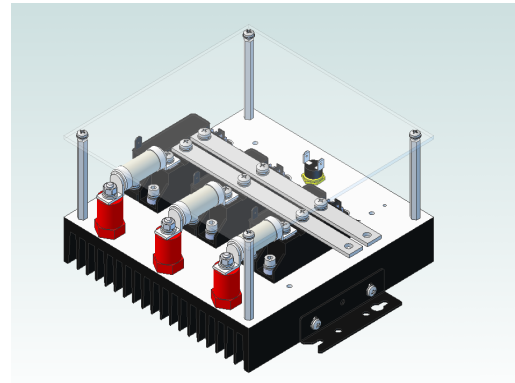


**HIGHLIGHTS**

- Wide range.
- Reliability.
- Short delivery time.
- Ultrafast fuses included.
- Thermostat, snubber and varistor included.
- Ready to use.
- Working voltage up to 400 V<sub>RMS</sub>.
- Insulation 3000 V<sub>RMS</sub>/1 min.



Non-contractual image

**GENERAL SPECIFICATIONS**

Nominal line to line input voltage (V <sub>RMS</sub> )	400 V <sub>AC</sub> ±10%
Repetitive peak reverse voltage (V <sub>RRM</sub> )	1200 V <sub>p</sub>
Maximum working current (I <sub>DC</sub> ) (1)	46 A <sub>DC</sub> @ 45°C TA
Maximum nominal working current (I <sub>DC</sub> ) (2)	39 A <sub>DC</sub> @ 45°C TA
Cooling	Natural air

(1): The maximum non continuous working current

(2): The maximum continuous working current without thermal protection activation

**SEMICONDUCTOR SPECIFICATIONS**

Peak non-repetitive surge current (I <sub>TSM</sub> )	520 A @ T <sub>p</sub> =10ms, T <sub>j</sub> =45°C, (50Hz), sine
	460 A @ T <sub>p</sub> =10ms, T <sub>j</sub> =125°C, (50Hz), sine
I <sup>2</sup> t capacity for fusing	1,35 kA <sup>2</sup> s @ T <sub>p</sub> =10ms, T <sub>j</sub> =45°C, (50Hz), sine
	1,05 kA <sup>2</sup> s @ T <sub>p</sub> =10ms, T <sub>j</sub> =125°C, (50Hz), sine
Maximum rate of rise of on-state current (repetitive) (di <sub>T</sub> /dt)	150 A/μs
Maximum rate of rise of on-state current (non-repetitive) (di <sub>T</sub> /dt)	500 A/μs
Maximum peak on-state voltage (V <sub>TM</sub> )	1,64 V @ I <sub>TM</sub> =80A
Critical rate of rise of off-state voltage (dv/dt)	Min. 1000 V/μs @ T <sub>j</sub> =125°C, V <sub>D</sub> =2/3 V <sub>RRM</sub>
Gate trigger voltage (V <sub>GT</sub> )	max. 1,5 V @ T <sub>j</sub> =25°C, V <sub>D</sub> =6V
	max. 1,6 V @ T <sub>j</sub> =-40°C, V <sub>D</sub> =6V
Gate trigger current (I <sub>GT</sub> )	max. 100 mA @ T <sub>j</sub> =25°C, V <sub>D</sub> =6V
	max. 200 mA @ T <sub>j</sub> =-40°C, V <sub>D</sub> =6V
Latching current (I <sub>L</sub> )	450 mA @ T <sub>j</sub> =25°C, t <sub>p</sub> =10μs; V <sub>D</sub> =6V
Holding current (I <sub>H</sub> )	200 mA @ T <sub>j</sub> =25°C; V <sub>D</sub> =6V

**PROTECTION**

dv/dt protection (RC)	RC network 0,068μF/150 Ohms
Peak voltage protection (VDR)	460 V <sub>RMS</sub> varistor
Current protection (Semiconductor fuses) (1)	3 x EW63
Thermal protection (Thermostats)	90°C NC

(1): Fuses only for shortcircuit protection. User provide external protection for continuous overloads and cable size.

