

50-60Hz RECTIFICATION BRIDGE

MAJOR PRODUCT CHARACTERISTICS

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

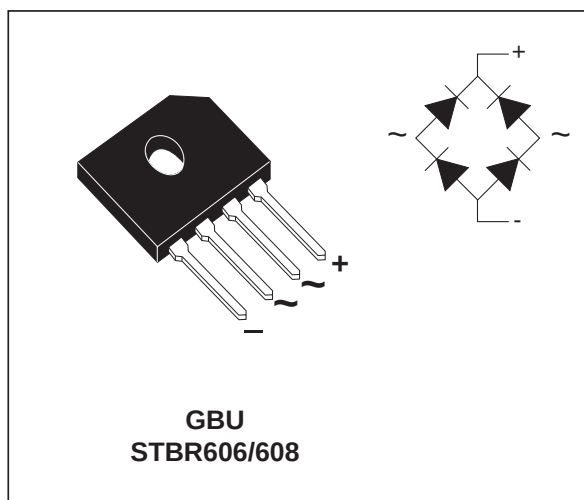
FEATURES AND BENEFITS

- 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	$T_C = 60^\circ\text{C}$	6		A
I_{FSM}	Non repetitive surge peak forward current	$t_p = 8.3\text{ ms}$ Single sine wave (JEDEC method)	175		A
I^2t	Rating for Fusing ($t_p < 8.3\text{ms}$)		127		A^2S
T_j	Maximum operating junction temperature		150		$^\circ\text{C}$
T_{stg}	Storage temperature range		- 50 to 150		$^\circ\text{C}$

THERMAL PARAMETERS

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

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
		$T_j = 125^{\circ}\text{C}$			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.

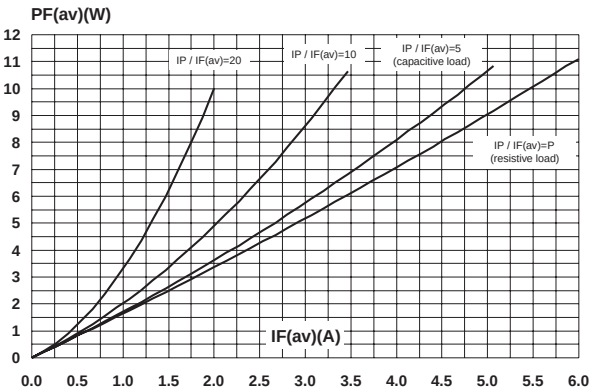


Fig. 2: Average output current versus ambient temperature (resistive load or inductive load)

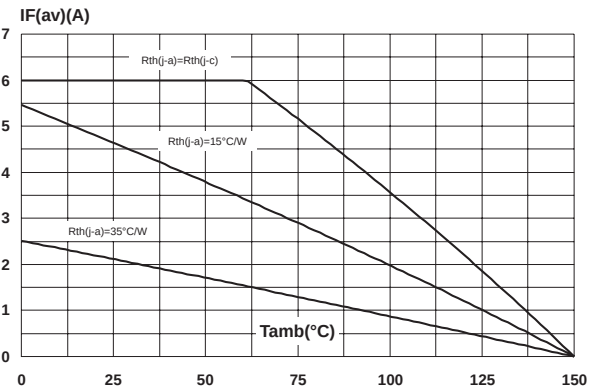


Fig. 3: Variation of thermal impedance junction to ambient versus pulse duration (printed circuit board epoxy FR4)

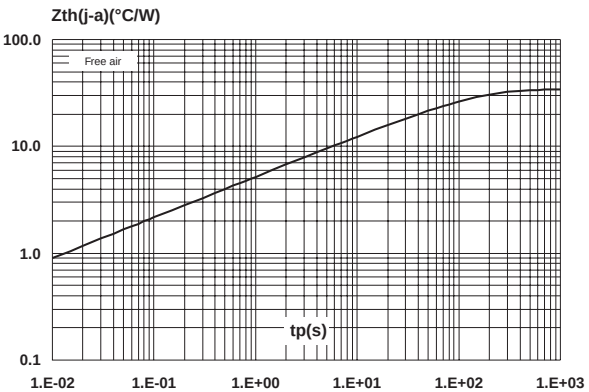


Fig. 4: Forward voltage drop versus forward current (typical values, per leg).

