MST500.18-B0

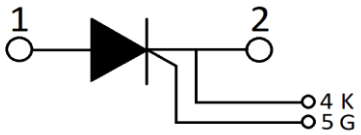
Thyristor module

Features:

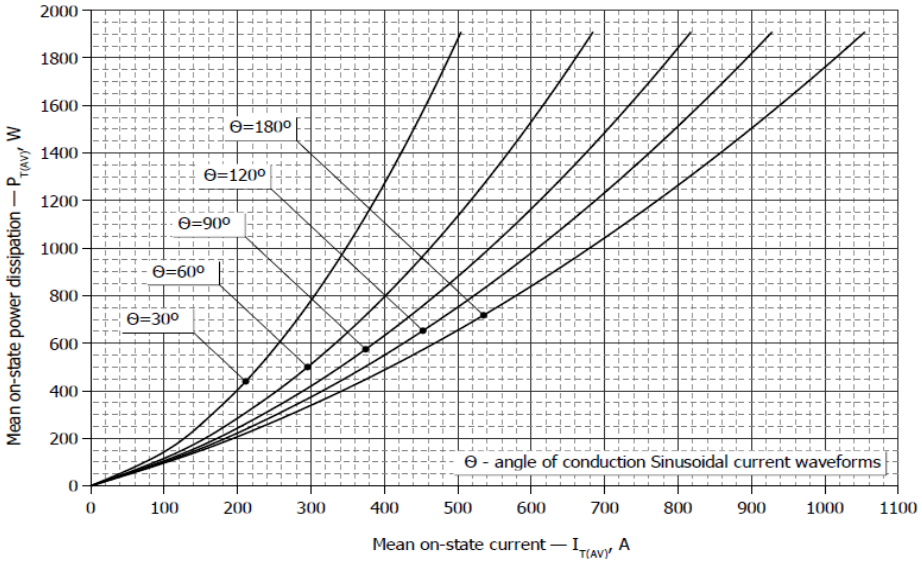
- Pressure contact technology with increased power cycling capability
- Glass passivated chip
- Simple mounting
- UL recognized, file no. E312789

Typical applications:

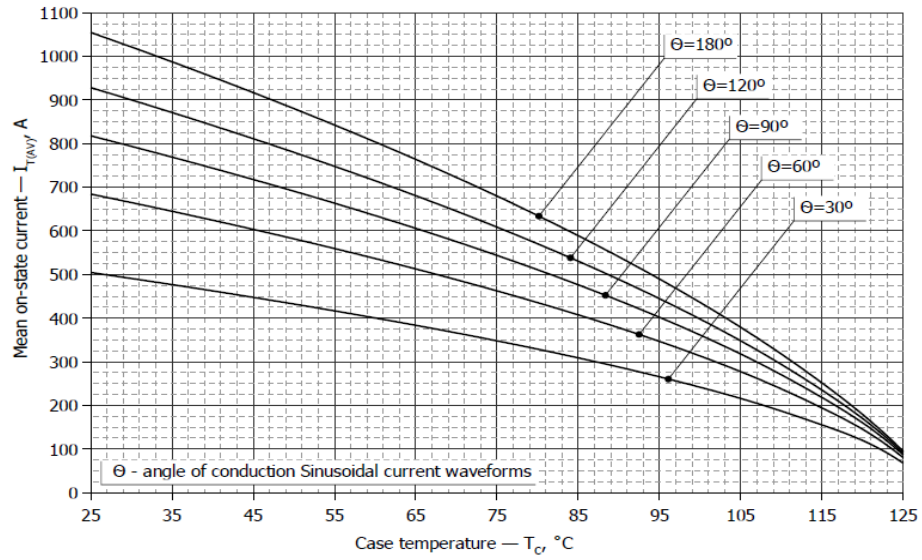
- Power converters
- Lighting control
- DC motor control and drives
- Heat and temperature control



