

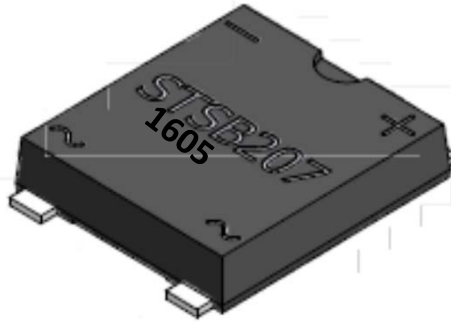
# STSB202 thru STSB207

## low Profile Surface Mount Single Phase Bridge Rectifiers

### Reverse Voltage 100 to1000V Forward Current 2.0A

#### FEATURES

- \* Low forward voltage drop
- \* Low leakage current
- \* Ideal for automated placement
- \* Glass passivated standard bridge rectifiers
- \* Moisture sensitivity: level 1
- \* Low profile, Typical Height 1.4mm
- \* High temperature soldering guaranteed:  
260°C/10 seconds
- \* Weight: 0.195g



#### Typical Applications

For use of general purpose AC to DC bridge rectification in power supply, charger, office appliance, home appliance and telecom device

We declare that the material of product is Halogen free (green epoxy compound)

#### 1. Maximum Ratings at 25°C unless otherwise noted

Parameter Symbol	symbol	STSB202	STSB203	STSB204	STSB205	STSB206	STSB207	Unit
device marking code		STSB202	STSB203	STSB204	STSB205	STSB206	STSB207	
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	2.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	75						A
Rating for fusing (t<8.3ms)	$I^2t$	20						A <sup>2</sup> sec
Typical thermal resistance (Note 2)	R $\theta$ JC	15						°C/W
	R $\theta$ JA	75						
Operating junction and storage temperature range	TJ, TSTG	-55 to +150						°C

#### Electrical Characteristics at 25°C unless otherwise noted

Parameter Symbol	symbol	STSB202	STSB203	STSB204	STSB205	STSB206	STSB207	Unit
Maximum Instantaneous Forward Voltage (IF = 2.0Amps, TJ = 25°C)	$V_F$	1.05						V
Maximum DC reverse current at rated DC blocking voltage TA= 25°C TA =125°C	IR	5						μA
		500						
Typical junction capacitance at 4.0V, 1MHz	CJ	32						PF

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## 2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

