

# 15MQ040N

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**PRV : 40 Volts**

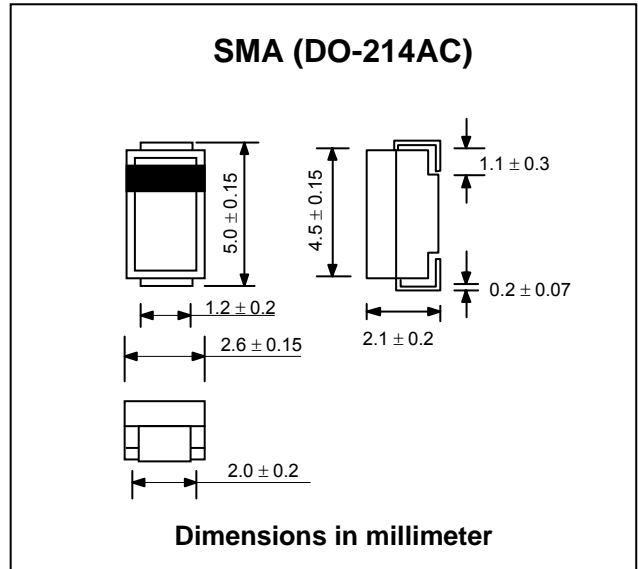
**I<sub>F(AV)</sub> : 3 Amperes**

### 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-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.067 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNIT
Maximum Working Peak Reverse Voltage	V <sub>RWM</sub>	40	V
Maximum DC Reverse Voltage	V <sub>R</sub>	40	V
Maximum Average Forward Current (50% duty cycle @ T <sub>L</sub> = 105 °C, rectangular wave form. On PC board 9 mm <sup>2</sup> island (0.013mm thick copper pad ares)	I <sub>F(AV)</sub>	2.1	A
Maximum Peak Forward Surge Current, One cycle Non-Repetitive , 10ms sine wave	I <sub>FSM</sub>	140	A
Maximum Forward Voltage <sup>(1)</sup>	V <sub>F</sub>	at I <sub>F</sub> = 1.0 A , T <sub>J</sub> = 25 °C	0.42
		at I <sub>F</sub> = 2.0 A , T <sub>J</sub> = 25 °C	0.49
		at I <sub>F</sub> = 1.0 A , T <sub>J</sub> = 125 °C	0.34
		at I <sub>F</sub> = 2.0 A , T <sub>J</sub> = 125 °C	0.43
Maximum Reverse Current at Rated DC Blocking Voltage <sup>(1)</sup>	I <sub>R</sub>	T <sub>J</sub> = 25 °C	0.5
		T <sub>J</sub> = 100 °C	20
Typical Thermal Resistance	R <sub>ΘJA</sub>	80	°C/W
Junction Temperature Range	T <sub>J</sub>	- 40 to + 150	°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150	°C

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



### RATING AND CHARACTERISTIC CURVES ( 15MQ040N )

FIG.1 - FORWARD CURRENT DERATING CURVE

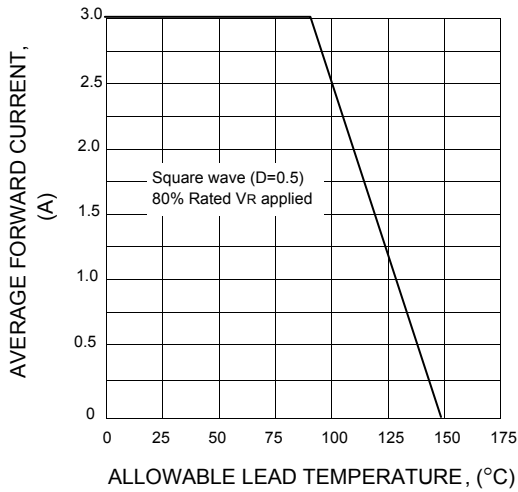


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

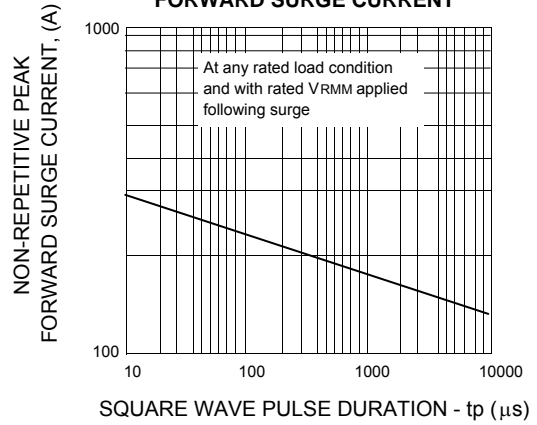


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

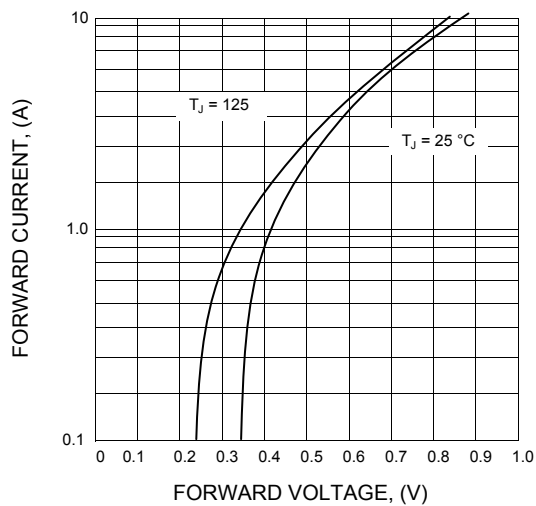


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