**RECTIFICADORES GUASCH, S.A.**

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SPAIN

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e-mail: info@e-guasch.com  
www.e-guasch.com

### TERMINAL SPECIFICATIONS

Input power terminals (AC terminals)	2xØ6,50 4,5 to 6,5 Nm (1)
Module power terminals	(M5) 2,5 to 4,0 Nm
Output power terminals	3xØ8,5 (M8) 11 to 13 Nm (1)
SCR control terminals (G&K)	Fast-on 2,8/0,8 (2)
Thermal cut-off terminals	6,35 mm Fast-on

(1): The press should be performed with two keys, avoiding to transmit lateral efforts at terminal of connection, what would be able to produce the deterioration of the element semiconductor.

(2): Fast-on 2,8 mm connectors provided by user. In no case should be proceeded to the direct welding on these terminals.

### ENVIRONMENT SPECIFICATIONS

Protection grade (EN-60529 / CEI529 / UNE-20324)	IP-00
Humidity max.	50% RH @ 35°C / 90% RH @ 20°C
Pollution degree	III
Isolation	3000 V <sub>RMS</sub> / 1 min

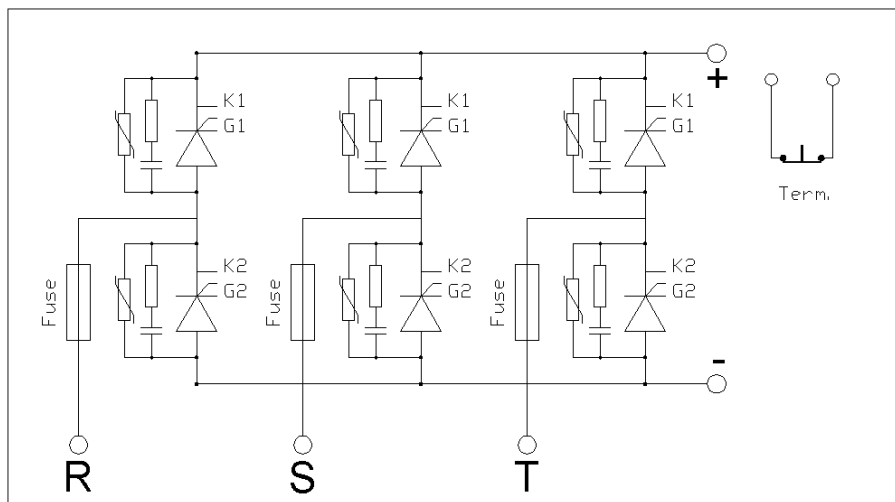
### LOSSES

Power dissipation of semiconductors at full charge	Aprox. 123 W
Maximum power dissipation of fuse at full charge	Aprox. 6 W
Maximum total power dissipation at full charge	Aprox. 128 W

### MECHANICAL SPECIFICATIONS

Mounting position	Vertical (fins perpendicular to base)
Storage temperature	-25 to 80°C
Width	244 mm
Depth	117 mm
Height	200 mm
Aprox. Weight	3,3 Kg.

