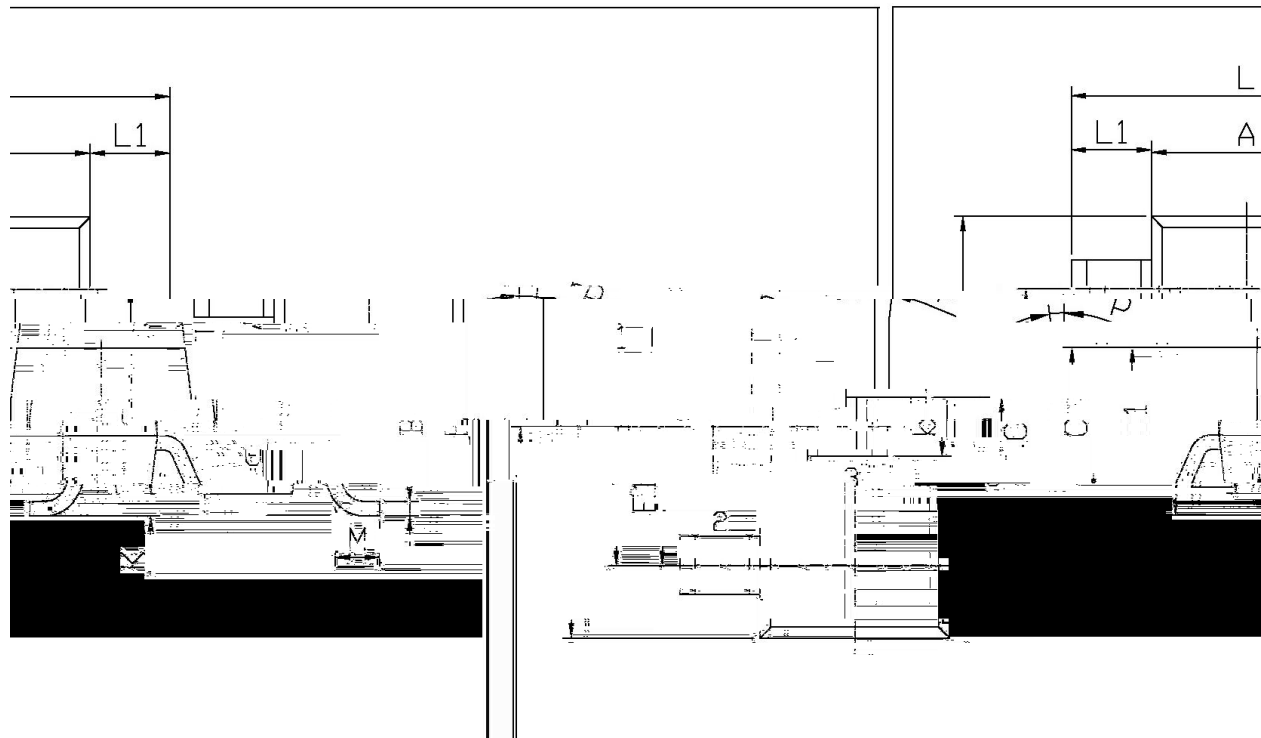


/ Electrical Characteristic Curve



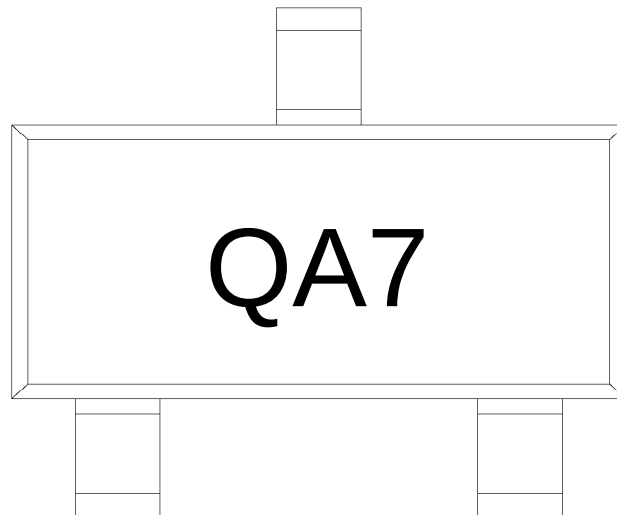
/ Package Dimensions

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
A	0.45	0.65	D	0.15	0.30
B	1.50	1.65	E	0.05	0.10
F	3.10	3.30	G	0.10	0.15
H	0.35	0.55	I	0.35	0.55
J	0.35	0.55	K	0.35	0.55
L	0.35	0.55	M	0.35	0.55
N	0.35	0.55	O	0.35	0.55
P	0.35	0.55	Q	0.35	0.55
R	0.35	0.55	S	0.35	0.55
T	0.35	0.55	U	0.35	0.55
V	0.35	0.55	W	0.35	0.55
X	0.35	0.55	Y	0.35	0.55
Z	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

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Note:

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

/ Resistance to Soldering Heat Test Conditions

260±5℃ 10±1 sec. Temp.:260±5℃ 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