



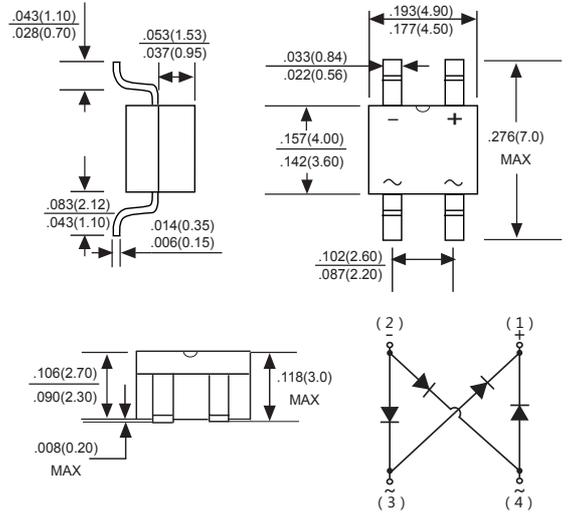
# MB14S THRU MB120S

Voltage Range - 40 to 200 V olts Current - 1.0 Ampere

## Schottky Surface Mount Flat Bridge Rectifier

### Features

- ◆ Ideal for printed circuit board
- ◆ Reliable low cost construction utilizing molded plastic technique
- ◆ High temperature soldering guaranteed: 260°/10 seconds at 5 lbs., (2.3kg) tension
- ◆ Small size, simple installation
- ◆ High surge current capability



Dimensions in inches and (millimeters)

### Mechanical Data

**Case** : JEDEC MBS Molded plastic body  
**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity** : Polarity symbol marking on body  
**Mounting Position** : Any  
**Weight** : 0.008 ounce, 0.22 grams

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	MDD	MDD	MDD	MDD	MDD	UNITS	
		MB14S	MB16S	MB18S	MB110S	MB120S		
Marking Code								
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	60	80	100	200	V	
Maximum RMS voltage	$V_{RMS}$	28	42	56	70	140	V	
Maximum DC blocking voltage	$V_{DC}$	40	60	80	100	200	V	
Maximum average forward rectified current	$I_{F(AV)}$	1.0						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30						A
Maximum instantaneous forward voltage at 1A	$V_F$	0.55	0.70	0.85	0.90		V	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ C$ $T_A=100^\circ C$	$I_R$	0.3 10		0.2 5	0.1 2		mA	
Typical junction capacitance at 4.0V, 1.0MHz	$C_j$	110	80				pF	
Typical thermal resistance (Note1)	$R_{\theta JA}$ $R_{\theta JL}$	100 20					°C/W	
Operating temperature range	$T_J$	-55 to +125					°C	
storage temperature range	$T_{STG}$	-55 to +150					°C	

Note: 1. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2×0.2" (5.0×5.0mm) copper pad areas.



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## Ratings And Characteristic Curves