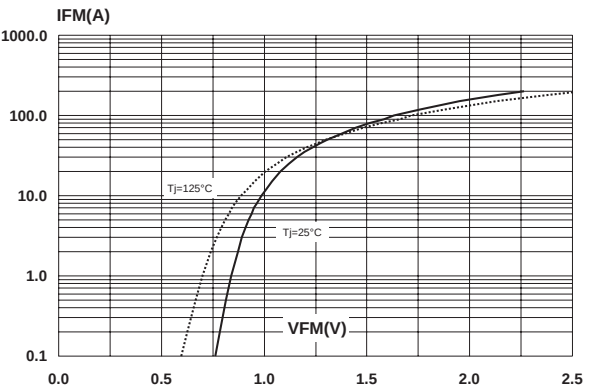


Fig. 5: Reverse leakage current versus reverse voltage applied (typical values, per leg).

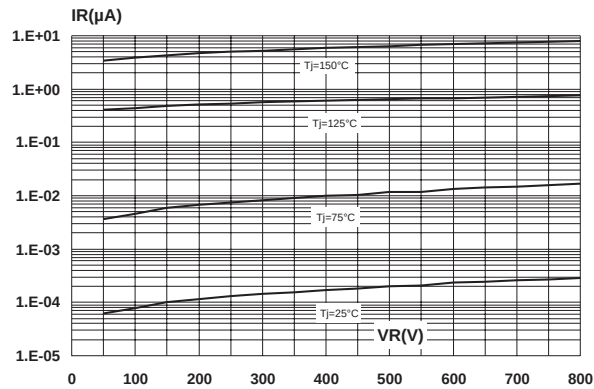


Fig. 6: Relative leakage current versus junction temperature (typical values).

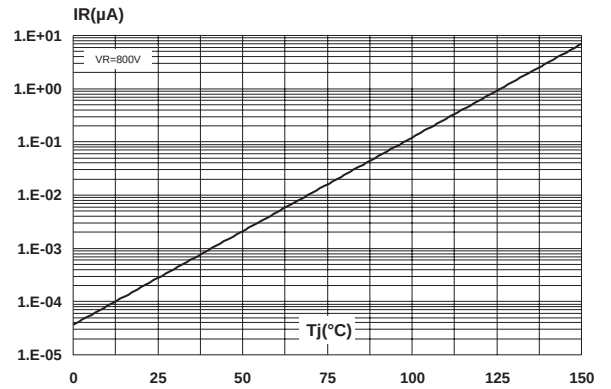


Fig. 7: Junction capacitance versus reverse voltage applied (typical values).

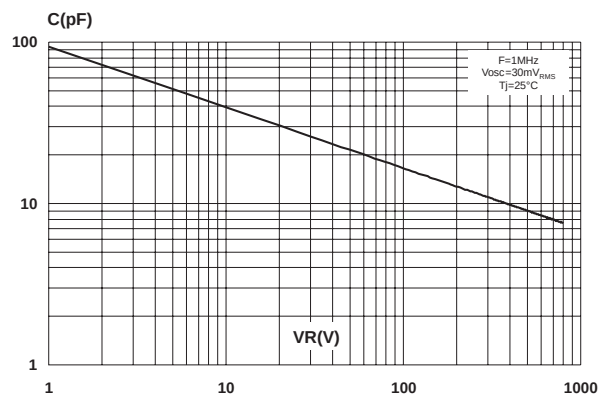


Fig. 8: Softness factor versus dI_F/dt (typical values).

