Technical Data

PST MD81

SINGLE RECTIFIER DIODE MODULE

Features:

- Electrically isolated base plate
- High surge capability
- Hard soldered joints for high reliability

Typical applications:

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motor

ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse blocking - Off-state

Device Type	V_{RRM} (1)	V_{RSM} (1)
PST MD81	2000	2100

V_{RRM} = Repetitive peak reverse voltage
V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage current	I_{RRM}	10 mA (3)

Notes:

All ratings are specified for Tj = 25 °C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to +125 °C.

(2) 10 ms max. pulse width

(3) Maximum value for Tj = Tjmax

(4) Min. value for linear and exponential wave shape to 67% rated V_{DRM}. Gate open. Tj = Tjmax

Conducting

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Average forward current	I_{FAV}		82		A	50 Hz sine wave,180° conduction, T_c = 85 °C
RMS forward current	$I_{F(RMS)}$		130		A	50 Hz sine wave,180° conduction, T_c = 85 °C
Surge non repetitive current	I_{FSM}		1.75		kA	50 Hz sine wave Half cycle
I squared t	I^2t		15		kA^2s	V_R = 0 Tj = Tjmax
Peak forward voltage	V_{FM}		1.39		V	Forward current 300 A, Tj = Tjmax
Threshold voltage	$V_{F(TO)}$		0.85		V	Tj = Tjmax
Forward slope resistance	r_F		1.80		mΩ	Tj = Tjmax
RMS isolation voltage	V_{INS}		3000		V	AC 50 Hz, 60 s

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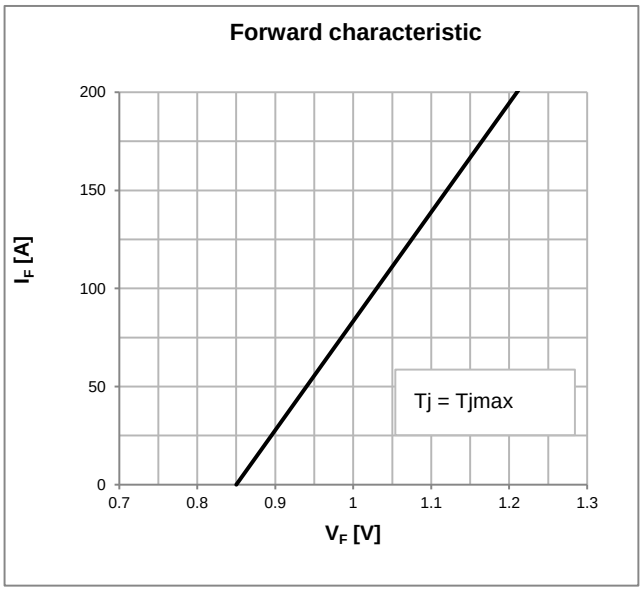
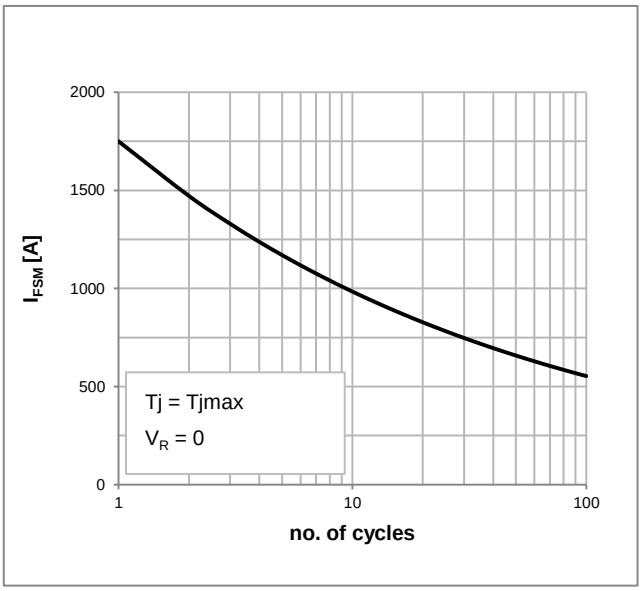
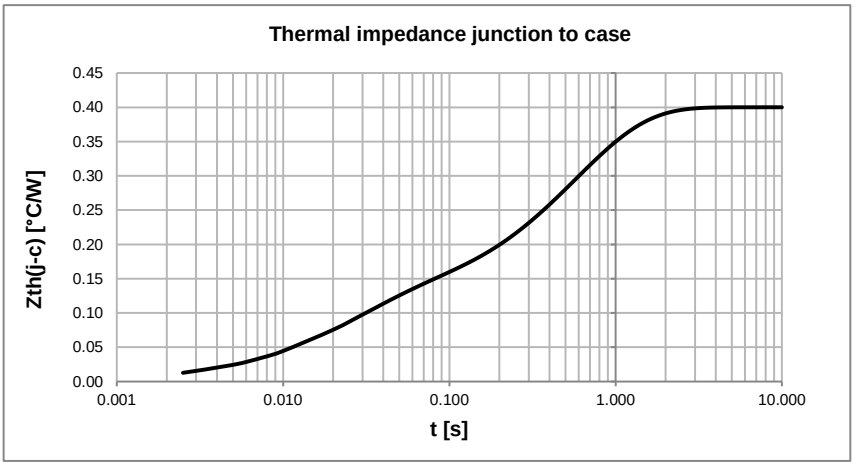
Thermal and mechanical characteristics and ratings

