



MM500.06IS

INSULATED FAST RECOVERY DIODE MODULE

Output Current **500 A**

Blocking Voltage **600 V**

V_{RRM} [V]	V_{RSM} [V]	V_{OUT} [V]	P/N
600	700	190	MM500.06IS

Features

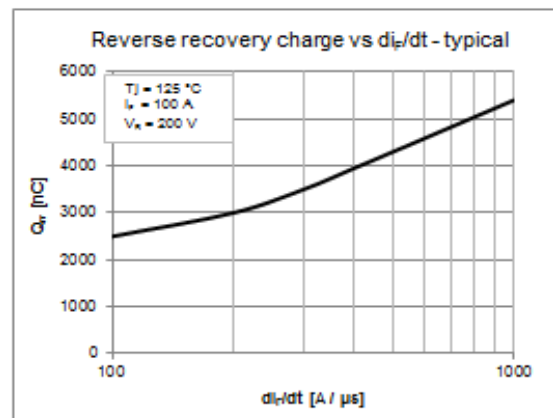
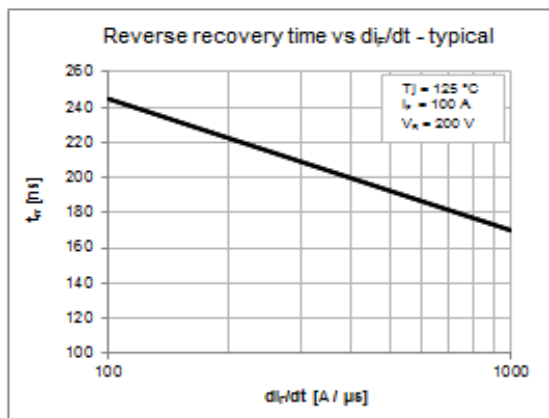
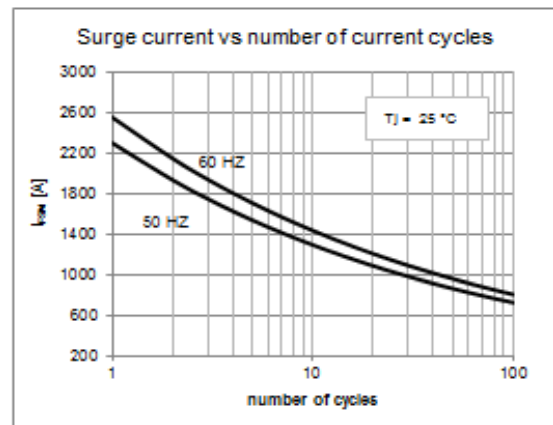
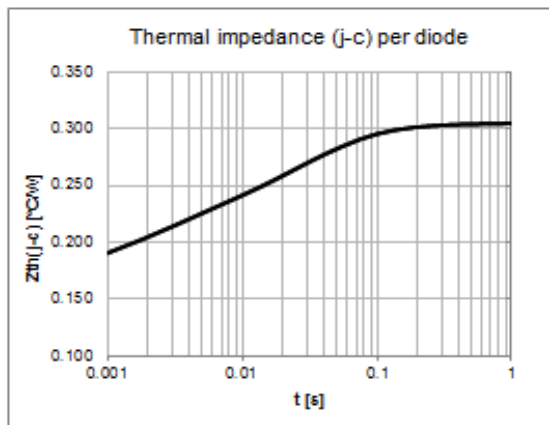
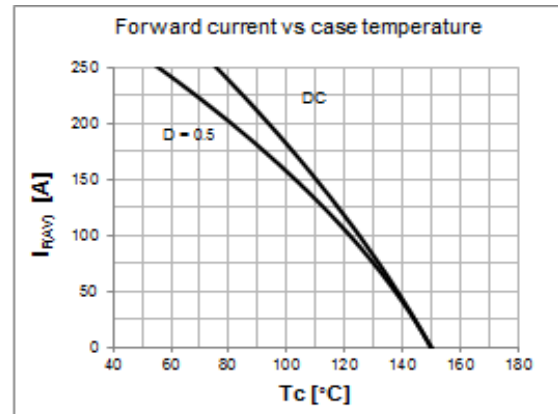
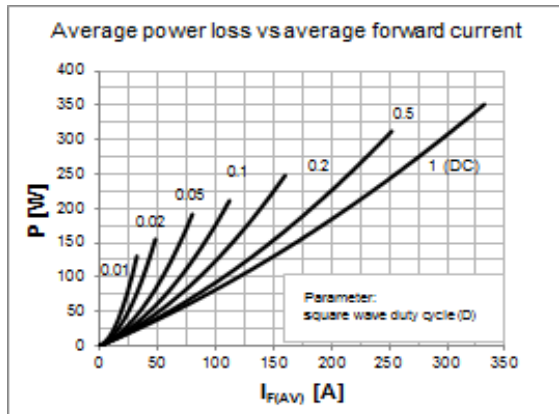
Short recovery time
Low switching losses
Soft recovery behavior
Electrically insulated case

Applications

Antiparallel diode for high frequency switching devices
Free-wheeling diode in converters or motor controllers
Uninterruptible power supplies (UPS)
Ultrasonic cleaners and welders