### SCHEMATIC

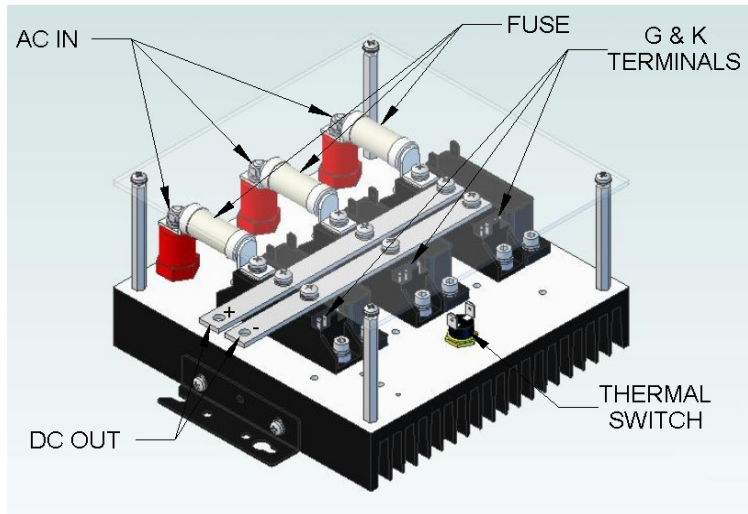


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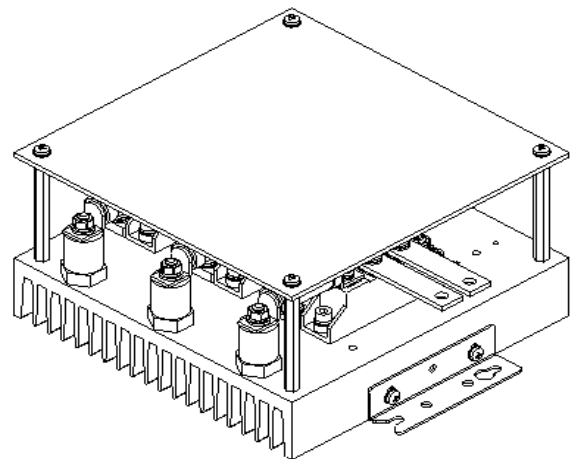
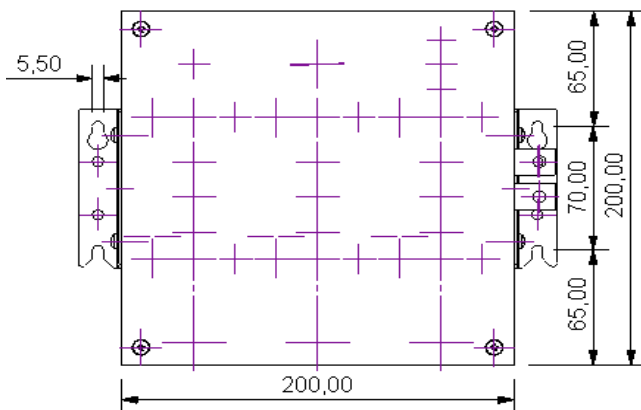
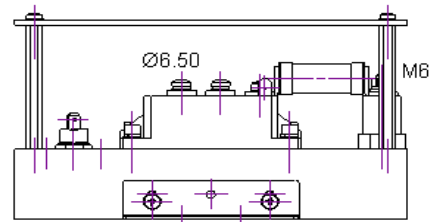
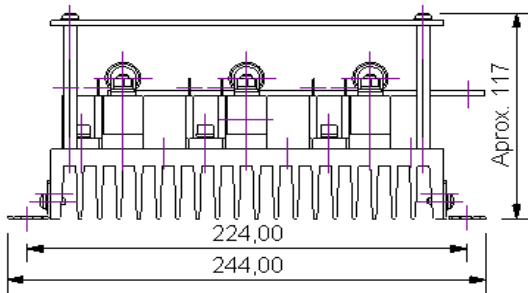
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### GENERAL DIMENSIONS

