



STBR606/608

50-60Hz RECTIFICATION BRIDGE

MAJOR PRODUCT CHARACTERISTICS

$I_{F(AV)}$	6 A
V_{RRM}	600 V / 800 V
$V_F(max)$	1.05 V

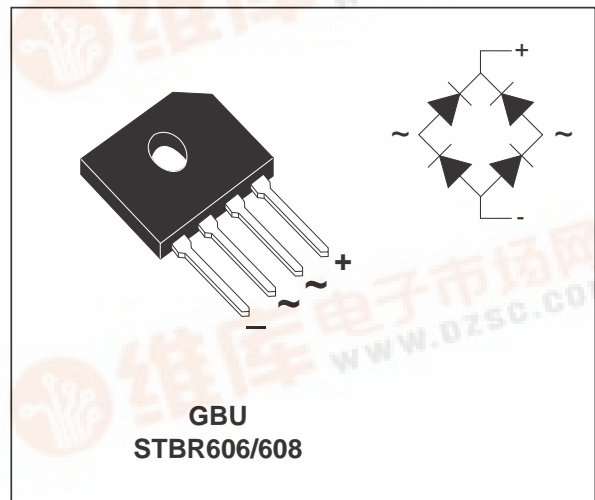
FEATURES AND BENEFITS

- Dielectric strength of 2000V
- High Surge overload rating
- High Surge current capability
- UL94V0
- Planar technology

DESCRIPTION

Single-phase 6A Bridge for 50 & 60Hz rectification in Switch Mode Power Supplies.

Applications: Home appliances, Automation, Telecommunications, PC, Servers.



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	STBR606	STBR608	Unit
V_{RRM}	Repetitive peak reverse voltage	600	800	V
V_{RMS}	RMS Voltage	420	560	V
V_{DC}	DC Blocking voltage	600	800	V
$I_{F(AV)}$	Average Forward Current	$T_C = 60^\circ C$		A
I_{FSM}	Non repetitive surge peak forward current	tp = 8.3 ms Single sine wave (JEDEC method)		A
I^2t	Rating for Fusing (tp < 8.3ms)	127		A ² S
T_J	Maximum operating junction temperature	150		°C
T_{stg}	Storage temperature range	- 50 to 150		°C

STBR606/608

THERMAL PARAMETERS

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Junction to case		7.4	8	$^{\circ}\text{C}/\text{W}$
$R_{th(j-a)}$	Junction to ambient			35	$^{\circ}\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
V_F	Forward voltage drop	$I_F = 6\text{A}$			1.05	V
I_R	Reverse leakage current per leg	$V_R = V_{RRM}$			5	μA
		$T_j = 25^{\circ}\text{C}$				
		$T_j = 125^{\circ}\text{C}$			50	μA
C	Junction capacitance per leg (note 1)			55		pF

Note 1: Measured at 1MHz and applied reverse voltage of 4V.

Fig. 1: Average power dissipation of bridge versus average output current.

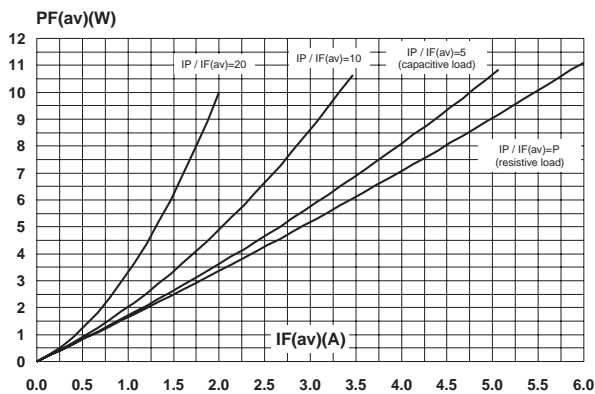


Fig. 2: Average output current versus ambient temperature (resistive load or inductive load).

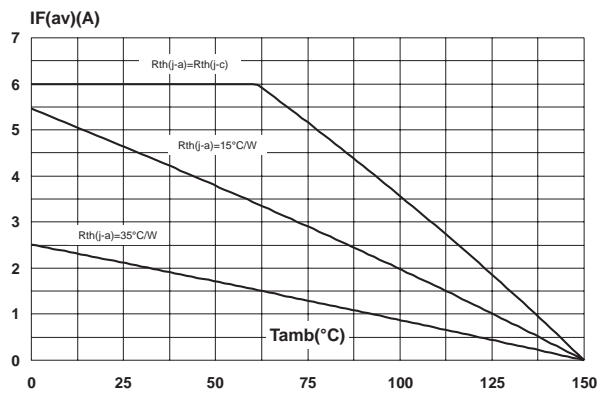


Fig. 3: Variation of thermal impedance junction to ambient versus pulse duration (printed circuit board epoxy FR4).