Diodes characteristics		Conditions	T_j [°C]	Value
$I_{F(AV)}$	Average forward current	$T_c = 56^\circ\text{C}$		250 A
I_{FRM}	Repetitive forward current, max	Square wave, 20 kHz		500 A
I_{RRM}	Max repetitive peak reverse current	$V = V_{RRM}$	150	4 mA
$V_{F(TO)}$	Threshold voltage		150	0,71 V
r_F	Forward slope resistance		150	1,05 m Ω
V_{FM}	Peak forward voltage, max	$I_F = 250$ A	150	1,18 V
I_{FSM}	Surge forward current	Half sine wave, 10 ms	25	2300 A
I^2t	Max I^2t for fusing		25	26450 A ² s
C_T	Junction capacitance, typ	$V = V_{RRM}$	25	140 pF
Q_{rr}	Reverse recovery charge, typ	$I_F = 100$ A	125	3000 nC
I_{rr}	Reverse recovery current, typ	$V_R = 200$ V		28 A
t_{rr}	Reverse recovery time, typ	$dI_F / dt = 200$ A / μ s		225 ns
T_{jmax}	Operating junction temperature			-40 / 150 °C
$R_{th(j-c)}$	Thermal resistance (junction to case)			0,30 °C/W

Module characteristics		Conditions	Value
I_{OUT}	Output current (center tap connection)	$T_c = 56^\circ\text{C}$	500 A
V_{INS}	RMS Insulating voltage	50 / 60 Hz $t = 1$ s ($i < 1$ mA)	3600 V
V_{INS}	RMS Insulating voltage	50 / 60 Hz $t = 60$ s ($i < 1$ mA)	3000 V
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Mounting surface flat, smooth and greased	0,100 °C/W
T_{stg}	Max storage temperature		150 °C
W	Weight		117 g
M_1	Mounting torque, $\pm 15\%$		5,5 N·m 48 lb·inch
M_2	Terminal connection torque, $\pm 15\%$		4,0 N·m 35 lb·inch



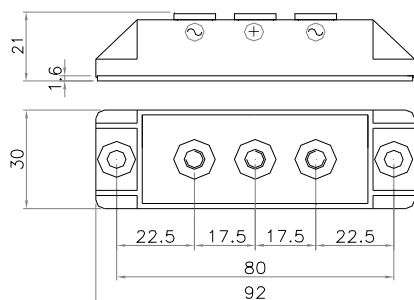


Fig.1 MM500.06IS-SS6-FIX5-HP-P80-TA

Code:MM50005000029

MM500.06IS-SS5-FIX5-HP-P80-TA

Code:MM50005000028

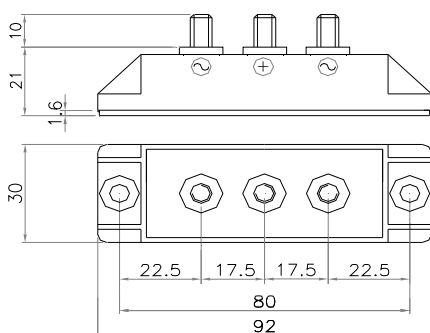


Fig.2 MM500.06IS-MM6x10-FIX5-HP-P80-TA

Code:MM50005000025

MM500.06IS-MM5x10-FIX5-HP-P80-TA

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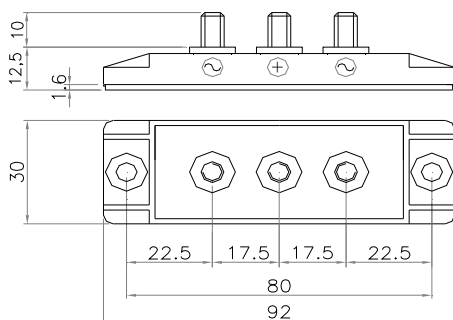


Fig.3 MM500.06IS-MM6x10-FIX5-LP-P80-TA

Code:MM50005000024

MM500.06IS-MM5x10-FIX5-LP-P80-TA

Code:MM50005000020

Power fix:
SS=Screw (M6 or M5)
MM=Bolt (M6 or M5)

Mounting fix:
FIX= Ø5,5

Profile:
HP=High Profile LP=Low Profile

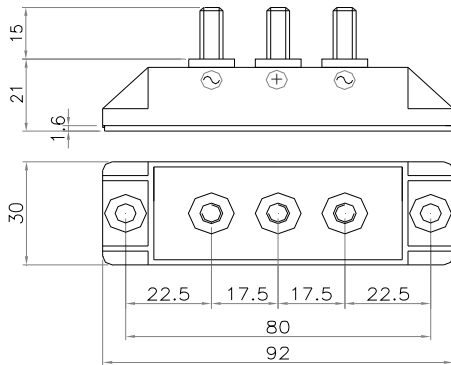


Fig.4 MM500.06IS-MM6x15-FIX5-HP-P80-TA

Code:MM50005000027

MM500.06IS-MM5x15-FIX5-HP-P80-TA

Code:MM50005000023

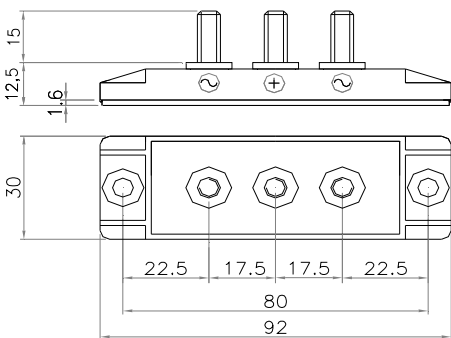


Fig.5 MM500.06IS-MM6x15-FIX5-LP-P80-TA

Code:MM50005000026

MM500.06IS-MM5x15-FIX5-LP-P80-TA

Code:MM50005000022

Power fix:

SS=Screw (M6 or M5)

MM=Bolt (M6 or M5)

Mounting fix:

FIX= $\varnothing 5,5$

Profile:

HP=High Profile LP=Low Profile