

# MURS120

Surface Mount Rectifiers

**VOLTAGE RANGE: 200 V**

**CURRENT: 1.0 A**



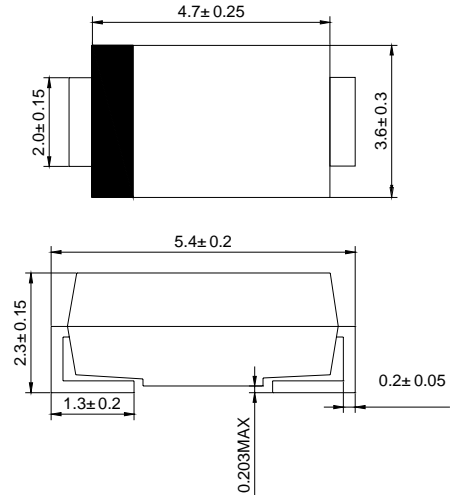
**DO-214AA(SMB)**

## Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ◇ Case: JEDEC DO-214AA, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.003 ounces, 0.093 gram
- ◇ Mounting position: Any



Dimensions in millimeters

## 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 by 20%.

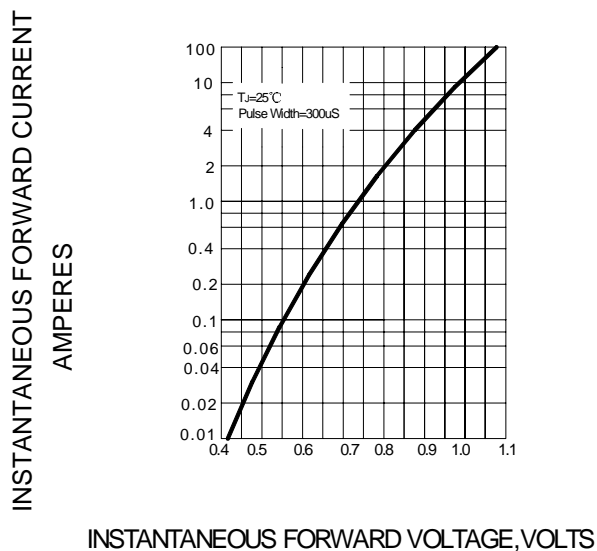
		MURS120	UNITS
Device marking code		MD	
Maximum recurrent peak reverse voltage	$V_{RRM}$	200	V
Maximum RMS voltage	$V_{RMS}$	140	V
Maximum DC blocking voltage	$V_{DC}$	200	V
Maximum average forward rectified current @ $T_L = 150^\circ\text{C}$ @ $T_L = 145^\circ\text{C}$	$I_{F(AV)}$	1.0 2.0	A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J = 125^\circ\text{C}$	$I_{FSM}$	40.0	A
Typical reverse recovery time (Note1)	$t_{rr}$	25	ns
Maximum reverse current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 150^\circ\text{C}$	$I_R$	2.0 50.0	$\mu\text{A}$
Maximum instantaneous forward voltage at 1.0 A @ $T_J = 25^\circ\text{C}$ @ $T_J = 150^\circ\text{C}$	$V_F$	0.875 0.71	V
Typical thermal resistance (Note2)	$R_{\theta JL}$	13.0	$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	- 65 ---- + 175	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 65 ---- + 175	$^\circ\text{C}$

NOTE: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $t_{rr} = 0.25\text{A}$ .

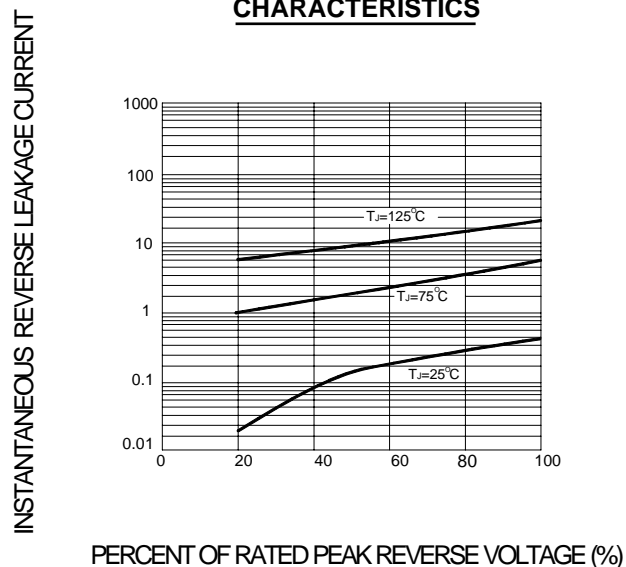
2. Junction to ambient.

## Ratings AND Characteristic Curves

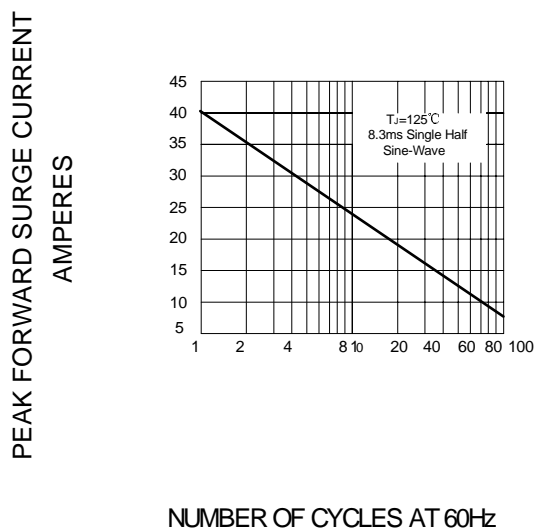
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.2 -- TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



**FIG.3 – PEAK FORWARD SURGE CURRENT**



**FIG.4 – FORWARD DERATING CURVE**

