

SINGLE-PHASE THYRISTOR-DIODE BRIDGE MODULE M20-100-12; M20-160-12; M20-200-12; M20-250-12 DATASHEET IN BRIEF

Single-phase thyristor-diode bridge module with thyristors control, connected to "positive" output, is intended for rectifying (converting AC into pulsating direct voltage).

OVERALL DRAWING AND ELECTRIC CIRCUIT

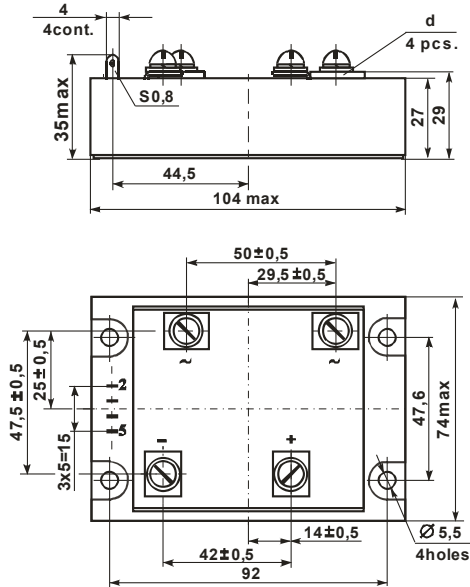


Figure 1

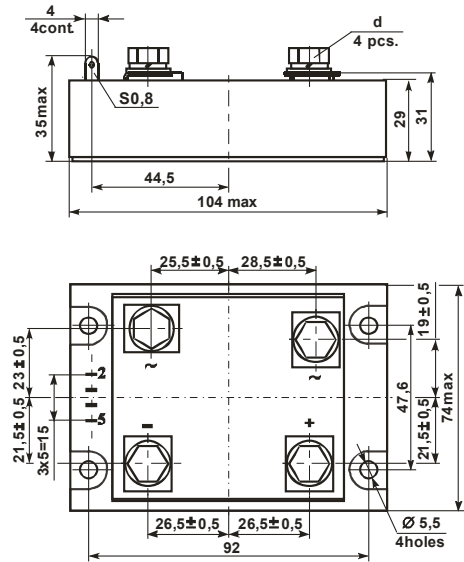
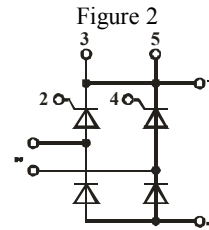


Figure 2



| Product description | Figure | d |
|---------------------|--------|----------|
| M20-100-12 | 1 | screw M5 |
| M20-160-12 | 1 | screw M6 |
| M20-200-12 | 2 | bolt M8 |
| M20-250-12 | 2 | bolt M8 |

BASIC CHARACTERISTICS

T = 25 °C

| Product name | Pulse voltage: on-state / direct diode, U_{TM} / U_{FM} , V | | Off-state current / valve DC, I_D / I_R , mA | | Thyristor hold on current, I_H , mA | Thyristor turn-on current, I_T , mA | Thyristor gate trigger DC voltage, U_{GT} , V | Thyristor gate trigger DC, I_{GT} , mA | Electric isolation strength at DC through radiator and outputs, U_{ISOL} , V | | Thyristor non-trigger DC voltage, U_{GD} , V $T_j = 125$ °C | Thermal junction-radiator resistance $R_{th(j-c)}$, °C/W | |
|--------------|---|--|--|-----------------|---------------------------------------|---------------------------------------|---|--|--|-----------|--|---|-----------|
| | max | I_O , A amplit. value | max | U_D / U_R , V | max | max | max | max | min | t, minute | | max | thyristor |
| M20-100-12 | 1.65 | $\frac{\pi}{2} \cdot I_O$, 10 ms, 50 Hz, sinus | 1.5 | ± 1200 | 200 | 400 | 3.0 | 200 | 4000 | 1 | 0.25 | 0.50 | 0.60 |
| M20-160-12 | | | | | | | | | | | | 0.35 | 0.40 |
| M20-200-12 | | | | | | | | | | | | 0.20 | 0.18 |
| M20-250-12 | | | | | | | | | | | | 0.15 | 0.13 |

MAXIMUM ALLOWABLE OPERATING MODES

| Product name | Pulse non-repetitive voltage: Thyristor off-state / reverse diode, U_{DSM} / U_{RSM} , V | Pulse repetitive voltage: off-state / reverse diode, U_{DRM} / U_{RRM} , V | Average rectified current, I_O , A $T_r = 75$ °C | Linear voltage (rms.), U_{lin} , V | Non-repetitive surge DC, $I_{TSM} I_{FSM}$, A | Maximum switching frequency, kHz | Critical rate of rise of reverse voltage, $(du_R / dt)_{cr}$, V/ μ s | DC critical rate of rise, $(di_T / dt)_{cr}$, A/ μ s | Junction temperature T_{VJ} *, °C | |
|--------------|--|--|---|--------------------------------------|--|----------------------------------|---|---|-------------------------------------|------|
| | | | | | | | | | min | max |
| M20-100-12 | ± 1300 | ± 1200 | 100 | 840 | 600 | 3 | 1000 | 150 | min | max |
| M20-160-12 | | | 160 | | 1200 | | | | -40 | +125 |
| M20-200-12 | | | 200 | | 1400 | | | | | |
| M20-250-12 | | | 250 | | 1600 | | | | | |

*the modules are designed for operating in the equipment with using of coolers that support transition temperature in the prescribed ranges

Precious metals are not contained.

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