



| 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 | | |
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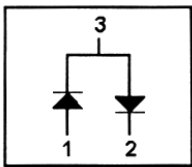
SOT-23

Silicon Diode in a SOT-23 Plastic Package.

AEC-Q101

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

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



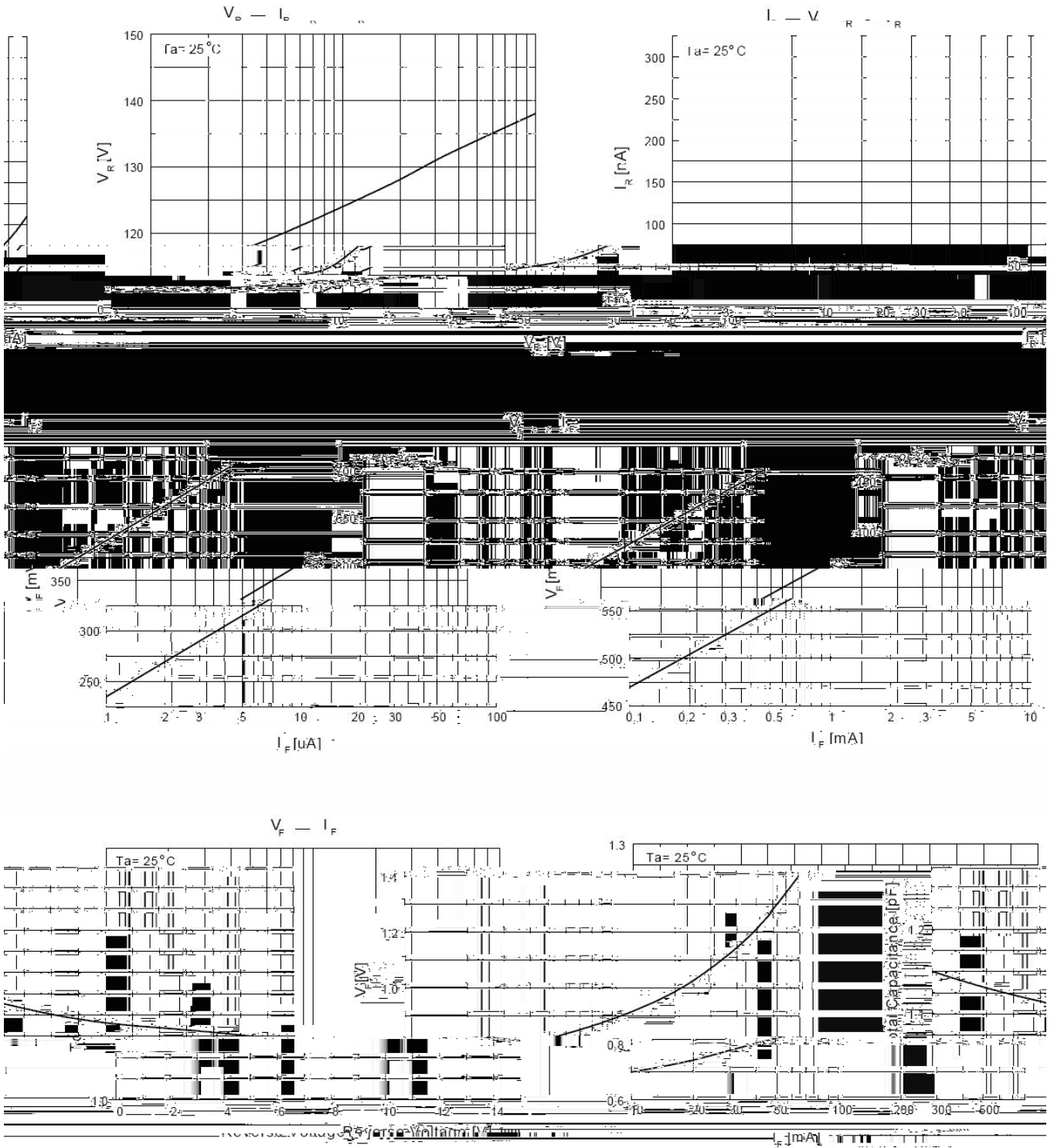
PIN: See Equivalent Circuit.

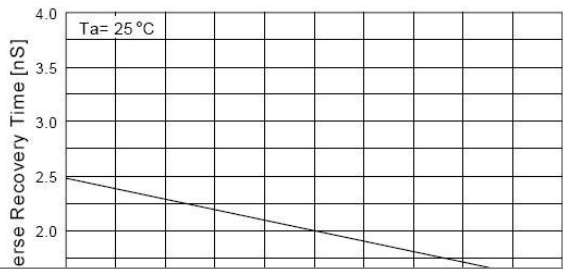
| | |
|---------|-----|
| Marking | QA7 |
|---------|-----|



| 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_{JA} | 357 | °C/W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{stg} | -55~150 | °C |

