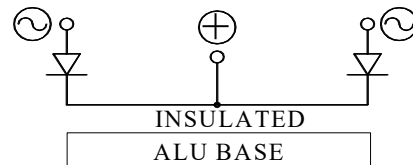


MCF500.04IS

INSULATED FAST RECOVERY DIODE MODULE

Output Current **500 A**

Blocking Voltage **400 V**



V_{RRM} [V]	V_{RSM} [V]	V_{OUT} [V]	P/N
400	500	125	MCF500.04IS

Features

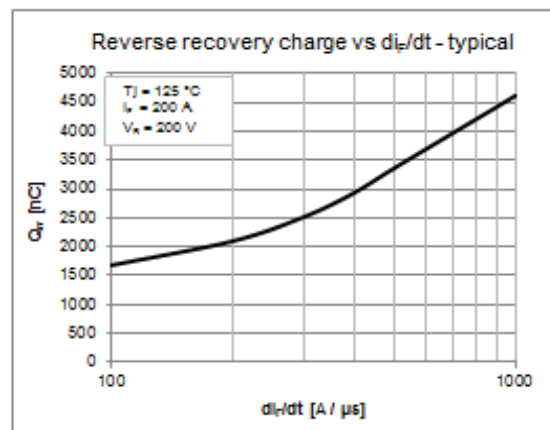
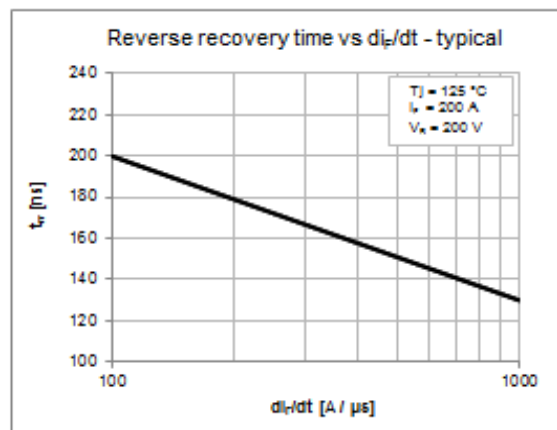
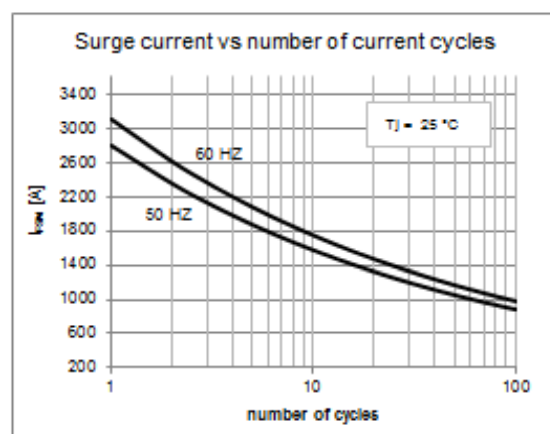
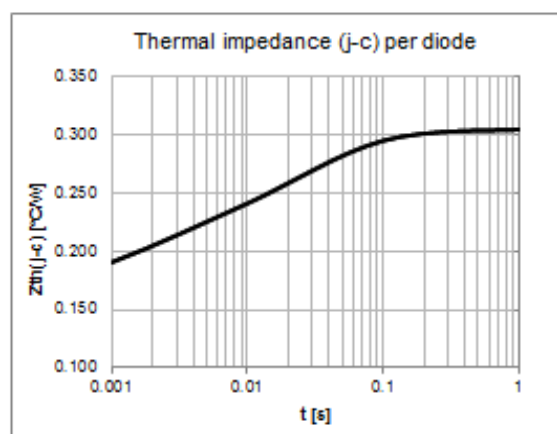
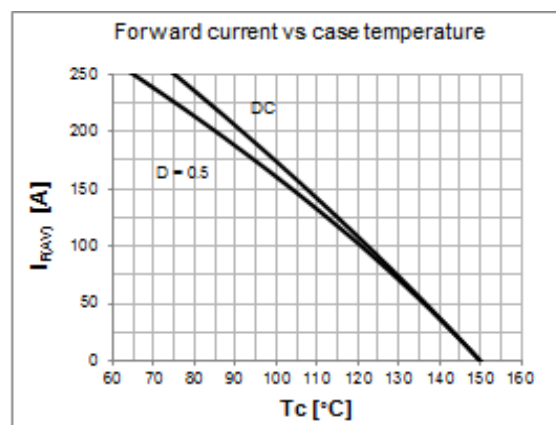
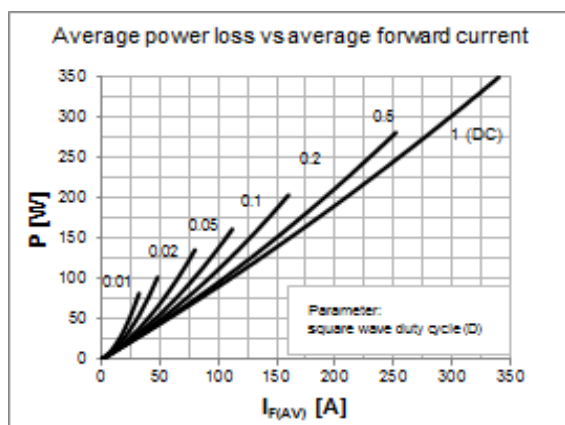
- Short recovery time
- Low switching losses
- Soft recovery behavior
- Electrically insulated case

