



### SEMICONDUCTING POWER MODULE RM

A semiconducting power module of series RM is intended to operate in schemes for voltage converting with frequency up to 400 Hz.

#### OVERALL DRAWING AND CIRCUITS OF EXTERNAL CONNECTION

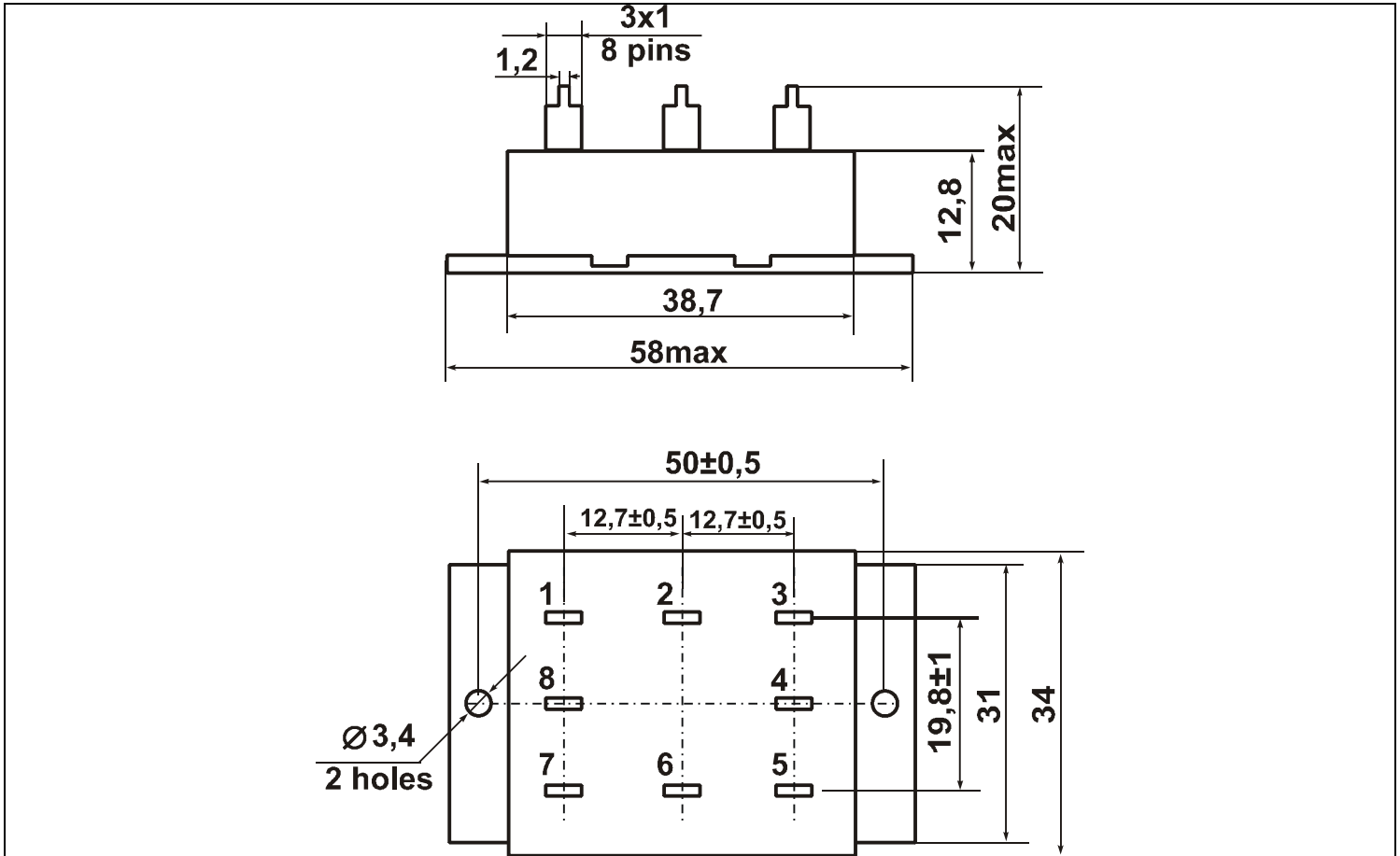
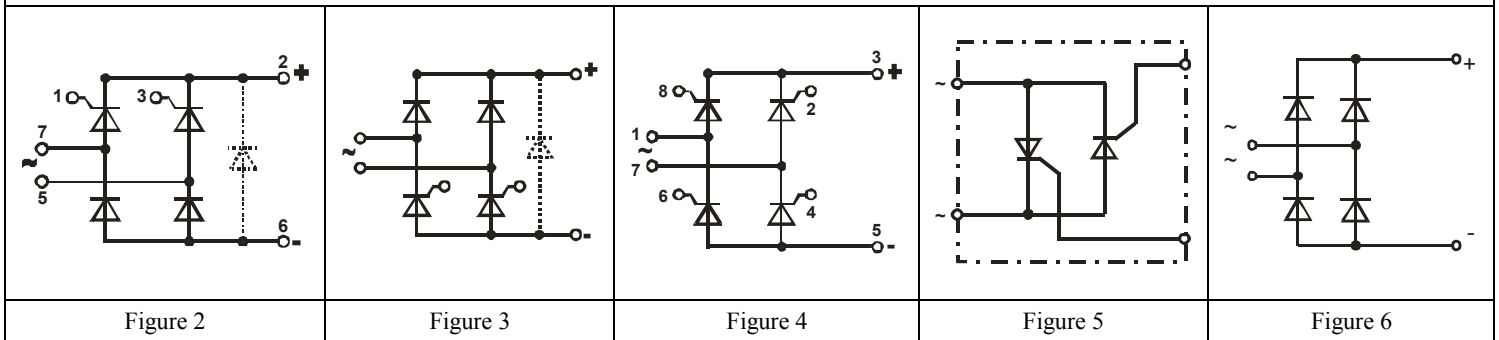