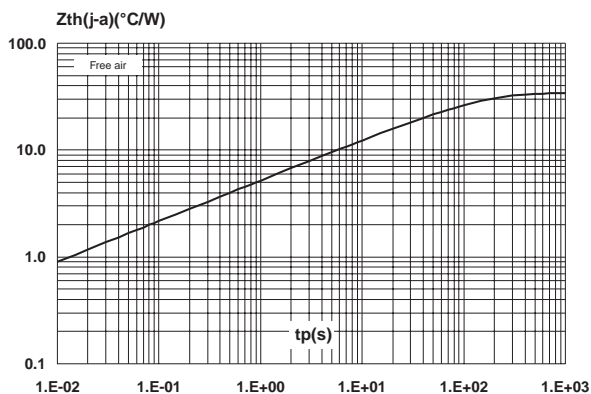


Fig. 4: Forward voltage drop versus forward current (typical values, per leg).

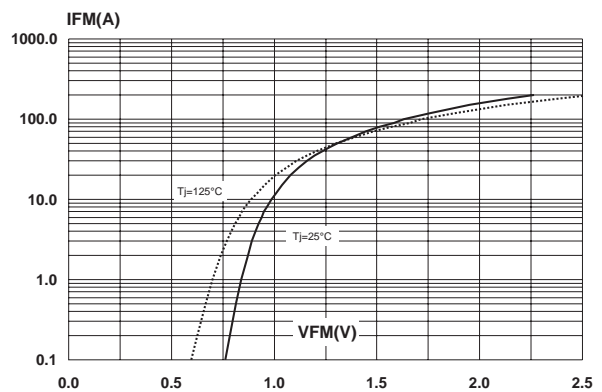


Fig. 5: Reverse leakage current versus reverse voltage applied (typical values, per leg).

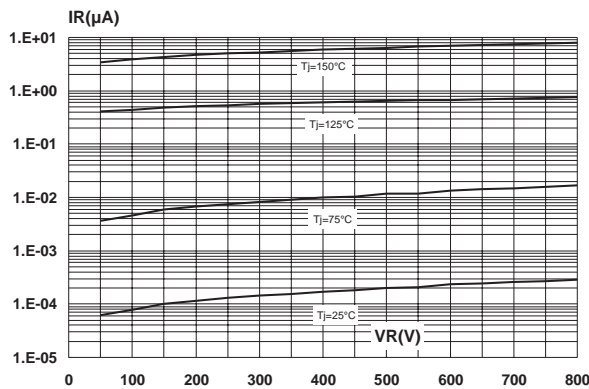


Fig. 6: Relative leakage current versus junction temperature (typical values).

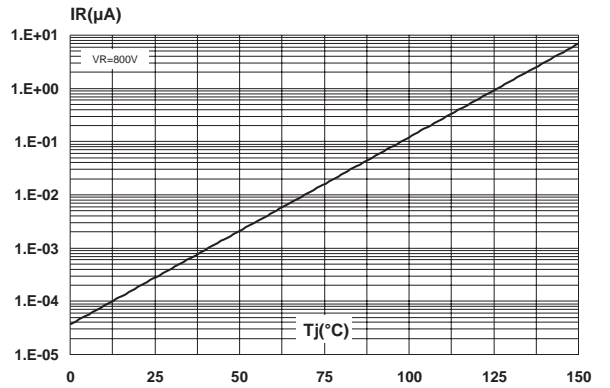


Fig. 7: Junction capacitance versus reverse voltage applied (typical values).

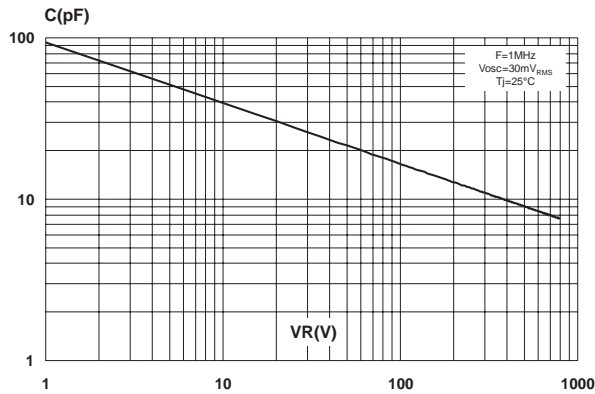


Fig. 8: Softness factor versus dI_F/dt (typical values).