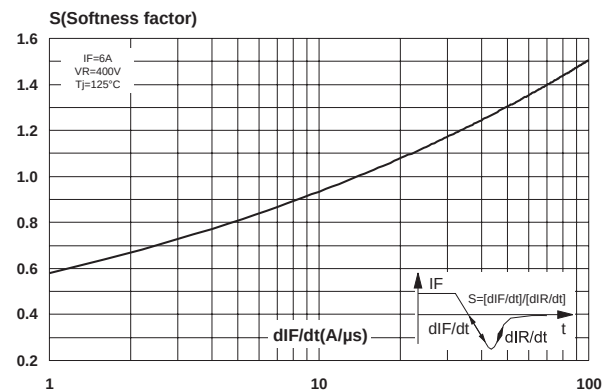
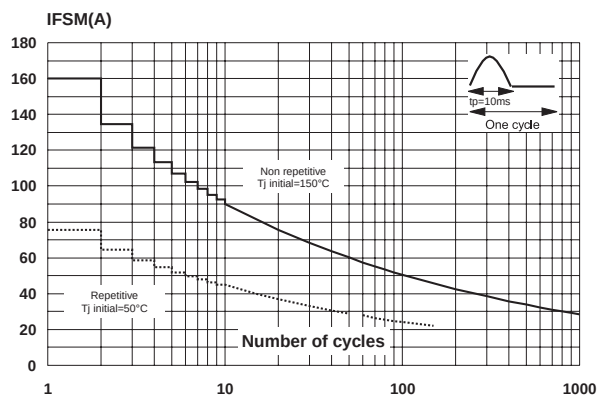
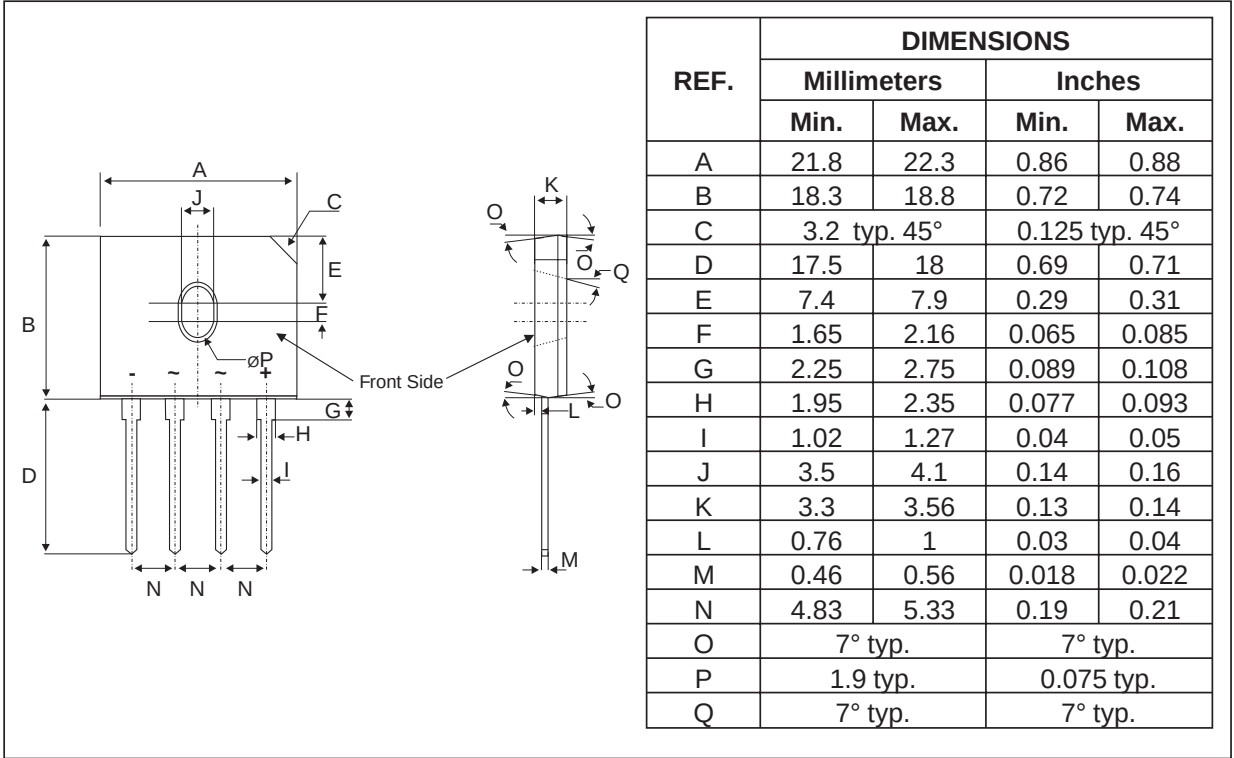


Fig. 9: Surge peak forward current versus number of cycles (per leg).



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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