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**MOUNTING CONSIDERATIONS**

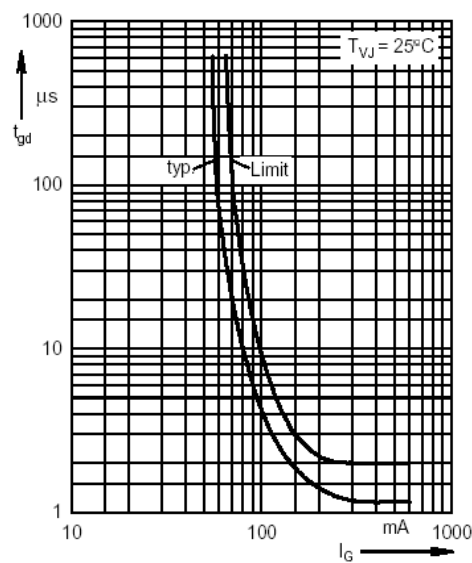
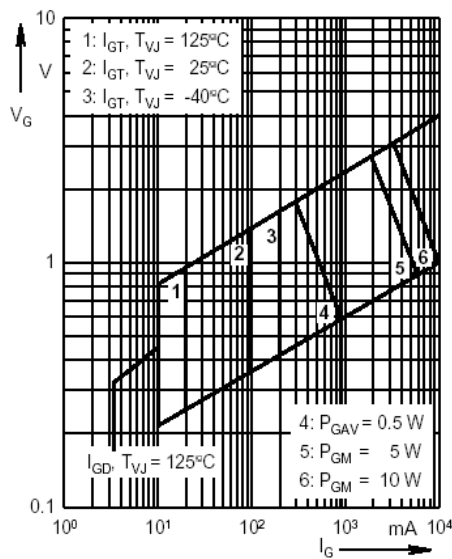
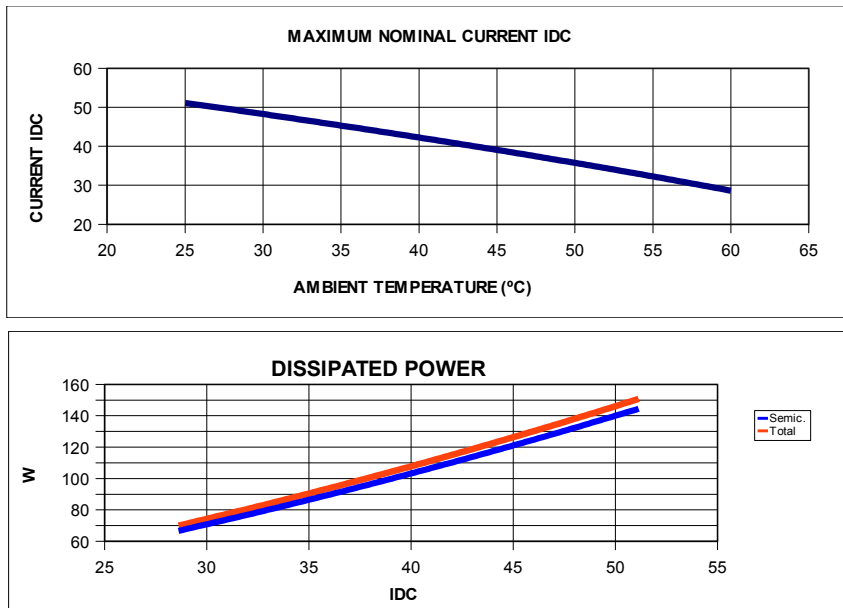
It's necessary a minimum distance of 100 mm with regard to the envelope. The free air circulation should be guaranteed. Avoiding the heat sources of nearby to assembly.

In the real applications it is important to consider a safety margin with regarding the working current, we recommend a margin of the 20%.

For critical cases (24 hours work, repetitive overloads...), margins of the 30% to 50% are used.

120522 Rev.:0

**POWER AND CHARACTERISTIC CURVES**



## ORDER CODES & OPTIONS

MF- B6C 0045 N 12 RCVTF /A  
(1) (2) (3) (4) (5) (6) (7)

1- MF, Series identifier

2- B6C, Circuit identifier

3- 0045; Maximum current identifier

4-N, Refrigeration identifier (N:Natural; F: Forced)

5-12;  $V_{RRM}/10$  identifier

6-Accessories:

RC: Resistance-capacitor (snubber) included

V: Varistor included

T. Thermal switch included

F: Semiconductor fuse protection included. (fuse also includes microswitch)

7-Options:

/A or without indication: Power output terminals on down side (standard type)

/B: Power output terminal on up side.

/C: Positive output on down side & negative output on up side

/D: Positive output on up side & negative output on down side

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No Annotation: The product parameters are fixed and the product is available to datasheet specification.

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**ADVANCED TECHNICAL INFORMATION:** La conception de produit est fini et la notice technique est comme il a été conçu pour la fabrication.

Sans annotation: La notice technique indique que le produit est selon la même

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120522 Rev.:0

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