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating temperature	T_j	-40	125		°C	
Storage temperature	T_{stg}	-40	125		°C	
Thermal resistance junction to case	$R_{th(j-c)}$		0.40		°C/W	SIN 180° conduction mounting surfaces smooth, flat and greased
Thermal resistance case to sink	$R_{th(c-s)}$		0.20		°C/W	
Mounting torque case-heatsink	T	4	6		N·m	
Mounting torque busbar-terminals	T	2.5	3.5		N·m	
Weight	W			100	g	







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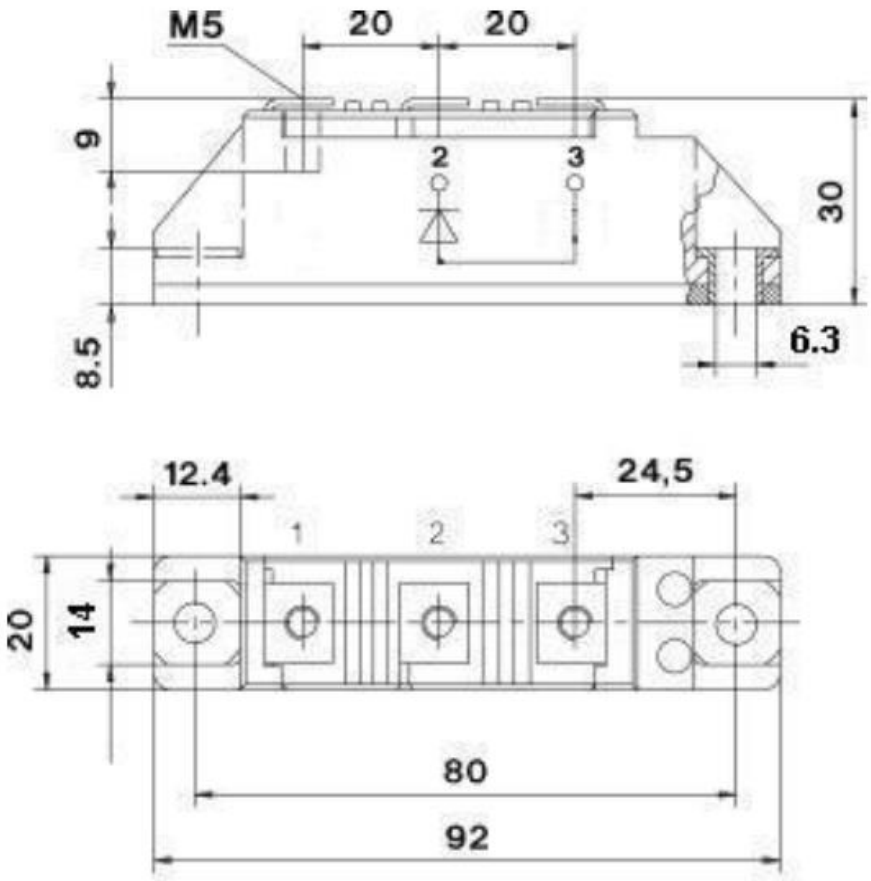
OUTLINE AND DIMENSIONS



(all dimensions in mm)