

# 10MQ040N

**PRV : 40 Volts**

**I<sub>F(AV)</sub> : 1.5 Amperes**

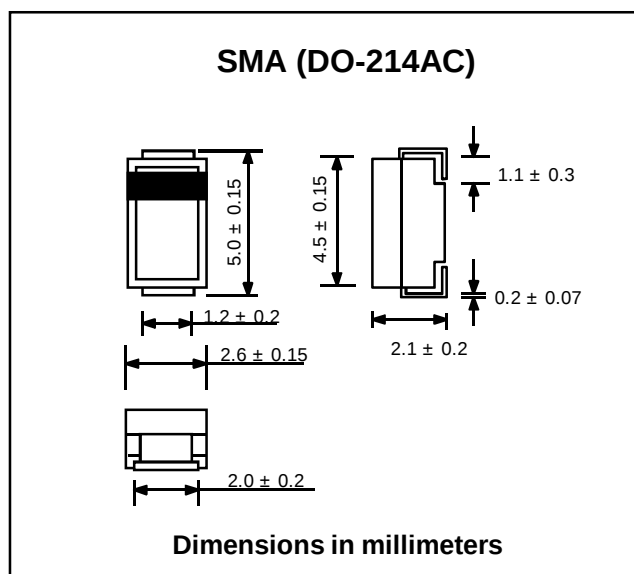
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low forward voltage drop
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.067 gram

## SCHOTTKY RECTIFIER



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

| RATING                                                                                                                                                                       | SYMBOL                              | VALUE         | UNIT |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------|------|
| Maximum Work Peak Reverse Voltage                                                                                                                                            | V <sub>RWM</sub>                    | 40            | V    |
| Maximum DC Reverse Voltage                                                                                                                                                   | V <sub>R</sub>                      | 40            | V    |
| Maximum Average Forward Current at DC                                                                                                                                        | I <sub>F(AV)</sub>                  | 2.1           | A    |
| Maximum Average Forward Current<br>50 % duty cycle at T <sub>L</sub> = 123 °C, rectangular waveform<br>On PC board 9 mm <sup>2</sup> island (0.013 mm thick copper pad area) | I <sub>F(AV)</sub>                  | 1.5           | A    |
| Maximum Peak Forward Surge Current,<br>One cycle Non-Repetitive , 10 ms sine wave                                                                                            | I <sub>FSM</sub>                    | 30            | A    |
| Maximum Forward Voltage<br>at I <sub>F</sub> = 1.0 A , T <sub>J</sub> = 25°C<br>at I <sub>F</sub> = 1.5 A , T <sub>J</sub> = 25°C                                            | V <sub>F</sub>                      | 0.54<br>0.62  | V    |
| Maximum Reverse Current at<br>V <sub>R</sub> = Rated V <sub>R</sub><br>T <sub>J</sub> = 25 °C<br>T <sub>J</sub> = 125 °C                                                     | I <sub>R</sub><br>I <sub>R(H)</sub> | 0.5<br>26     | mA   |
| Typical Thermal Resistance                                                                                                                                                   | R <sub>θJA</sub>                    | 80            | °C/W |
| Junction Temperature Range                                                                                                                                                   | T <sub>J</sub>                      | - 55 to + 150 | °C   |
| Storage Temperature Range                                                                                                                                                    | T <sub>STG</sub>                    | - 55 to + 150 | °C   |

**Note :** (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.

## RATING AND CHARACTERISTIC CURVES ( 10MQ040N )

FIG.1 - FORWARD CURRENT DERATING CURVE

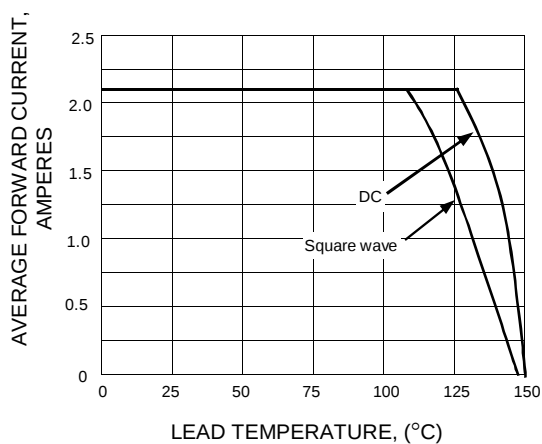


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

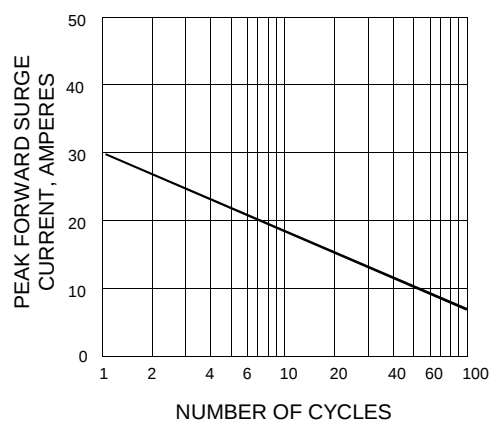


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

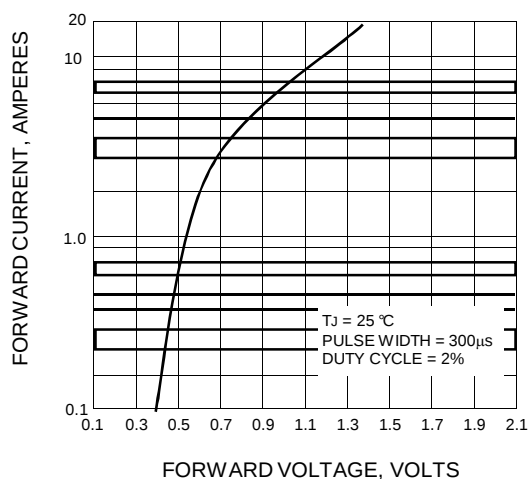


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

