

# FrelTec

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## Ultrafast Plastic Rectifier SMB

## SMB

## SPECIFICATION

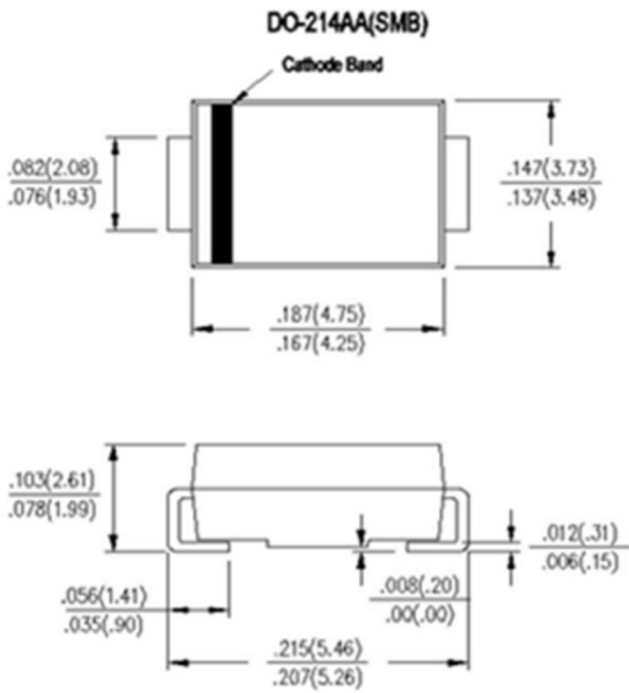
68B	MURS120xxx	SMBX	L03
Type	Type	Package	Packing
68B: Ultrafast Plastic Rectifier	MURS120	SMB	L03: tape and Reel(embossed tape)for 3k pc (13'REEL)

**All products according to RoHS (2015/863/EU)**

**PACKAGE OUTLINE**



DO-214AA (SMB)



## SMB

## Ultrafast Plastic Rectifier

## Maximum Ratings &amp; Characteristics

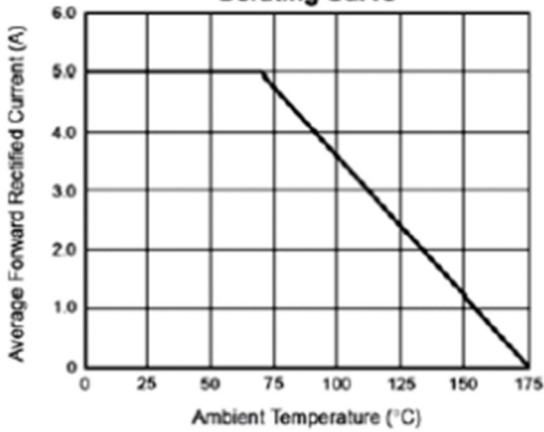
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	MURS120	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	Volts
Working peak reverse voltage	$V_{RWM}$	200	Volts
Maximum DC blocking voltage	$V_{DC}$	200	Volts
Maximum average forward rectified current at $T_L=155^\circ\text{C}$ (See figure 1) $T_L=145^\circ\text{C}$	$I_{F(AV)}$	1,0 2,0	Amps
Peak forward surge current 8,3ms single half sine-wave superimposed on rated load(JEDEC Method)	$I_{FSM}$	40,0	Amps
Maximum instantaneous Forward voltage(Note 1) at $I_F=1,0\text{A}$ , $T_J=25^\circ\text{C}$ at $I_F=1,0\text{A}$ , $T_J=150^\circ\text{C}$	$V_F$	0,875 0,710	Volts
Maximum instantaneous reverse current At rated DC blocking voltage(Note 1) $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	$I_R$	2,0 200	$\mu\text{A}$ $\mu\text{A}$
Maximum reverse recovery time At $I_F=1,0\text{A}$ , $I_R=10\text{A}$ , $I_{rr}=0,25\text{A}$	$t_{rr}$	25	nS
Maximum reverse recovery time At $I_F=1,0\text{A}$ , $di/dt=100\text{A}/\mu\text{s}$ , $V_R=30\text{V}$ , $I_{rr}=10\%$ IRM	$t_{rr}$	35	nS
Maximum reverse recovery time At $I_F=1,0\text{A}$ , $di/dt=100\text{A}/\mu\text{s}$ , recovery to 1,0V	$t_{rr}$	25	nS
Typical thermal resistance junction to ambient	$R_{\theta JA}$	13	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +175	$^\circ\text{C}$

