



**Technical Data**

**P/N: YZPST MDC160-16**  
**RECTIFIER DIODE MODULE**

**Features:**

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

**Typical applications:**

- Uncontrolled rectifiers for AC/DC converters
- Line rectifier for transistorized AC motor controllers
- Field supply for DC motors

**ELECTRICAL CHARACTERISTICS AND RATINGS**

**Reverse blocking**

Device Type	$V_{RRM}$ (1)	$V_{RSM}$ (1)
YZPST MDC160	1600 V	1700 V

$V_{RRM}$  = Repetitive peak reverse voltage

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

Notes:

All ratings are specified for  $T_j = 25\text{ }^\circ\text{C}$  unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz / 60Hz sinusoidal waveform over the temperature range -40 to +135  $^\circ\text{C}$ .

(2) 10 ms max. pulse width

(3) Maximum value for  $T_j = T_{jmax}$

Repetitive peak reverse leakage current	$I_{RRM}$	20 mA (3)
---	-----------	-----------

**Conducting**

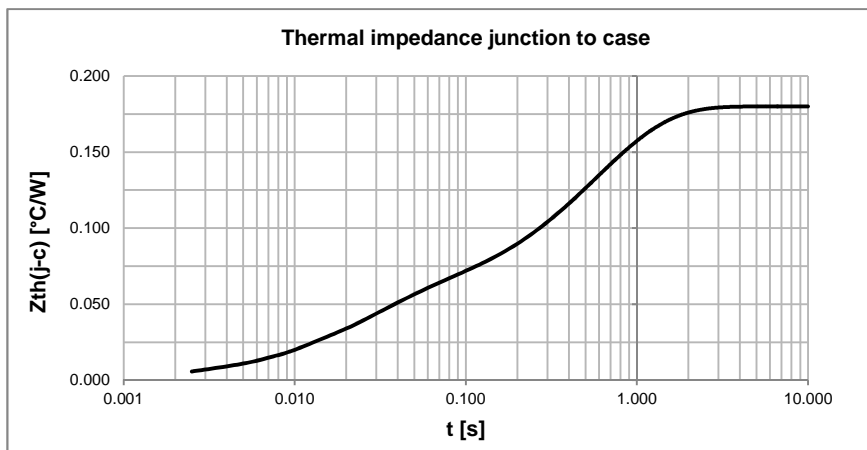
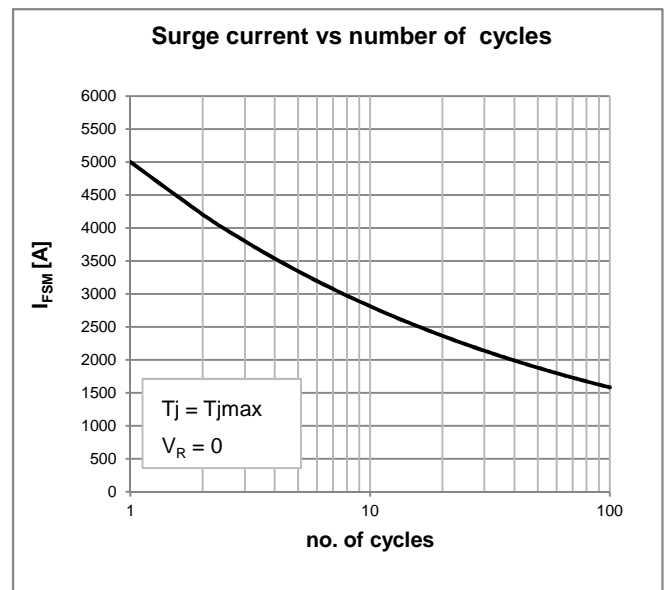
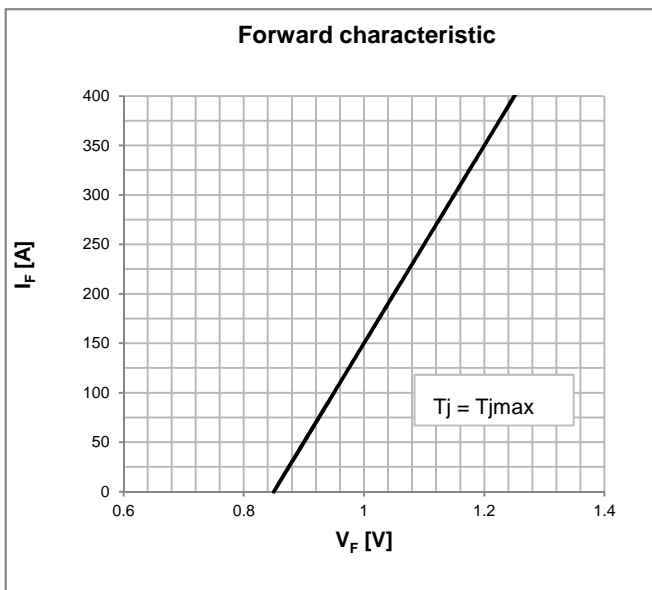
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Average value of forward current	$I_{F(AV)}$		195		A	50 Hz sinewave, 180 $^\circ$ conduction, $T_c = 85\text{ }^\circ\text{C}$
RMS value of forward current	$I_{F(RMS)}$		300		A	50 Hz sinewave, 180 $^\circ$ conduction, $T_c = 85\text{ }^\circ\text{C}$
Peak one cycle surge (non repetitive) current	$I_{FSM}$		5		kA	50 Hz sinewave, 180 $^\circ$ conduction, $T_j = T_{jmax}$ , $V_R = 0$
I squared t	$I^2 t$		125		kA $^2$ s	$T_j = T_{jmax}$
Peak forward voltage	$V_{FM}$		1.35		V	Forward current 500 A, $T_j = T_{jmax}$
Threshold voltage	$V_{F(TO)}$		0.85		V	$T_j = T_{jmax}$
Forward slope resistance	$r_F$		1		m $\Omega$	$T_j = T_{jmax}$
RMS isolation voltage	$V_{INS}$		3000		V	AC 50 Hz, 60 s

