

**MURS120
MURS140
MURS160**

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

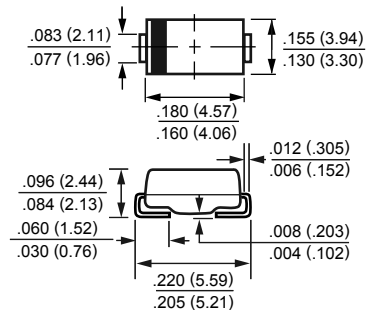
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.057 gram

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%.

Preliminary

DO-214AA



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	MURS120	MURS140	MURS160	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	Volts
Maximum RMS Voltage	V _{RMS}	140	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	200	400	600	Volts
Maximum Average Forward Rectified Current at T _A =55°C	I _O	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	35			Amps
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150			°C

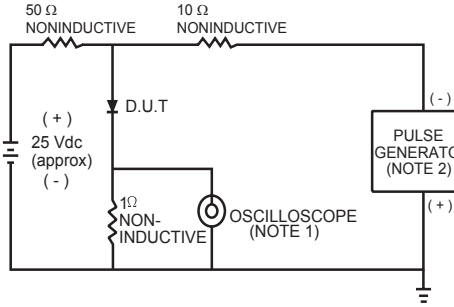
ELECTRICAL CHARACTERISTICS (@T_A=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MURS120	MURS140	MURS160	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	0.875	1.25		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T _J = 25°C	2.0	5.0		uAmps
	@T _J = 150°C	50	150		
Maximum Reverse Recovery Time (Note 1)	t _{rr}	25	50		nSec

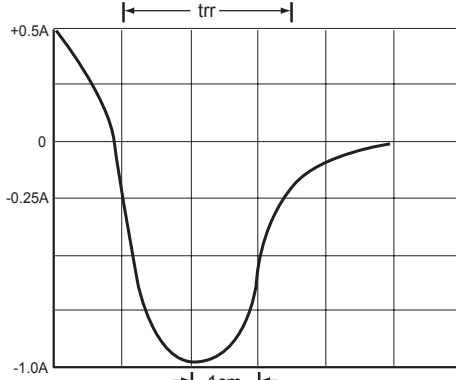
NOTES : 1. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)"

2010-02
REV: 0

RATING AND CHARACTERISTICS CURVES (MURS120 THRU MURS160)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm, 22pF.
 2. Rise Time = 10ns max. Source Impedance = 50 ohms.



SET TIME BASE FOR 15/1 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

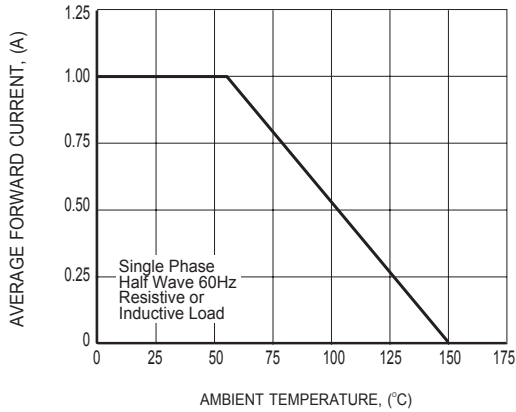


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

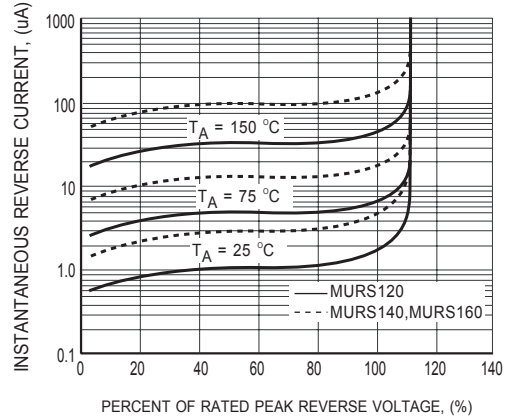


FIG.3 TYPICAL REVERSE CHARACTERISTICS

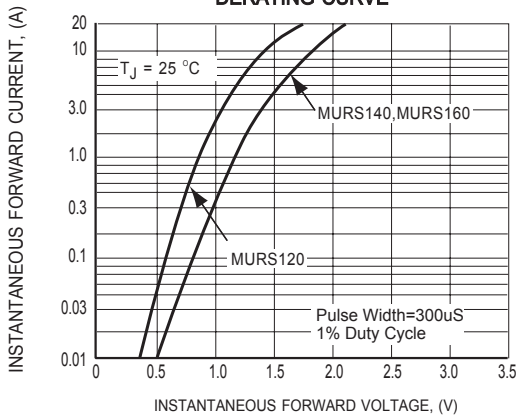


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

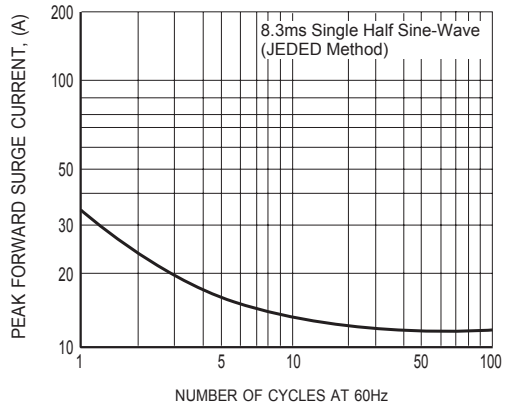
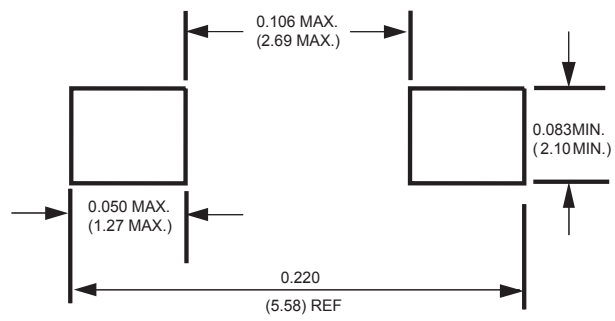


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

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