



Technical Data
Data Sheet N1371, Rev. A

Green Products

10MQ100N-S SCHOTTKY RECTIFIER

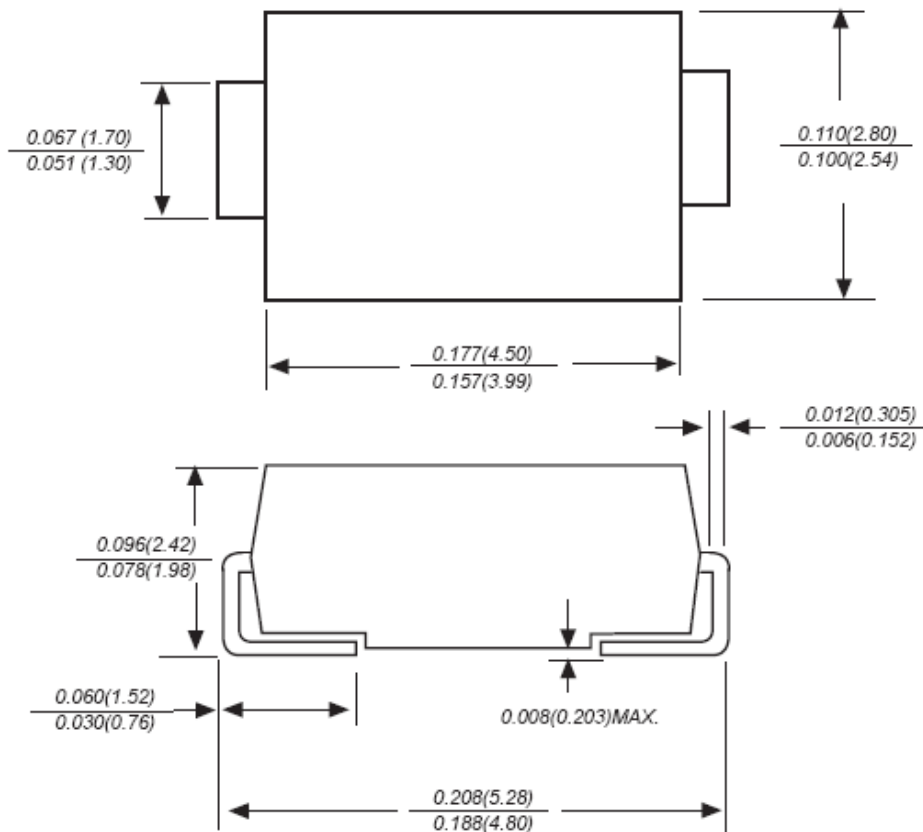
Applications:

- Disk Drives
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery Charging

Features:

- Small foot print, surface moutable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Dimensions (In Inches / mm):



SMA (DO-214AC)



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Marking Diagram:



Where XXXXX is YYWWL

- S = Device Type
- A = Package Type
- 1 = Forward Current (1A)
- J = Reverse Voltage (100V)
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information:

| Device | Package | Shipping |
|------------|---------------|----------------|
| 10MQ100N-S | SMA (Pb-Free) | 5000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|---|-------------|--|------|-------|
| Peak Inverse Voltage | V_{RWM} | - | 100 | V |
| Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_L=105^{\circ}C$, rectangular wave form | 1.5 | A |
| DC Current | $I_{F(DC)}$ | DC @ $T_L=120^{\circ}C$ | 2.1 | A |
| Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 36 | A |



Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------|-----------------|--|--------|-------|
| Forward Voltage Drop* | V _{F1} | @ 1 A, Pulse, T _J = 25 °C | 0.78 | V |
| | | @ 1.5 A, Pulse, T _J = 25 °C | 0.85 | |
| | V _{F2} | @ 1 A, Pulse, T _J = 125 °C | 0.63 | V |
| | | @ 1.5 A, Pulse, T _J = 125 °C | 0.68 | |
| Reverse Current * | I _{R1} | @V _R = Rated V _R , Pulse, T _J = 25 °C | 0.1 | mA |
| | I _{R2} | @V _R = Rated V _R , Pulse, T _J = 125 °C | 1 | mA |
| Junction Capacitance | C _T | @V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz | 38 | PF |
| Typical Series Inductance | L _S | Measured lead to lead 5 mm from package body | 2.0 | nH |
| Voltage Rate of Change | dv/dt | - | 10,000 | V/μs |