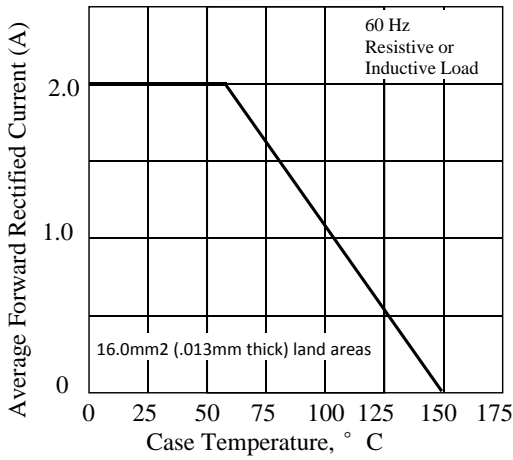


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

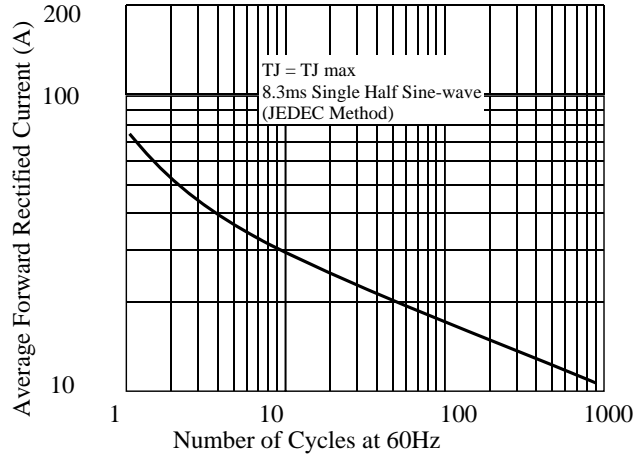


Fig. 3 - Typical Instantaneous Forward Characteristics

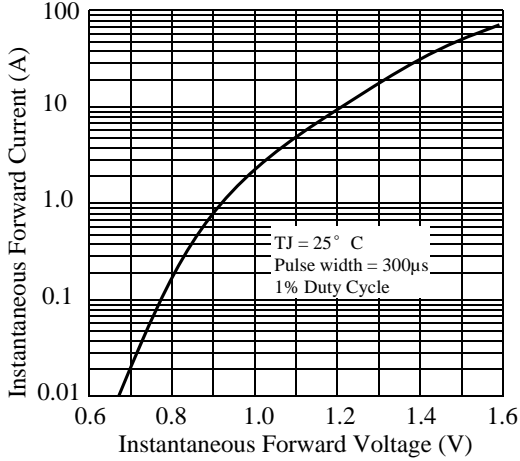


Fig. 4 - Typical Reverse Characteristics

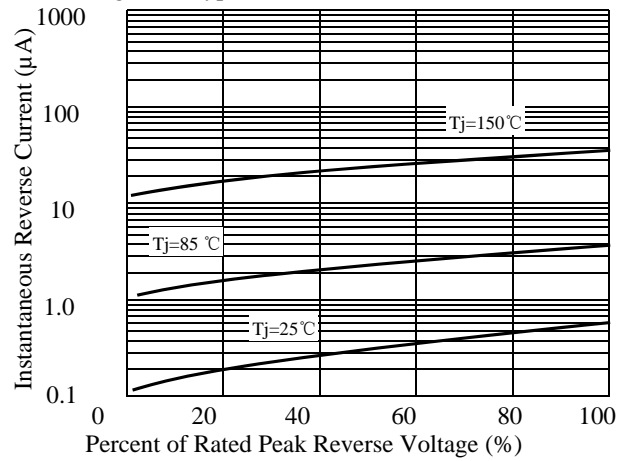


Fig. 5 - typical transient thermal impedance

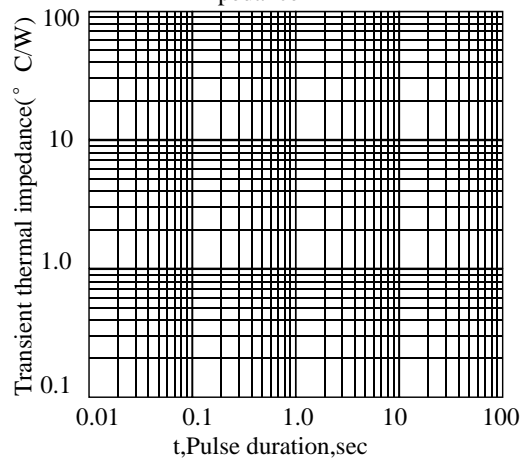
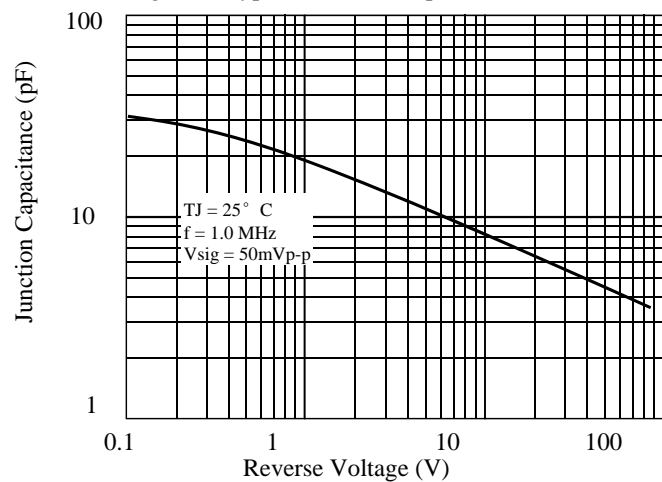