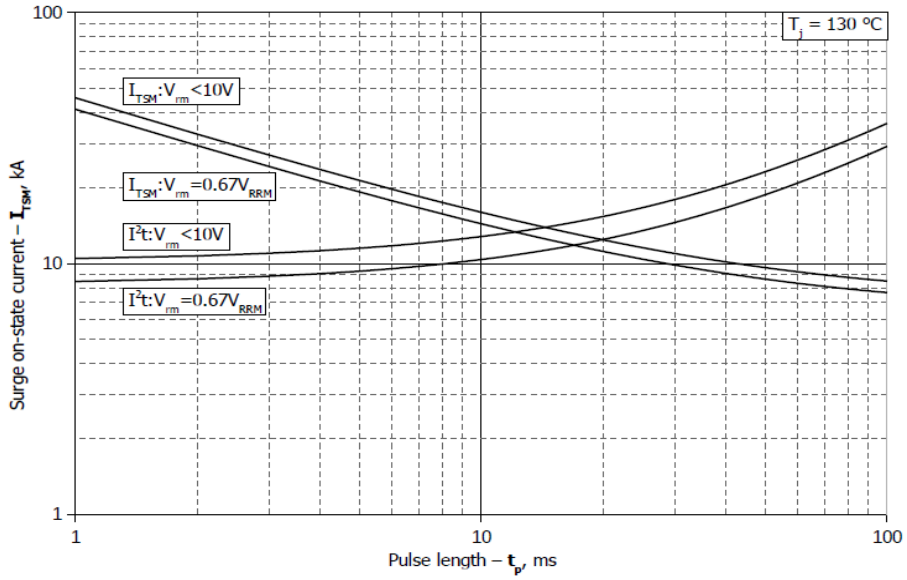
Symbol	Characteristcs	Test Conditions	Value			Unit
			Min	Typ	Max	
$V_{RSM/DSM}$	Non-repetitive reverse/forward blocking voltage	Tj = 25°C			1900	V
$V_{RRM/DRM}$	Repetitive reverse/forward blocking voltage	Tj = 25°C			1800	V
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz T_c = 94 °C			500	A
$I_{T(RMS)}$	RMS on-state current				785	A
I_{RRM} I_{DRM}	Repetitive peak current	at V_{DRM}/V_{RRM} Tj = 130°C			70	mA
I_{TSM}	Surge non repetitive current	10ms half sine wave V_R = 60% V_{RRM} Tj = 130°C			22	kA
I^2t	I^2t for fusing coordination				1200	kA^2s
V_{TO}	Threshold voltage	Tj = 130°C			0.858	V
r_T	On-state slope resistance	Tj = 130°C			0.366	mΩ
V_{TM}	Peak on-state voltage	T=25°C ; I_T=1570A			1.50	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM} = 67% V_{DRM}, Tj = 130°C, linear voltage rise			1000	V/µs
di/dt	Critical rate of rise of off-state current	Tj = 130°C, Gate source 2A, I_{TM} = 2000A, Tr < 0,5µs Non-Repetitive			1250	A/µs
I_{GT}	Gate trigger current	V_A = 12V, I_A = 1A, 'Tj = 25 °C			250	mA
V_{GT}	Gate trigger voltage				2.5	V
I_H	Holding current				300	mA
V_{GD}	Non-trigger gate voltage	V_{DM} = 67% V_{DRM}, Tj = 130°C			0.30	V
$R_{th(j-c)}$	Thermal resistance junction to case	Single side cooled per chip			0.055	°C/W
$R_{th(c-s)}$	Thermal resistance case to sink	Single side cooled per chip			0.010	°C/W
V_{ISO}	Isolation voltage	50Hz, RMS, t = 1min, I_{ISO} : 1mA (MAX)	3000			V
F_M	Mounting torque - copper plate (M6)		4.5		6.0	N·m
	Mounting torque - terminal (M12)		10		12	N·m
T_{stg}	Storage Temperature		-40		130	°C
T_j	Operating Temperature		-40		130	°C
W_t	Weight			900		g
Outline	B0					