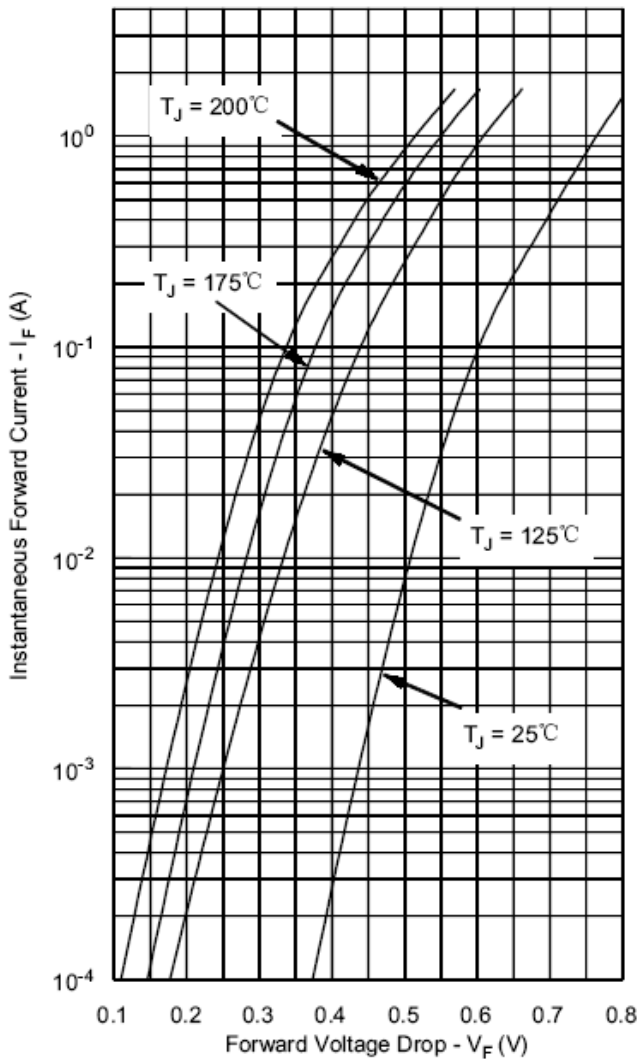
* Pulse Width < 300μs, Duty Cycle < 2%

Thermal-Mechanical Specifications:

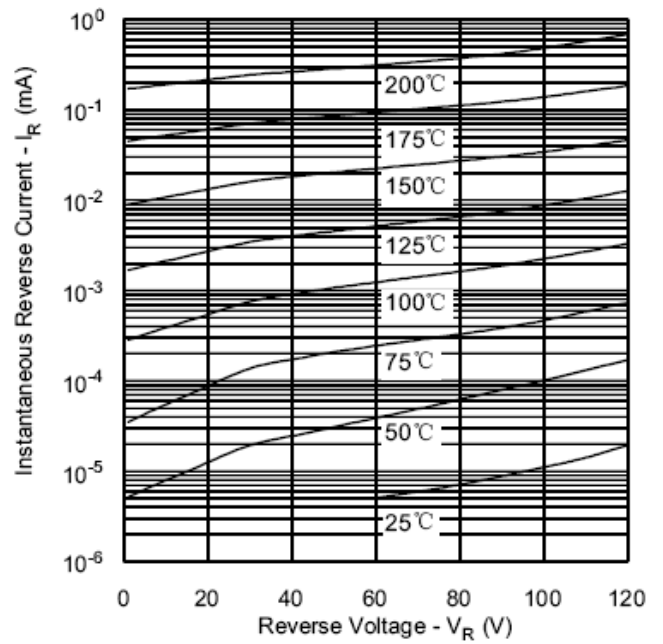
| Characteristics | Symbol | Condition | Specification | Units |
|--|------------------|--------------|---------------|-------|
| Junction Temperature | T _J | - | -55 to +150 | °C |
| Storage Temperature | T _{stg} | - | -55 to +150 | °C |
| Maximum Thermal Resistance Junction to Ambient | R _{θJA} | DC operation | 80 | °C/W |
| Approximate Weight | wt | - | 0.06 | g |
| Case Style | SMA | | | |



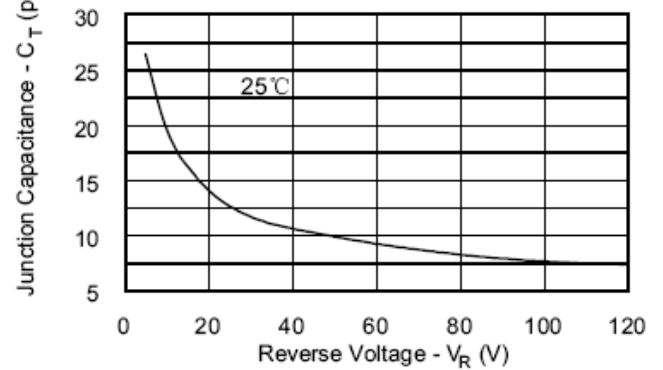
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance





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