



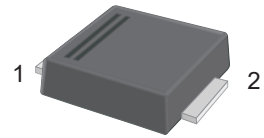
# US5ABF-PJ~US5MBF-PJ

## Surface Mount Superfast Recovery Rectifiers

### Features

- For surface mount applications
- Glass passivated chip junction
- Low profile package
- Easy to pick and place
- Superfast reverse recovery time

### SMBF



1.Cathode  2.Anode

### Marking Code:

US5ABF-PJ: U5AB  
 US5BBF-PJ: U5BB  
 US5DBF-PJ: U5DB  
 US5GBF-PJ: U5GB  
 US5JBF-PJ: U5JB  
 US5KBF-PJ: U5KB  
 US5MBF-PJ: U5MB

### 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 current derate by 20 %.

Parameter	Symbols	US5ABF -PJ	US5BBF -PJ	US5DBF -PJ	US5GBF -PJ	US5JBF -PJ	US5KBF -PJ	US5MBF -PJ	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	5.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	150							A
Maximum Instantaneous Forward Voltage at 5 A	$V_F$	1.0		1.3		1.68		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	$I_R$	10 150							$\mu\text{A}$
Typical Thermal Resistance <sup>Note1</sup>	$R_{\theta JA}$ $R_{\theta JC}$	40 12							$^\circ\text{C/W}$
Maximum Reverse Recovery Time <sup>Note2</sup>	$T_{rr}$	50				75			nS
Junction Temperature	$T_J$	150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

### Note:

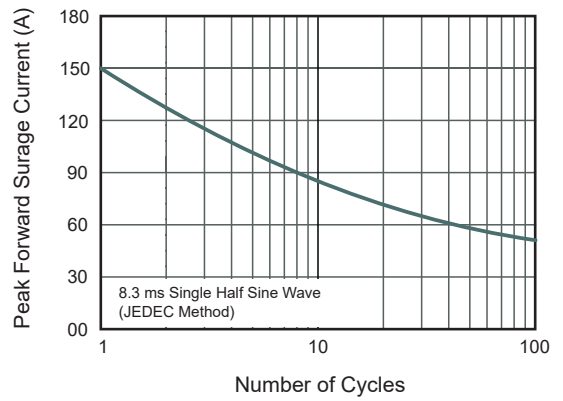
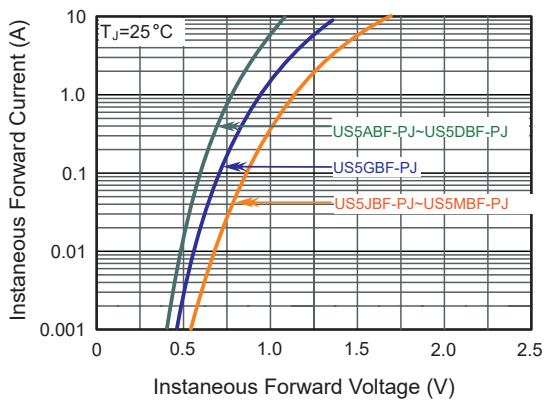
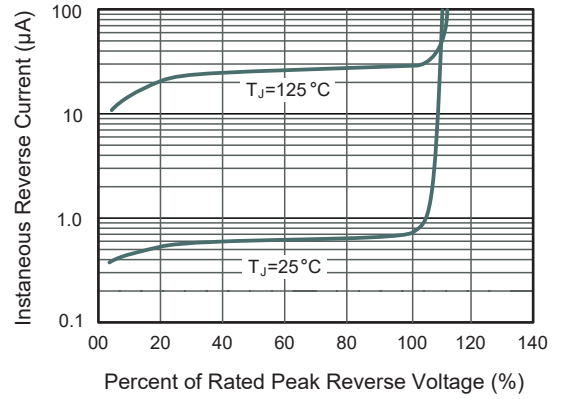
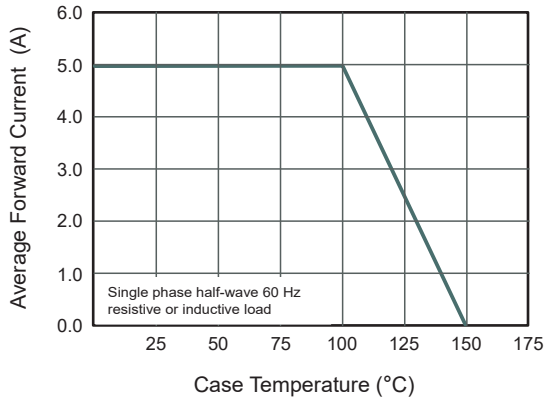
1. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
2. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .



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### Typical Characteristic Curves





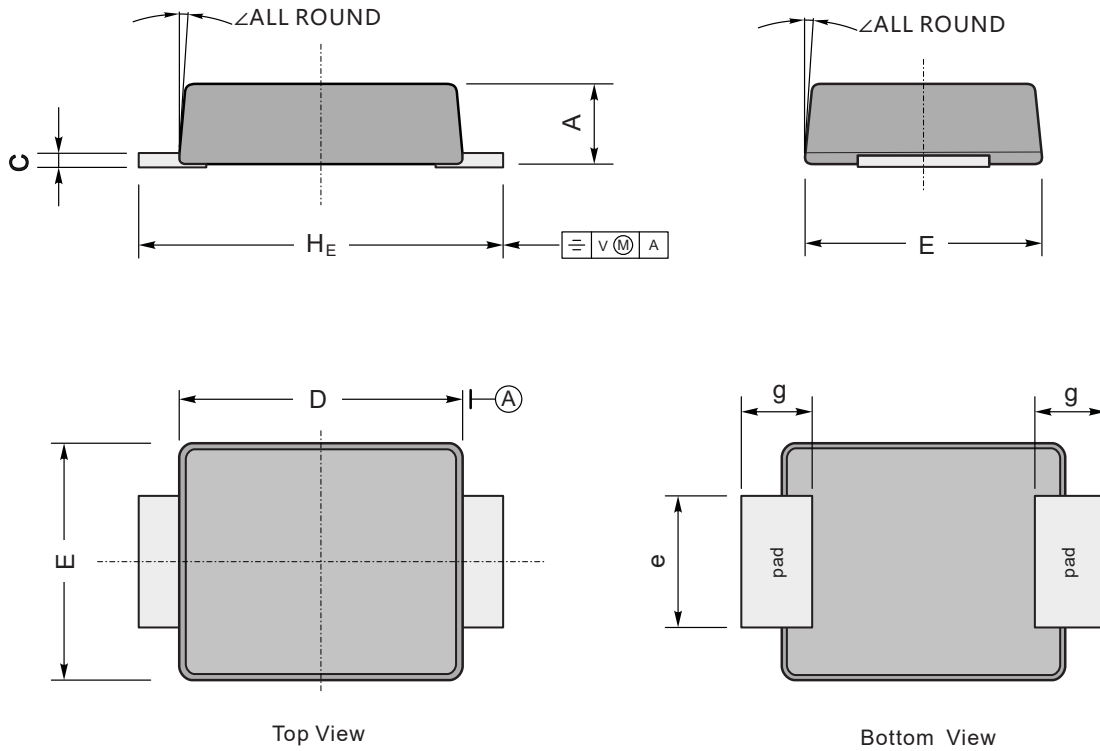
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### Package Outline

SMBF

Dimensions in mm



UNIT		A	C	D	E	H <sub>E</sub>	e	g	∠
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		