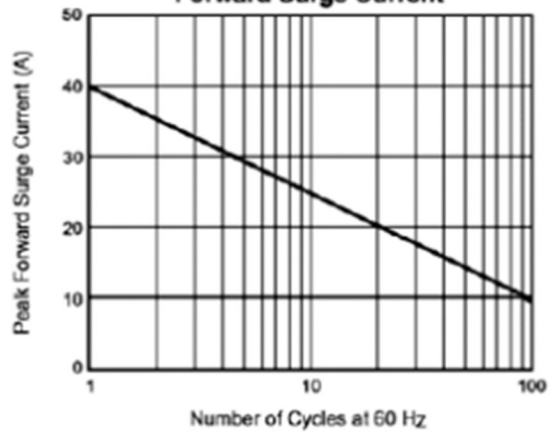
Note:1.Pulse test:  $t_p=300\mu\text{s}$ , duty cycle<2%

Characteristics(Typical)

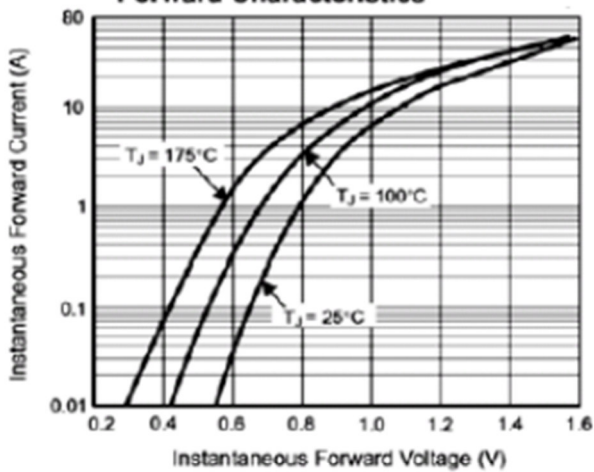
**Fig. 1 – Forward Current Derating Curve**



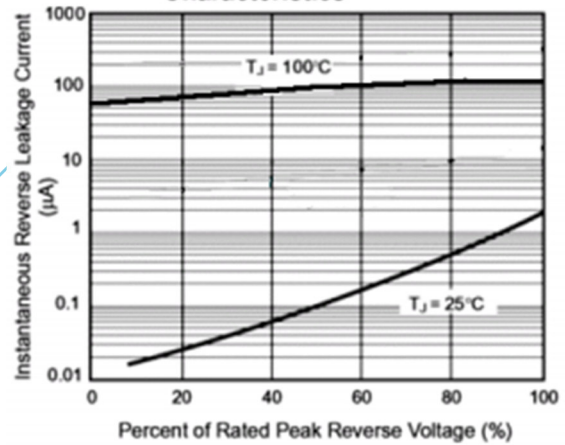
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



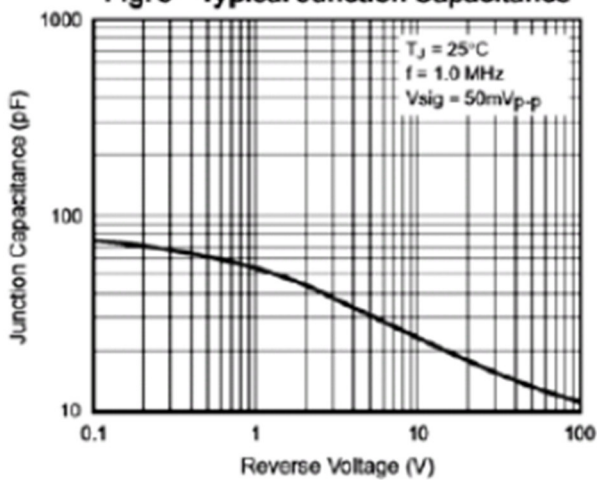
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Leakage Characteristics**