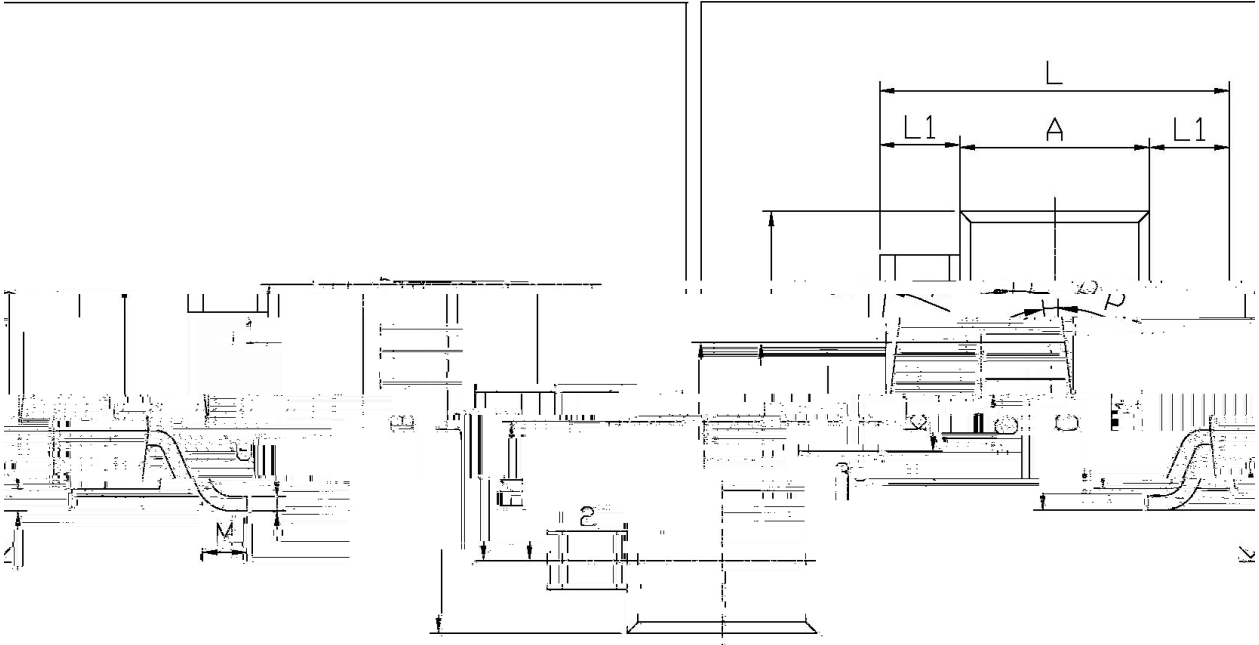
| 参数 Parameter | 符号 Symbol | 测试条件 Test Conditions | 最小值 Min | 典型值 Typ | 最大值 Max | 单位 Unit |
|-------------------------------|--------------|--|------------|------------|------------|------------|
| Breakdown Voltage | V_R | $I_R=100\mu A$ | 70 | | | V |
| Forward Voltage | V_F | $I_F=1.0mA$ | | | 715 | 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 |
| | | $V_R=25V$ $T_A=150^\circ C$ | | | 30 | μA |
| | | $V_R=70V$ $T_A=150^\circ C$ | | | 50 | μA |
| Total Capacitance | C_T | $V_R=0$ $f=1.0MHz$ | | | 1.5 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=10mA$ $I_{RR}=1.0mA$ $R_L=100$ | | | 4.0 | ns |



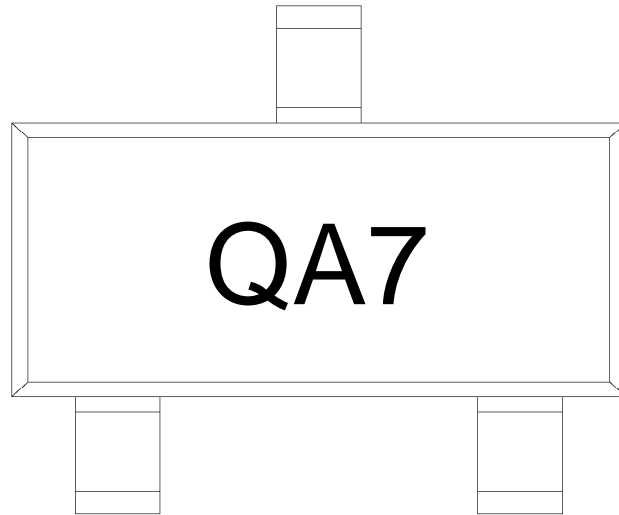




单位



| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|------|--------|---------------------------|------|
| | Min | Max | | Min | Max |
| L | 2.2 | 2.7 | C | 1.30Max | |
| | 0.45 | 0.65 | | 0.15 | 0.90 |
| | 0.20 | 0.45 | | 1.50 | 0.05 |
| | 0.10 | 2.70 | | 3.10 | 0 |
| | 0.30 | 0.05 | | 0.20 | 0.20 |
| | 0.85 | 1.05 | | 0.20 | 7° |
| | 0.35 | 0.55 | | | |



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:

- 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.

260±5°C

10±1 sec.

Temp.:260±5°C

Time:10±1 sec

/ 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 |