

**ULTRAFAST RECTIFIER**

**VOLTAGE RANGE 200 to 600 Volts CURRENT 1.0 Ampere**

**FEATURES**

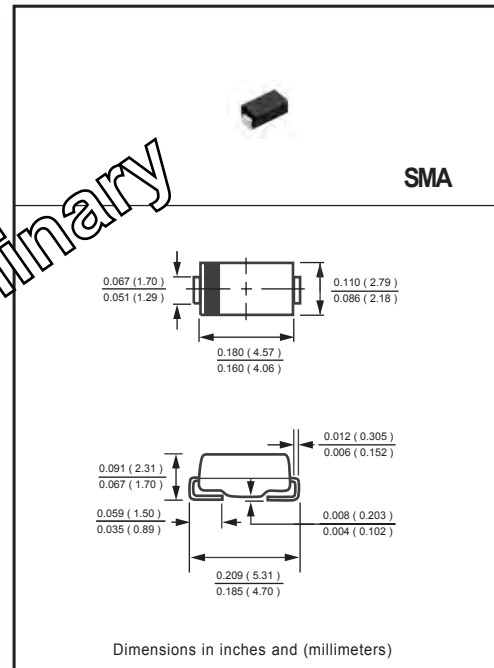
- \* High reliability
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* Ultrafast switching speed
- \* High surge capability
- \* Good for switching mode circuit

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.057 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	MURS120A	MURS140A	MURS160A	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> =55°C	I <sub>O</sub>	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	35			Amps
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150			°C

**ELECTRICAL CHARACTERISTICS (@T<sub>A</sub>=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	MURS120A	MURS140A	MURS160A	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	0.875	1.25		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>J</sub> = 25°C	2.0	5.0		uAmps
	@T <sub>J</sub> = 150°C	50	150		
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	25	50		nSec

NOTES : 1. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = -1.0A, I<sub>RR</sub> = -0.25A  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)"

2010-02  
REV: 0

# RATING AND CHARACTERISTICS CURVES ( MURS120A THRU MURS160A )

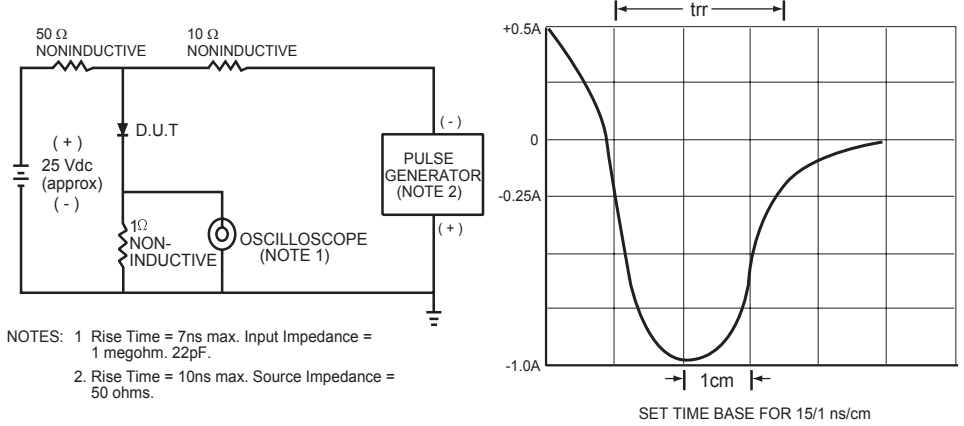


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

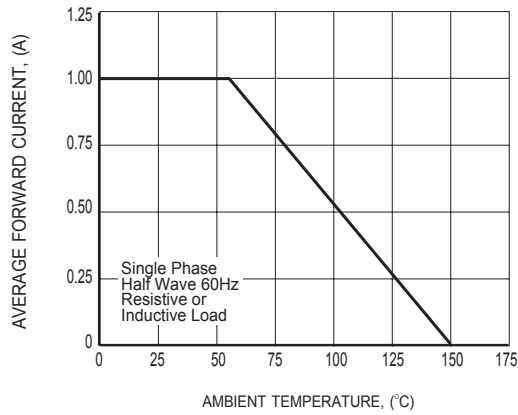


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

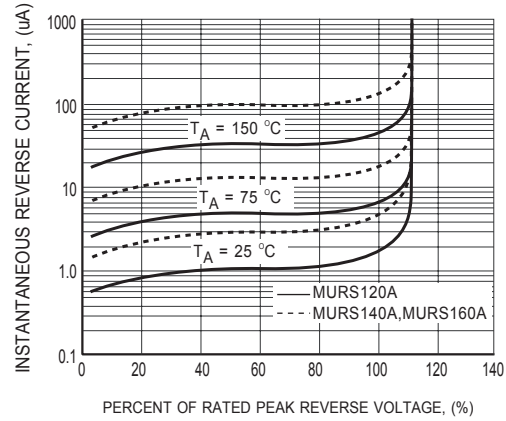


FIG.3 TYPICAL REVERSE CHARACTERISTICS

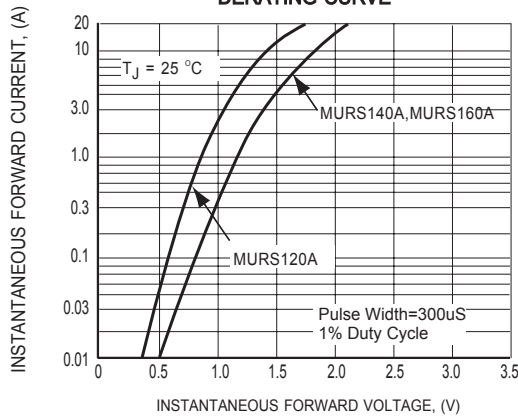


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

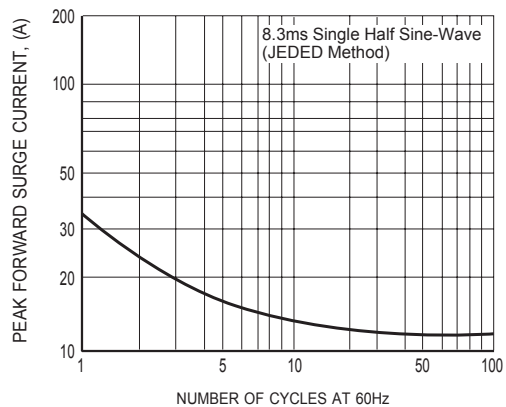
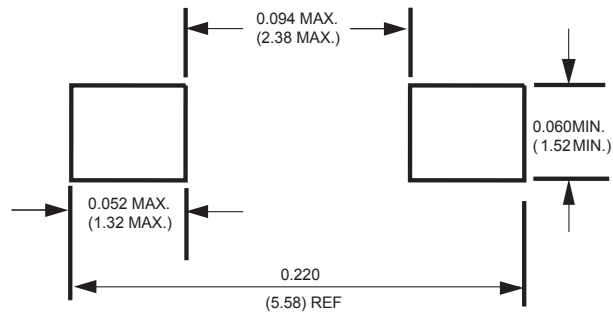


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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