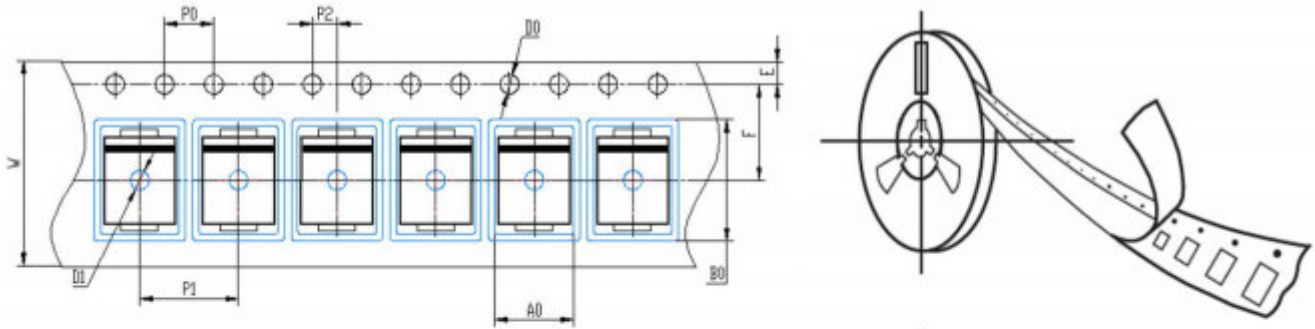
**Fig. 5 – Typical Junction Capacitance**



SMB

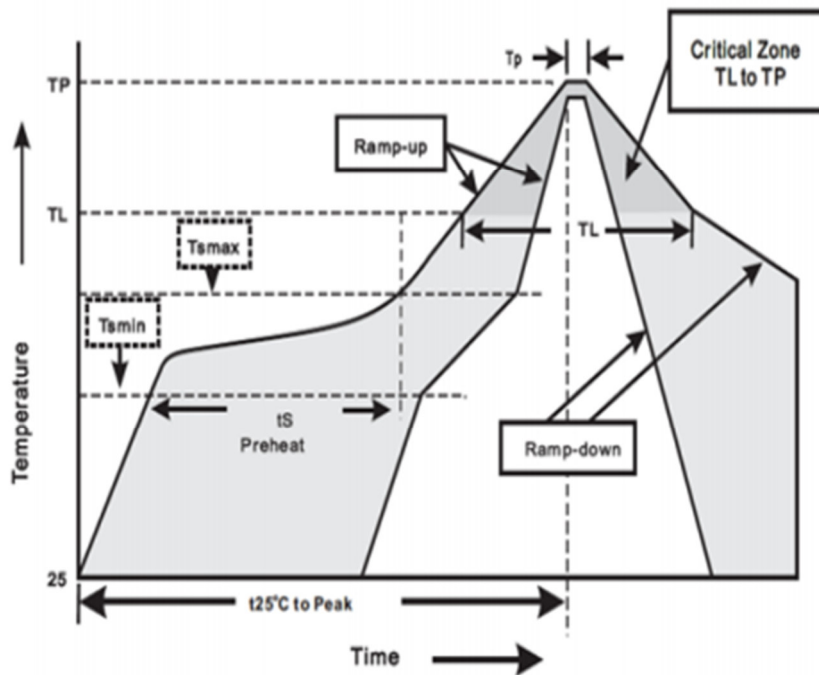
Size (Unit:mm)

**Tape & Reel Specification**



Symbol	SMB (mm)
W	12 ± 0.2
E	1.75 ± 0.1
F	5.5 ± 0.05
D0	1.5 ± 0.1
D1	1.50 +0.1/-0
P0	4.0 ± 0.1
P1	8.0 ± 0.1
P2	2.0 ± 0.05
A0	3.95 ± 0.1
B0	5.74 ± 0.1

**Soldering Parameters**



**Stock period**

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 20-30°C and a relative humidity 20-60%RH

11/5/2020

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