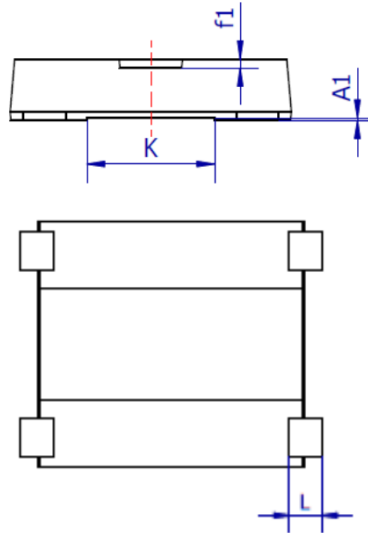
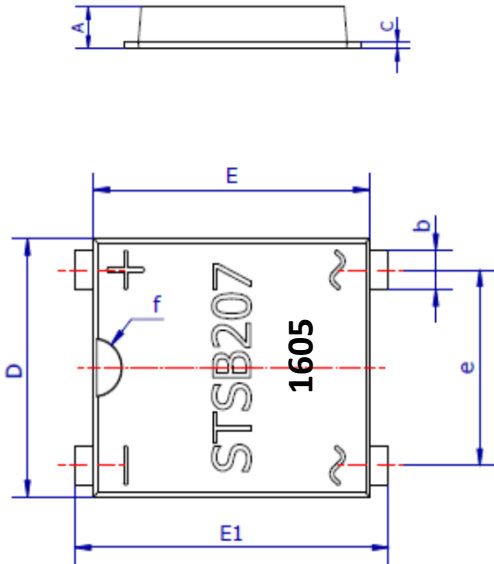
Fig. 6 - Typical Junction Capacitance



## STSB202 thru STSB207

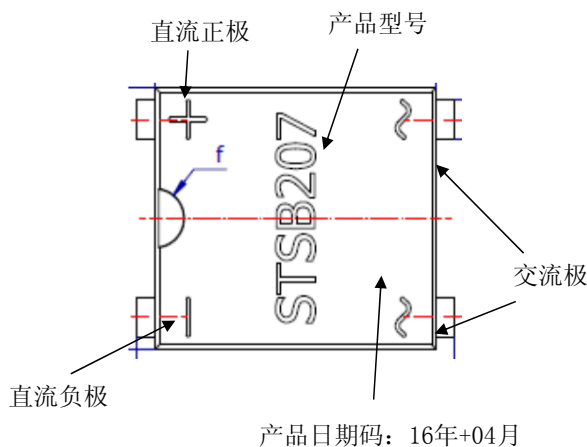
### 3. dimension:

### STSB

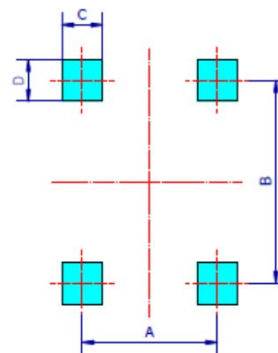


Dim	unit:mm	
	MIN	MAX
A	1.20	1.60
b	0.90	1.10
C	0.15	0.25
D	6.35	6.85
E	7.05	7.55
E1	8.05	8.55
e	4.75	5.25
f	TYP	R0.75
f1	TYP	0.2
A1	TYP	0.5
K	2.75	3.25
L	0.75	1.05

1605



### Mounting PAD layout



产品型号说明: ST--小型薄形管脚; S---贴片;  
B---桥; 2--IF=2A;07--VR=1000V;

Dim	MIN	MAX
A	4.75	5.25
B	7.15	7.65
C	1.50	2.50
D	1.50	2.50

## STSB202 thru STSB207

### 4、版式次更新记录

版次	更新记录	更新作者	更新日期
1	设计试用版	周杰	2016.05.10
2	完善热阻参数	谭志伟	2016.06.20

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