

THYRISTOR-THYRISTOR MODULE

M1.1-25(40,63,80,100,125,160,200,250)-12

DATASHEET IN BRIEF

Thyristor-thyristor modules are intended for using in switch elements of controllable rectifiers, converters (inverters), power regulators for powerful DC and AC loads.

OVERALL DRAWINGS

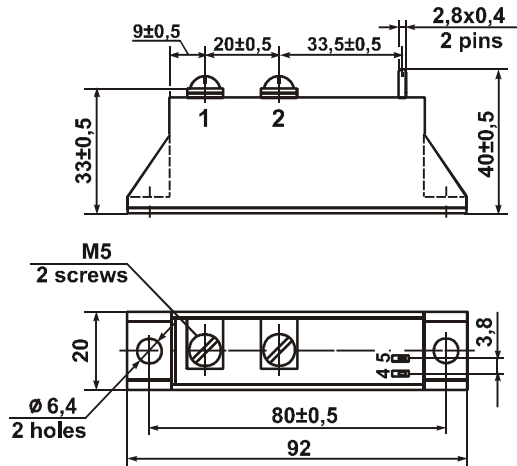


Figure 1

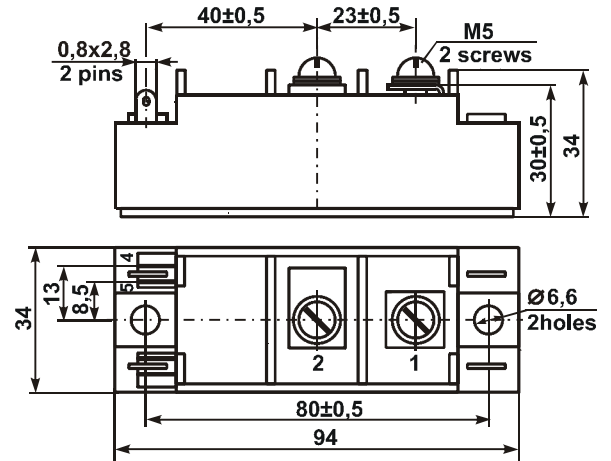


Figure 2

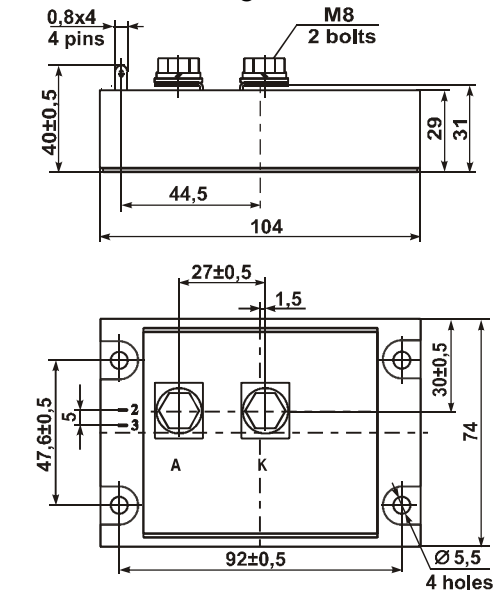


Figure 3

Symbol	Figure
M1.1-25-12	1 or 2, 4
M1.1-40-12	1 or 2, 4
M1.1-63-12	1 or 2, 4
M1.1-80-12	1 or 2, 4
M1.1-100-12	2, 4
M1.1-125-12	2, 4
M1.1-160-12	2, 4
M1.1-200-12	3, 5
M1.1-250-12	3, 5

INTERNAL CONNECTION CIRCUITS

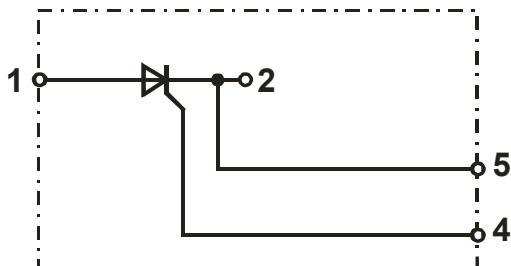


Figure 4

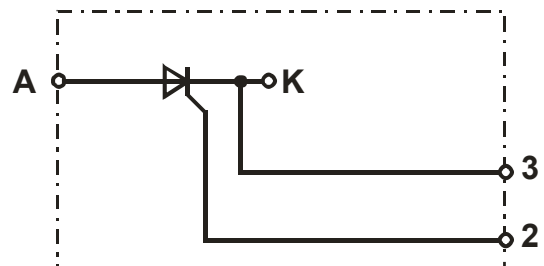


Figure 5

BASIC CHARACTERISTICS

T = 25 °C

Product name	Pulse on-state voltage, U_{TM} , V		Repetitive peak off-state current, I_{DRM} , mA		Repetitive peak reverse thyristor current, I_{RRM} , mA		Gate trigger DC voltage, U_{GT} , V	Gate trigger DC I_{GT} , mA	Electric isolation strength at DC between radiator and power outputs, U_{ISOL} , V		Gate non-trigger DC voltage, U_{GD} , (V) $T_j = 125^\circ\text{C}$	Thermal junction-cooler resistance, $R_{th(j-c)}$, ($^\circ\text{C}/\text{W}$)
	max	I_{OUT} , A ampl. value	max	U_{OUT} , V	max	U_{OUT} , V			max	max		
M1.2-25-12	1.65	$\pi \cdot I_{T(AV)}$, 10 ms, 50 Hz, sinus	1.0	± 1200	1.0	± 1200	2.0	150	4000	1	0.25	1.5
M1.2-40-12												0.7
M1.2-63-12												0.55
M1.2-80-12								0.45				
M1.2-100-12								0.3				
M1.2-125-12								0.25				
M1.2-160-12								0.22				
M1.2-200-12								0.22				
M1.2-250-12								0.17				

MAXIMUM ALLOWABLE OPERATING MODES

Product name	Repetitive thyristor pulse reverse voltage/ off-state, U_{RRM} / U_{DRM} , V	Average open state current with cooler $I_{T(AV)}$ *, A, $T_c=85^\circ\text{C}$	Commutation voltage, U_{com} , V	Surge on-state current, I_{TSM} *, A		Critical speed of voltage build-up in off-state, $(du_d / dt)_{cr}$, V/ μs	Critical rate of rise of on-state current, $(di_T / dt)_{cr}$, A/ μs	Junction temperature, T_{vj} ** , $^\circ\text{C}$	
				max	t, ms			min	max
M1.2-25-12	± 1200	25	840	200	10	1000	150	- 40	+125
M1.2-40-12		40		560					
M1.2-63-12		63		720					
M1.2-80-12		80		960					
M1.2-100-12		100		1350					
M1.2-125-12		125		2500					
M1.2-160-12		160		4000					
M1.2-200-12		200		5000					
M1.2-250-12		250		6000					

* to thyristor

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

Precious metals are not contained.

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