

FULL 50-60Hz RECTIFICATION BRIDGE

MAIN PRODUCT CHARACTERISTICS

$I_F(AV)$	35A
V_{RRM}	1000V
V_F (max)	1.3V

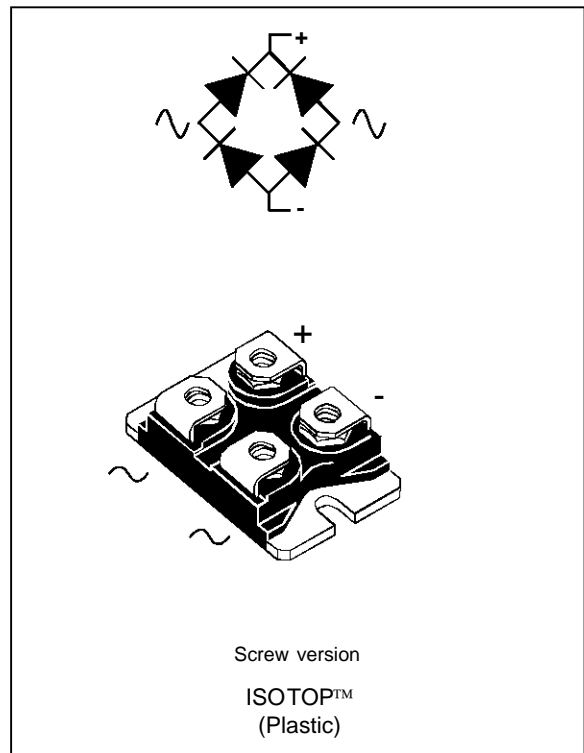
PRELIMINARY DATASHEET

FEATURES AND BENEFITS

- COMPACT ISOTOP DESIGN COMPATIBLE WITH FAST DIODES, TRANSISTORS AND PASSIVE COMPONENTS.
- EXCELLENT THERMAL TRANSFER JUNCTION TO HEATSINK
- UL PENDING

DESCRIPTION

The Bridges series from SGS-THOMSON has been designed to allow a better standardization of packages on boards principally designed with ISOTOP packages. The insulated package of the bridge will be able to sit on heatsink with other components. Single phase and 3-phase high power SMPS, UPS, MOTOR DRIVES and WELDING equipment will primarily find advantage in these industry package products.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (per diode unless specified)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive peak reverse voltage		1000	V
V_{RSM}	Non repetitive peak reverse voltage		1000	V
$I_F(AV)$ total	Average forward current	$T_c=80^\circ\text{C}$ Sinus	35	A
I_{FSM}	Surge non repetitive forward current 50Hz JEDEC method		300	A
I^2_t	Fusing		660	$\text{A}^2\cdot\text{s}$
T_{stg}	Storage temperature range		- 65 to + 150	$^\circ\text{C}$
T_j	Max. operating junction temperature		150	$^\circ\text{C}$
P_{max} total	Total power dissipation		50	W

TM : ISOTOP is a trademark of SGS-THOMSON Microelectronics.

BF3510TV

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
Rth (j-c) total	Junction to case	0.5	°C/W

ELECTRICAL CHARACTERISTICS (Per diode)