Figure 1



## BASIC CHARACTERISTICS

T amb = 25 °C

Characteristic		15 A	25 A	45 A	Note
Maximum rectifier output current, A	I <sub>O</sub>	15	25	42.5	T <sub>a</sub> = 85 °C
Maximum forward diode voltage (thyristor), V	U <sub>FM</sub> (U <sub>TM</sub> )	1.65	1.65	1.65	I = I <sub>O</sub>
Junction temperature range, °C	T <sub>J</sub>	- 40 ÷ + 125			
Repetitive pulse current in off-state, mA	I <sub>DRM</sub>	1			U <sub>DRM</sub> = 1200 V
Repetitive pulse current of thyristor/diode, mA	I <sub>RRM</sub>	1			U <sub>RRM</sub> = 1200 V
Critical rate of on-state current rise, A/μs	dI/dt	100			T <sub>J</sub> = 125 °C
Critical rate of off-state voltage rise, B/ μs	du/dt	500			
Effective input voltage, V	U <sub>RMS</sub>	480			U <sub>RRM</sub> = 1200 V
Maximum non-repetitive surge current, A	I <sub>TSM</sub>	225	300	600	single half-wave sinusoidal pulse, 60 Hz
Safety factor, A <sup>2</sup> c	I <sup>2</sup> T	210	375	1500	t = 8.3 sec
Trigger control DC, mA	I <sub>GT</sub>	60	60	80	T = 25 °C
Trigger control DC voltage, V	U <sub>GT</sub>	2.5	2.5	3.0	
Average power dissipation by control electrode, W	P <sub>G(AV)</sub>	0.5	0.5	0.5	
Maximum reverse voltage of control electrode, V	U <sub>GM</sub>	5	5	5	
Maximum thermal resistance «crystal – ceramic substrate», °C/W	R <sub>θJC</sub>	1.25	0.9	0.7	
Electric isolation strength, V	V <sub>ISOL</sub>	2500	2500	2500	Effective value

\*The module intended for using in the equipment with the coolers that support junction temperature without exceeding the maximum

Precious metals are not contained

**Notation:**  $\frac{RM - 15 - 1 - 480 - D}{1 \quad 2 \quad 3 \quad 4 \quad 5}$

- 1 RM – semiconducting power module.
- 2 Maximum rectifier output current:  
15 – 15 A;  
25 – 25 A;  
45 – 45 A.
- 3 Circuit type:  
1 - Figure 2;  
2 - Figure 3;  
3 - Figure 4;  
4 - Figure 5;  
5 - Figure 6.
- 4 Effective input voltage 480 V.  
D – with reverse diode (for schemes of Fig. 2 and Fig. 3).

5 Naugorskoe shosse, Orel, 302020, Russia  
Tel. (4862) 44-03-44, Fax (4862) 47-02-12, E-mail: [mail@electrum-av.com](mailto:mail@electrum-av.com)