# P/M:YZPST MDC160-16

## RECTIFIER DIODE MODULE

### Thermal and mechanical characteristics and ratings

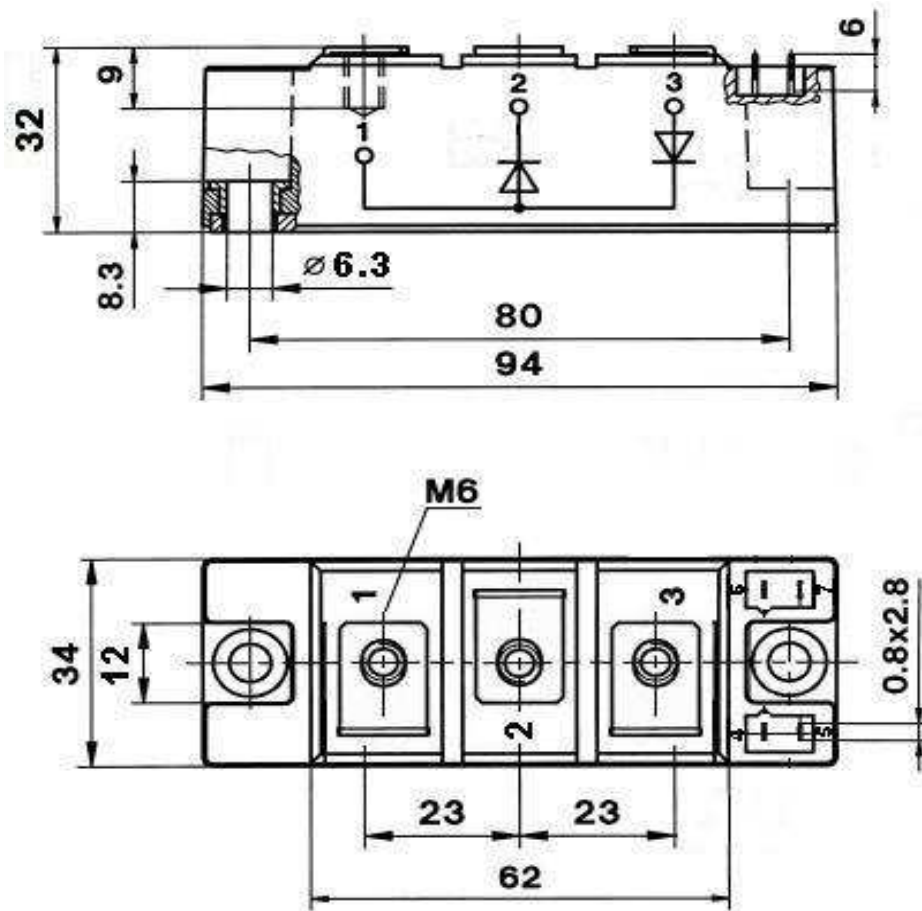
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating junction temperature	$T_j$	-40	135		°C	
Storage temperature	$T_{stg}$	-40	125		°C	
Thermal resistance junction to case (per diode)	$R_{th(j-c)}$		0.180		°C/W	SIN 180° conduction mounting surfaces smooth, flat and greased
Thermal resistance case to sink (per module)	$R_{th(c-s)}$		0.050		°C/W	
Mounting torque case-heatsink	$T$	2.5	3.5		N·m	
Mounting torque busbar-terminals	$T$	4	6		N·m	
Weight	$W$			200	g	



P/N: YZPST MDC160-16

RECTIFIER DIODE MODULE

OUTLINE AND DIMENSIONS



(all dimensions in mm)