STATIC CHARACTERISTICS

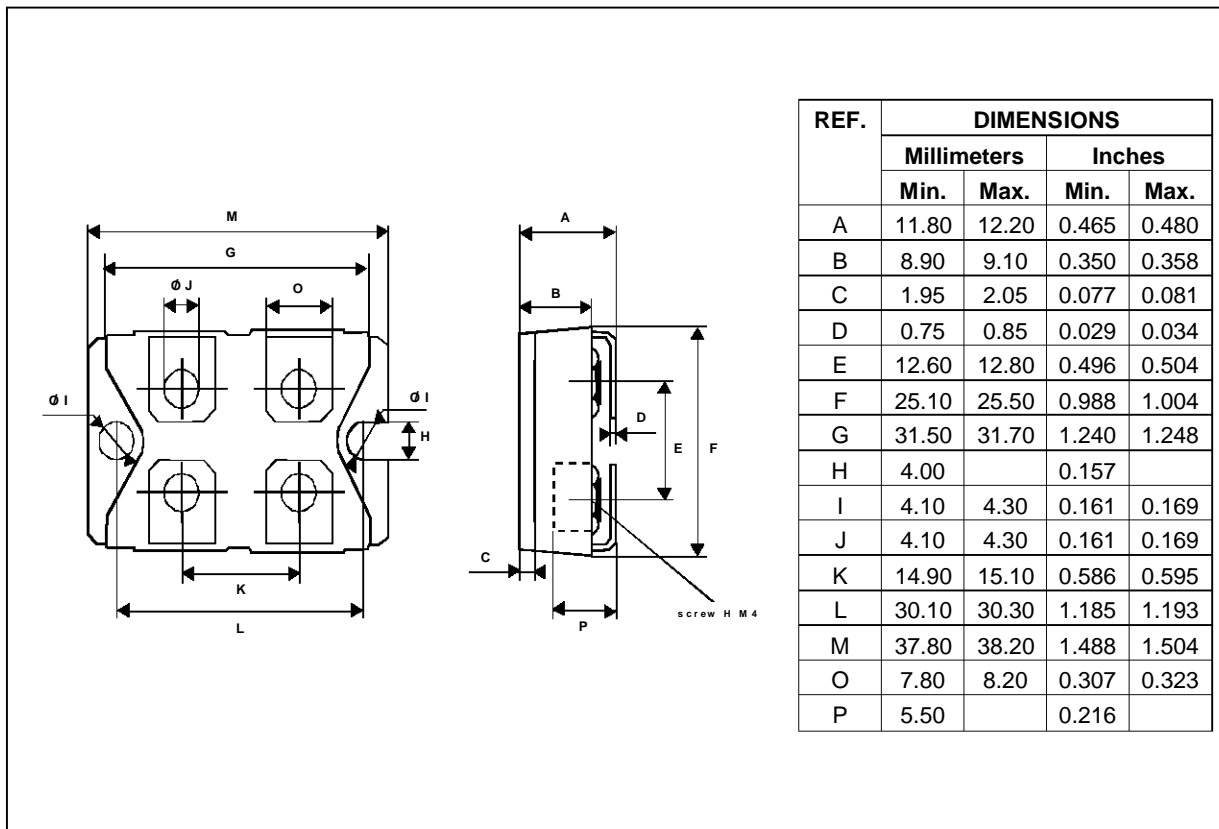
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
I _R *	Reverse leakage current	V _R = 0.8 V _{RRM} δ < 2% tp = 5ms	T _j = 25°C			10	μA
			T _j = 125°C			0.2	mA
V _F **	Forward voltage drop	I _F = 35 A δ < 2% tp = 380μs	T _j = 25°C			1.4	V
			T _j = 125°C			1.3	V

Pulse test : * tp = 5 ms, duty cycle < 2 %

** tp = 380 μs, duty cycle < 2 %

For one diode: $P_{cond} = 1.02 \times I_F(AV) + 0.008 \times I_F^2(RMS)$ and $T_j = P_{cond} \times 4 \times R_{th(j-c)} + T_c$

PACKAGE DATA (millimeter)
ISOTOP (Plastic)



Cooling method : C
 Marking : Type number
 Weight : 28 g. (without screws)

Electrical isolation : 2500V_(RMS)
 Capacitance : < 45 pF
 Inductance : < 5 nH

- Recommended torque value : 1.3 N.m (MAX 1.5 N.m) for the 6 x M4 screws. (2 x M4 screws recommended for mounting the package on the heatsink and the 4 screws given with the screw version).
- The screws supplied with the package are adapted for mounting on a board (or other types of terminals) with a thickness of 0.6 mm min and 2.2 mm max.

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