

## MURS120 ULTRAFAST RECTIFIERS

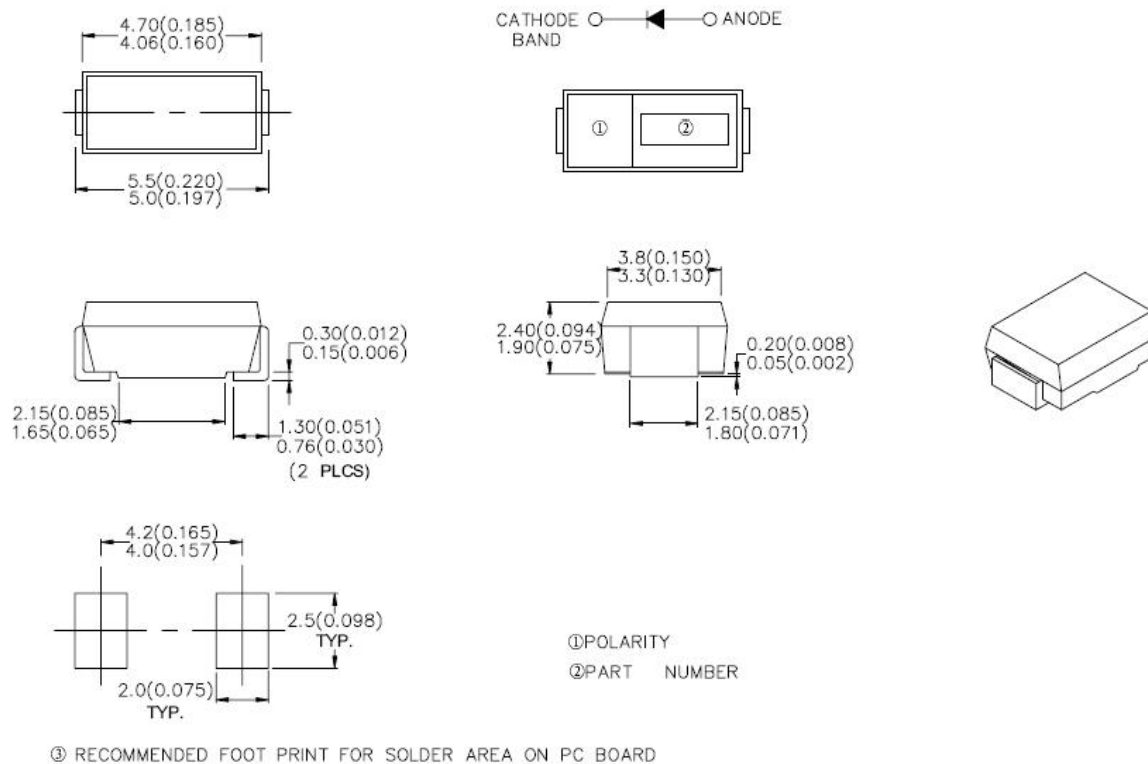
### Applications:

- Switching Power Supply
- Power Switching Circuits
- General Purpose

### Features:

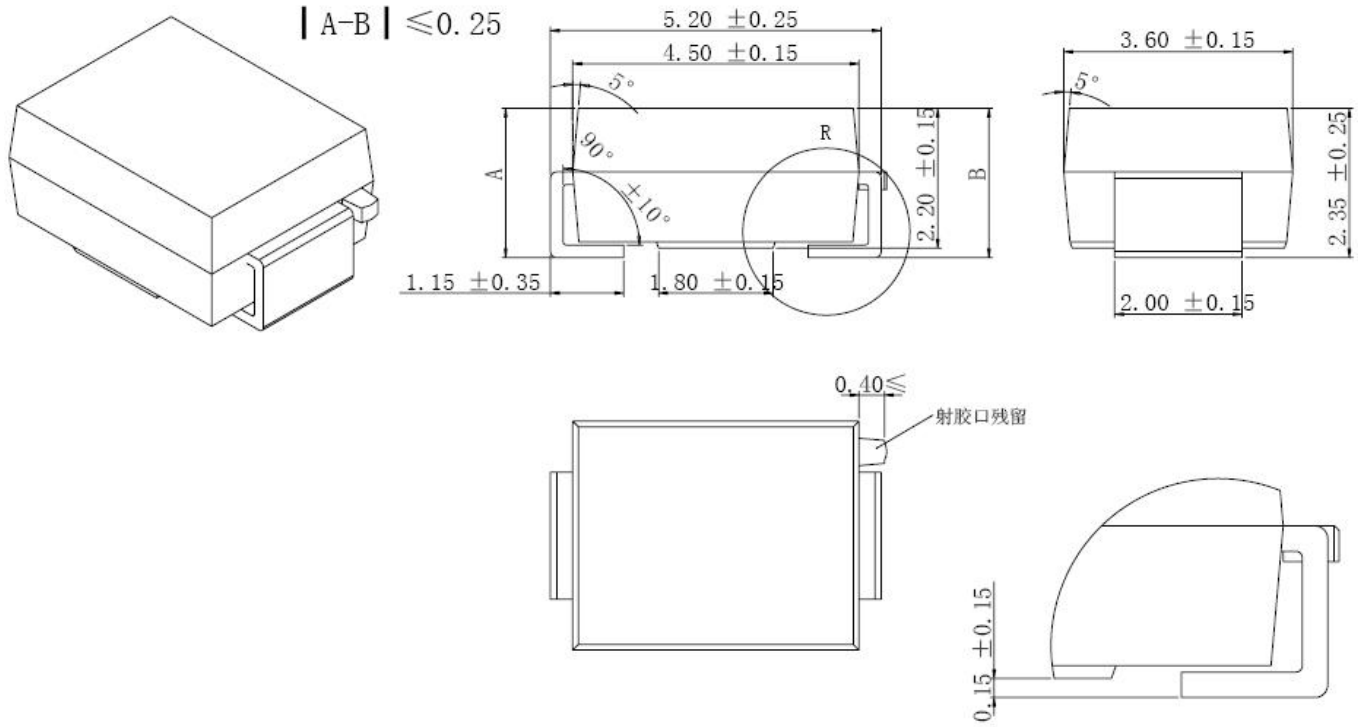
- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Mechanical Dimensions (In mm / Inches) and Marking:



### OPTION 1

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •



**OPTION 2(JK)**

**SMB**

**Marking Diagram:**

Where XXXXX is YYWWL



U	= Device Type
1	= Forward Current (1A)
20	= Reverse Voltage (200V)
B	= Package type
YY	= Year
WW	= Week
L	= Lot Number

**Cautions:** Molding resin  
 Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
MURS120	SMB (Pb-Free)	3000pcs/reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$  unless otherwise specified**

Single Phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

Characteristic	Symbol	MURS120	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	200	V
Average Rectified Output Current @ $T_L = 75^\circ\text{C}$	$I_o$	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40	A
Forward Voltage (Note 1) @ $I_F = 1.0\text{A}$ , $T_J=25^\circ\text{C}$	$V_{FM1}$	0.9	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_R$	2.0 50	$\mu\text{A}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	80	K/W
Maximum Reverse Recovery Time (Note 2)	$T_{rr1}$	25	ns
Operating and Storage Temperature Range	$T_J$ , $T_{STG}$	-55 to +150	$^\circ\text{C}$
Approximate Weight	wt	0.09	g
Case Style		SMB	

Note: 1. Mounted on P.C. Board with 14mm<sup>2</sup> (0.13mm thick) copper pad.  
 2. Measured with  $I_F=0.5\text{A}$ ;  $I_R=1.0\text{A}$ ;  $I_{RR}=0.25\text{A}$

Figure 1  
Typical Forward Characteristics

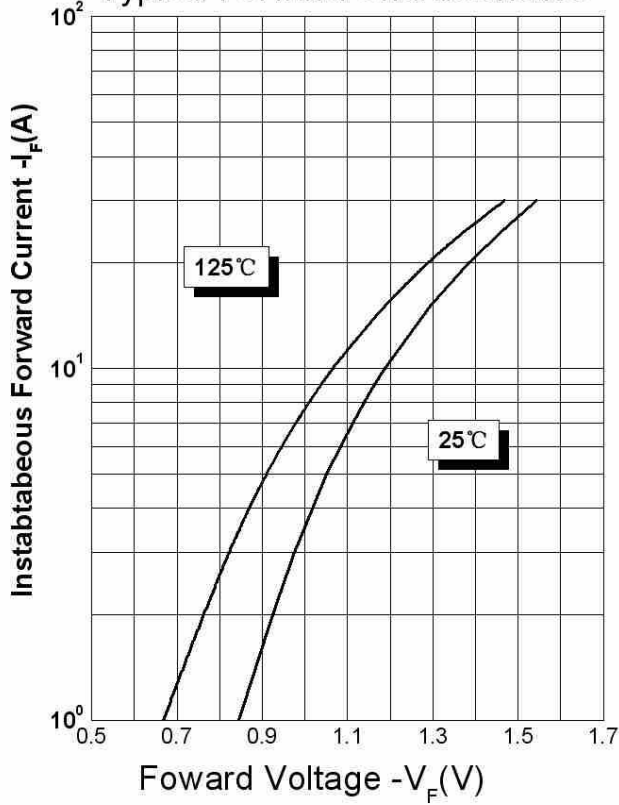


Figure 2  
Typical Reverse Characteristics

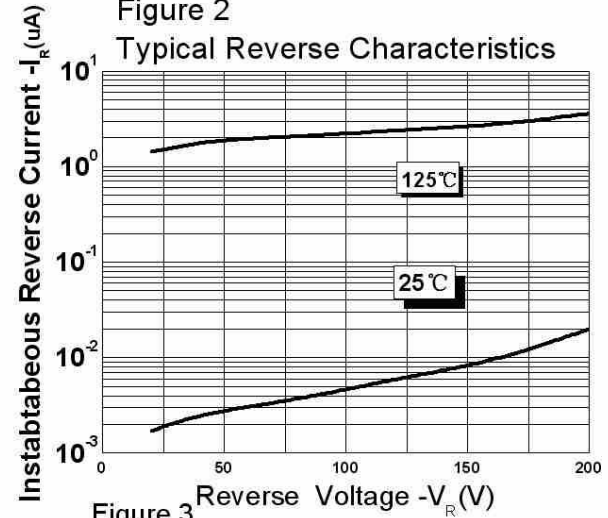
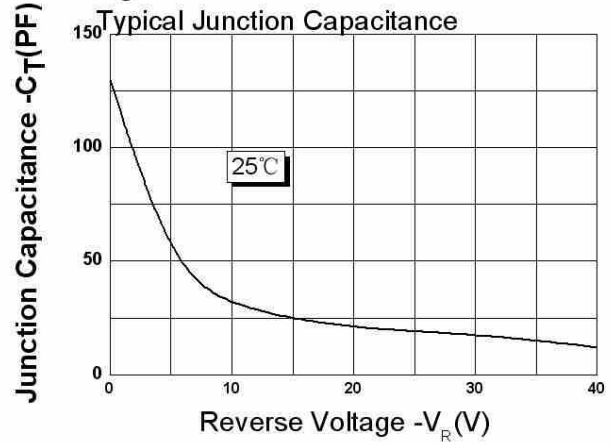


Figure 3  
Typical Junction Capacitance



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