Mean on-state power dissipation P_{TAV} vs. mean on-state current I_{TAV}



Mean on-state current I_{TAV} vs. case temperature T_C



Maximum surge on-state current I_{TSM} vs. pulse length t_p

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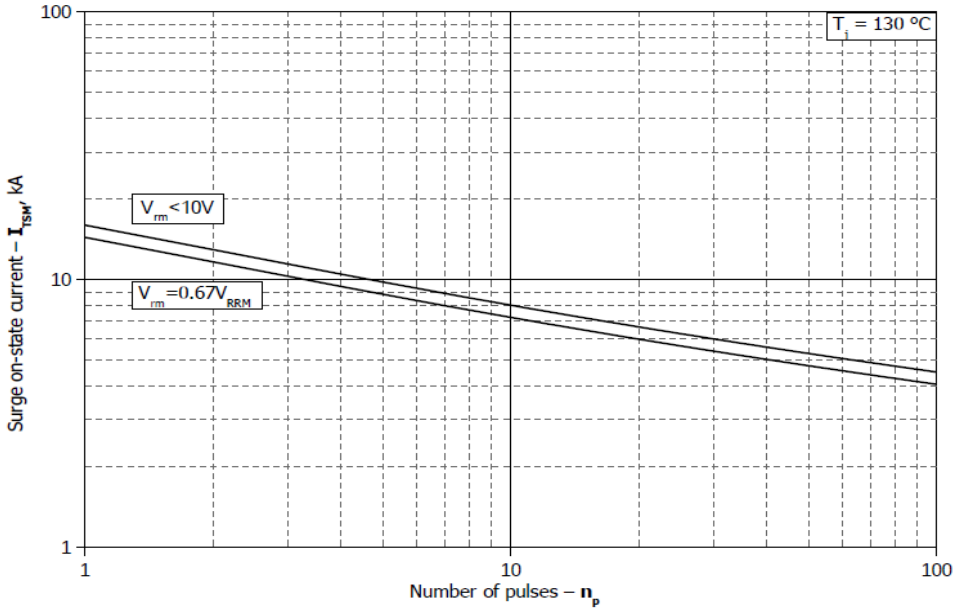
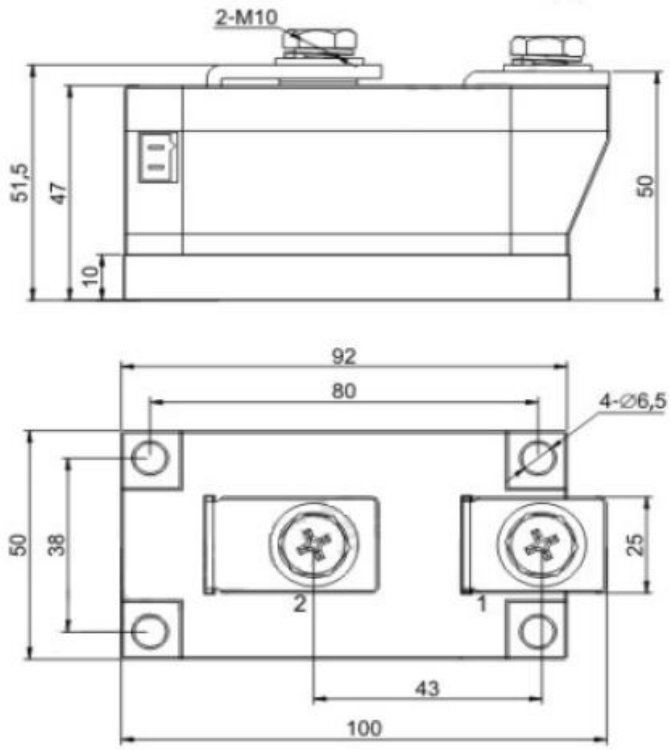


Maximum surge on-state current I_{TSM} vs. number of pulses n_p



(dimensions in mm)

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