

# MURA105-Q, MURA110-Q

PRV : 50 - 100 Volts

Io : 1.0 Amperes

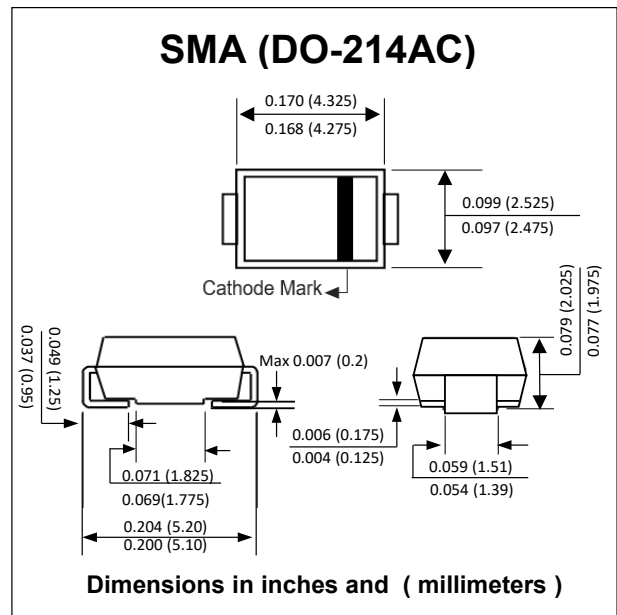
### FEATURES :

- \* AEC-Q101 Qualified
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Super fast recovery time
- \* 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
- \* ESD Protection HBM > 4000V (CLASS 3)  
MM > 400V (CLASS C)

## SURFACE MOUNT ULTRA FAST RECTIFIERS



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

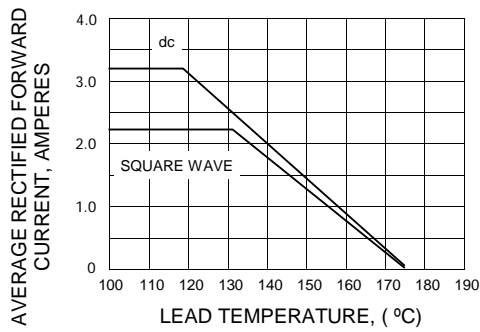
RATING	SYMBOL	MURA105-Q	MURA110-Q	UNIT
Maximum Peak Repetitive Reverse Voltage	VRRM	50	100	V
Maximum Working Peak Reverse Voltage	VRWM	50	100	V
Maximum DC Blocking Voltage	VDC	50	100	V
Maximum Average Rectified Forward Current	IF(AV)	1.0 ( T <sub>L</sub> = 155 °C ) 2.0 ( T <sub>L</sub> = 135 °C )		V
Maximum Non-Repetitive Peak Surge Current (Surge Applied at Rate Load Conditions Halfwave, Single Phase, 60 Hz)	IFSM	50		A
Maximum Instantaneous Forward Voltage at I <sub>F</sub> = 1.0 A (Note 1)	V <sub>F</sub>	0.875 (T <sub>J</sub> = 25°C) 0.66 (T <sub>J</sub> = 150°C)		V
Maximum Instantaneous Reverse Current (Note 1) (Rated dc Voltage)	IR IR(H)	2.0 (T <sub>J</sub> = 25°C) 50 (T <sub>J</sub> = 150°C)		μA
Thermal Resistance, Junction to Lead (Note 2)	R <sub>θJL</sub>	24		°C/W
Thermal Resistance, Junction to Ambient (Note 2)	R <sub>θJA</sub>	216		°C/W
Maximum Reverse Recovery Time (I <sub>F</sub> =1.0A, di/dt = 50A/μs)	T <sub>rr</sub>	30		ns
Operating Junction Temperature Range	T <sub>J</sub>	- 65 to + 175		°C

#### Notes :

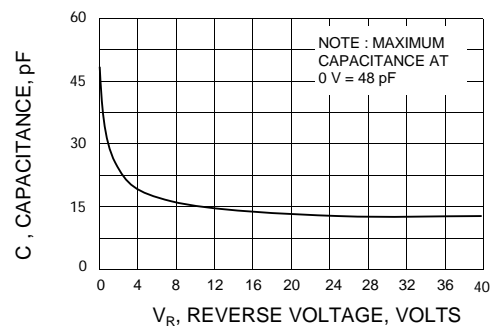
- (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle ≤ 2.0 %.
- (2) Rating Applies when surface mounted on the minimum pad size recommended, PC Board FR-4.

**RATING AND CHARACTERISTIC CURVES ( MURA105-Q, MURA110-Q )**

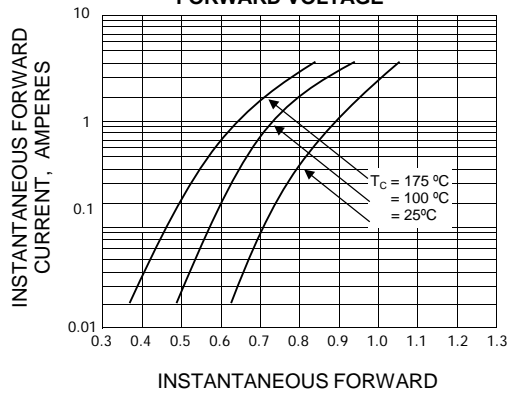
**FIG.1 - CURRENT DERATING, LEAD**



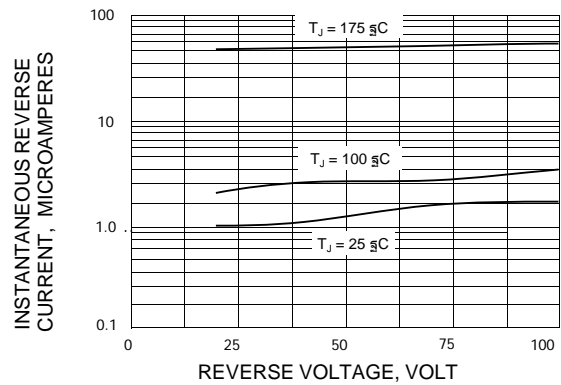
**FIG.2 - MAXIMUM CAPACITANCE**



**FIG.3 - MAXIMUM INSTANTANEOUS FORWARD VOLTAGE**



**FIG. 4 - MAXIMUM REVERSE CURRENT**



**FIG. 5 - POWER DISSIPATION**