Fig.1 Forward Current Derating Curve

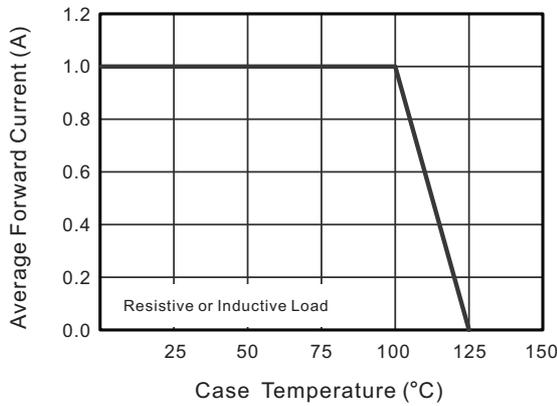


Fig.2 Typical Reverse Characteristics

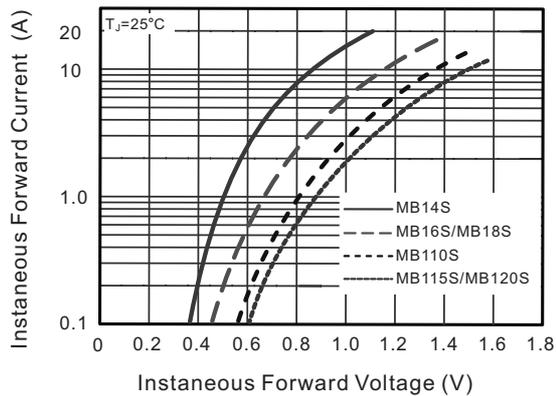
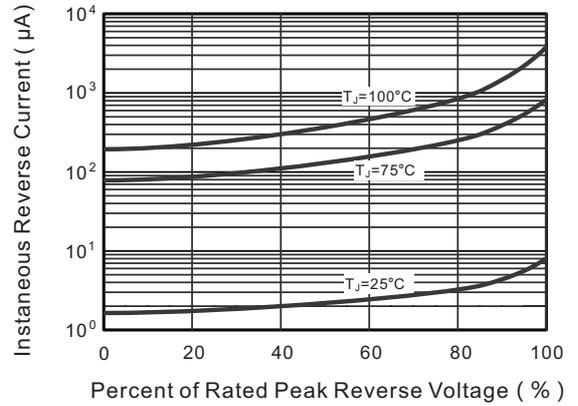


Fig.4 Typical Junction Capacitance

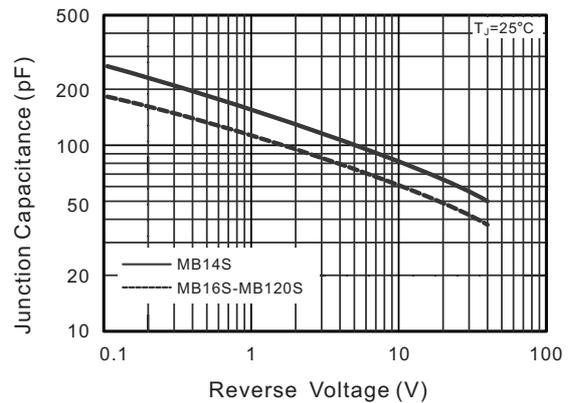


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

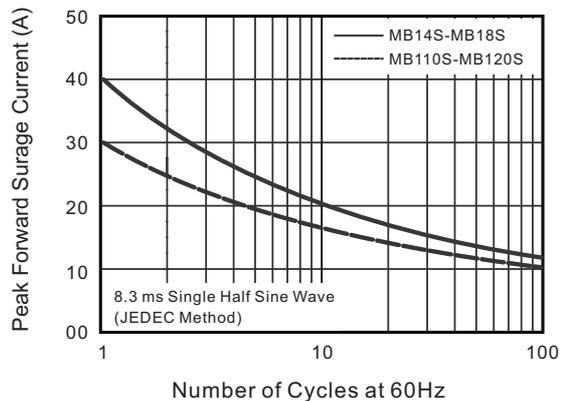
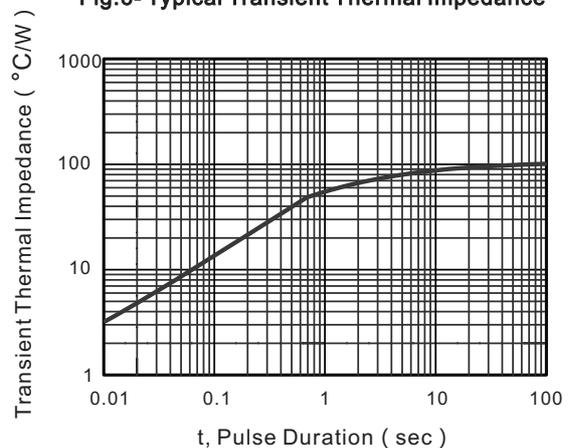


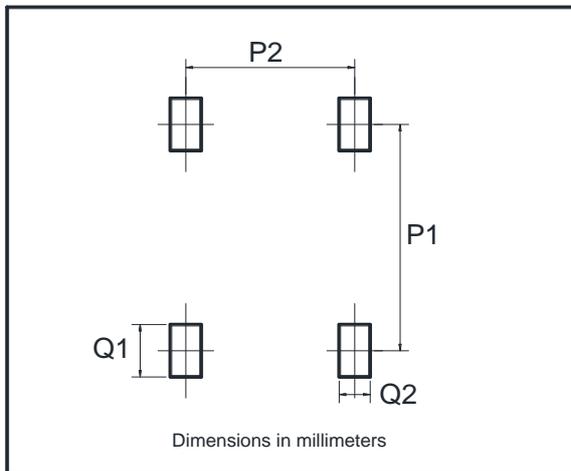
Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.



## Suggested Pad Layout



Dim	Min
P1	6.00
P2	2.40
Q1	1.84
Q2	1.20

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