

## FULL 50-60Hz RECTIFICATION BRIDGE

### MAIN PRODUCT CHARACTERISTICS

$I_F(AV)$	35A
$V_{RRM}$	600V
$V_F$ (max)	1.3V

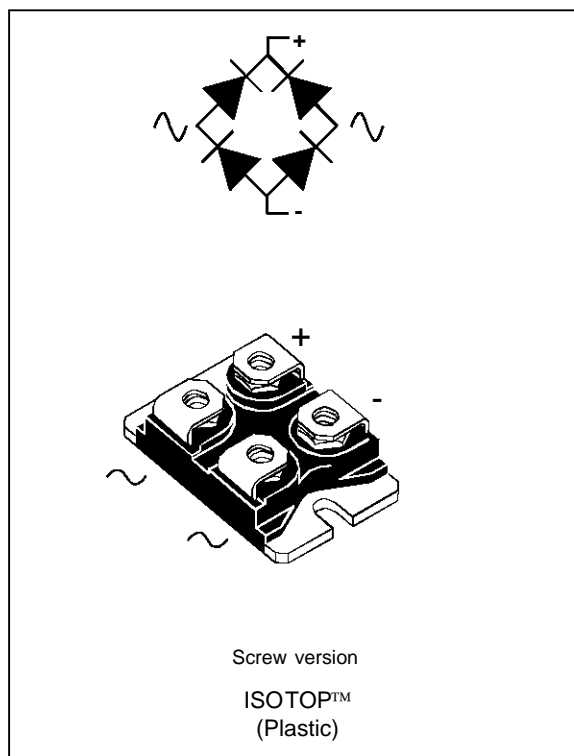
### PRELIMINARY DATASHEET

### 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		600	V
$V_{RSM}$	Non repetitive peak reverse voltage		600	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	A <sup>2</sup> .s
$T_{stg}$	Storage temperature range		- 65 to + 150	°C
$T_j$	Max. operating junction temperature		150	°C
$P_{max}$ total	Total power dissipation		50	W

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**THERMAL RESISTANCE**

Symbol	Parameter	Value	Unit
R <sub>th(j-c)</sub> total	Junction to case	0.5	°C/W

**ELECTRICAL CHARACTERISTICS (Per diode)****STATIC CHARACTERISTICS**

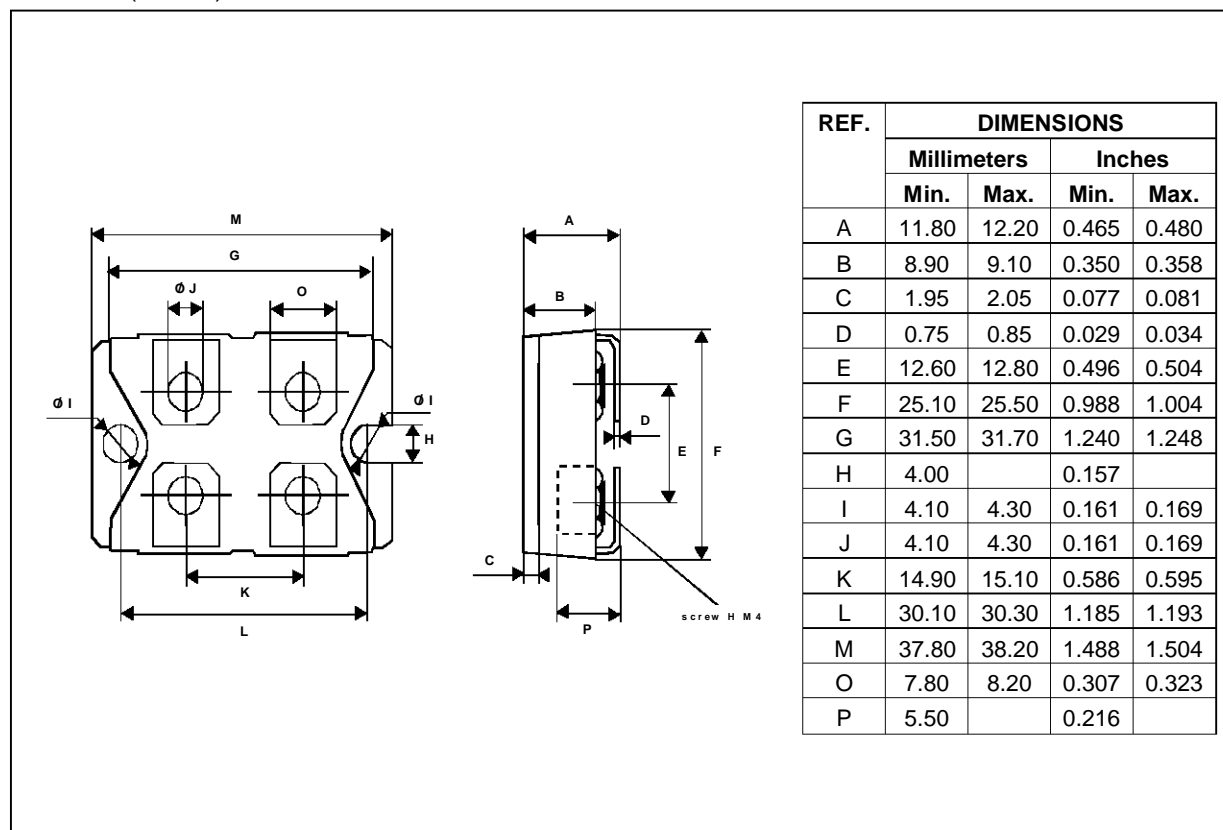
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>R</sub> *	Reverse leakage current	V <sub>R</sub> = 0.8 V <sub>RRM</sub> δ < 2% tp = 5ms	T <sub>j</sub> = 25°C		10	μA
			T <sub>j</sub> = 125°C		0.2	mA
V <sub>F</sub> **	Forward voltage drop	I <sub>F</sub> = 35 A δ < 2% tp = 380μs	T <sub>j</sub> = 25°C		1.4	V
			T <sub>j</sub> = 125°C		1.3	V

Pulse test : \* tp = 5 ms, duty cycle &lt; 2 %

\*\* tp = 380 μs, duty cycle &lt; 2 %

For one diode: P<sub>cond</sub> = 1.02 × I<sub>F(AV)</sub> + 0.008 × I<sub>F(RMS)</sub><sup>2</sup> and T<sub>j</sub> = P<sub>cond</sub> × 4 × R<sub>th(j-c)</sub> + T<sub>c</sub>

**PACKAGE DATA** (millimeter)  
**ISOTOP** (Plastic)



Cooling method : C

Marking : Type number

Weight : 28 g. (without screws)

Electrical isolation : 2500V<sub>(RMS)</sub>

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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