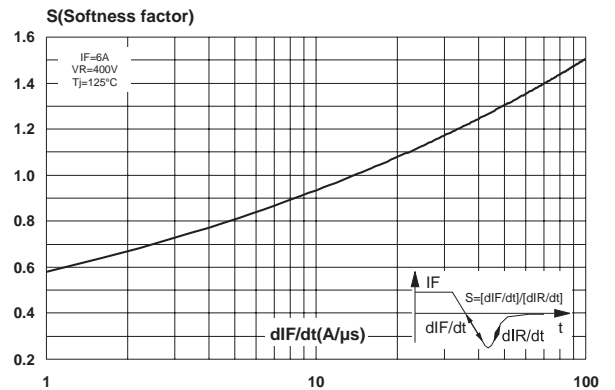
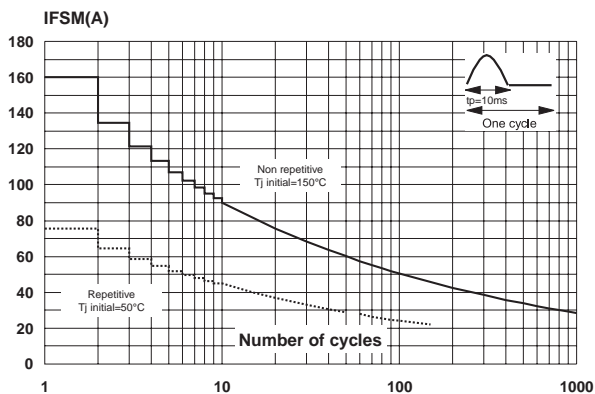
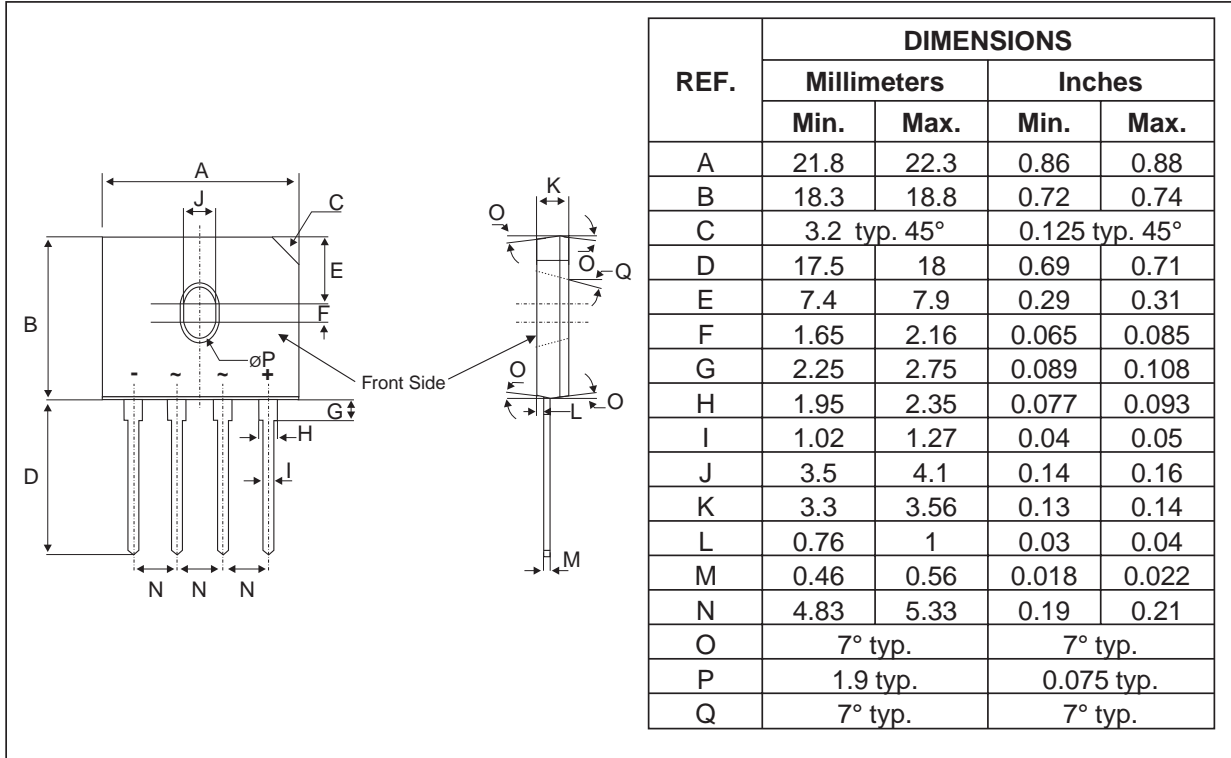


Fig. 9: Surge peak forward current versus number of cycles (per leg).



STBR606/608

PACKAGE MECHANICAL DATA
GBU



Ordering type	Marking	Package	Weight	Base qty	Delivery mode
STBR606	STBR606	GBU	4.0g	20	Tube
STBR608	STBR608	GBU	4.0g	20	Tube

- Epoxy meets UL94,V0
- Cooling method: C
- Recommended torque value: 0.8 m.N
- Maximum torque value: 1.0 m.N

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