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	Tj [°C]	Value
$I_{F(AV)}$	Average forward current	$T_c = 65\text{ °C}$		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	0,85 V
r_F	Forward slope resistance		150	0,53 mΩ
V_{FM}	Peak forward voltage, max	$I_F = 300\text{ A}$	150	1,18 V
I_{FSM}	Surge forward current	Half sine wave, 10 ms	25	2800 A
I^2t	Max I^2t for fusing		25	39200 A ² s
C_T	Junction capacitance, typ	$V = V_{RRM}$	25	360 pF
Q_{rr}	Reverse recovery charge, typ	$I_F = 200\text{ A}$	125	2100 nC
I_{rr}	Reverse recovery current, typ	$V_R = 200\text{ V}$		22 A
t_{rr}	Reverse recovery time, typ	$di_F / dt = 200\text{ A} / \mu\text{s}$		180 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)	$T_c = 65\text{ °C}$	500 A
V_{INS}	RMS Insulating voltage	50 / 60 Hz $t = 1\text{ s}$ ($i < 1\text{ mA}$)	3600 V
V_{INS}	RMS Insulating voltage	50 / 60 Hz $t = 60\text{ s}$ ($i < 1\text{ mA}$)	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, ± 15 %		5,5 N·m 48 lb·inch
M_2	Terminal connection torque, ± 15 %		4,0 N·m 35 lb·inch



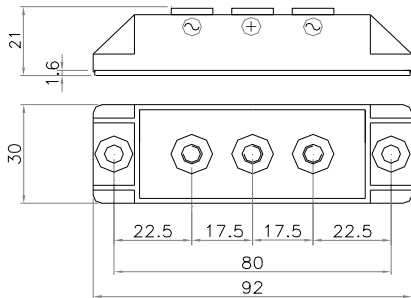


Fig.1 MCF500.04IS-SS6-FIX5-HP-P80-TA

Code:950005000019

MCF500.04IS-SS5-FIX5-HP-P80-TA

Code:950005000018

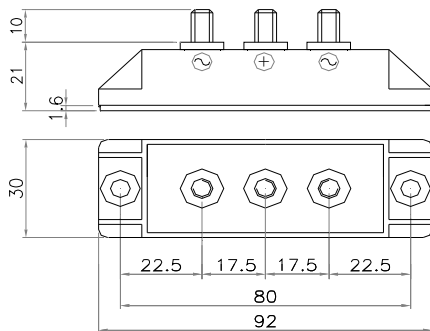


Fig.2 MCF500.04IS-MM6x10-FIX5-HP-P80-TA

Code:950005000015

MCF500.04IS-MM5x10-FIX5-HP-P80-TA

Code:950005000011

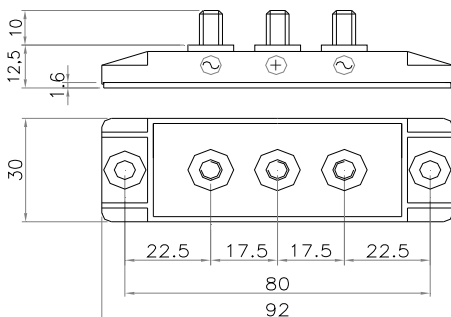


Fig.3 MCF500.04IS-MM6x10-FIX5-LP-P80-TA

Code:950005000014

MCF500.04IS-MM5x10-FIX5-LP-P80-TA

Code:950005000010

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

Mounting fix:
FIX= Ø5,5

Profile:
HP=High Profile LP=Low Profile

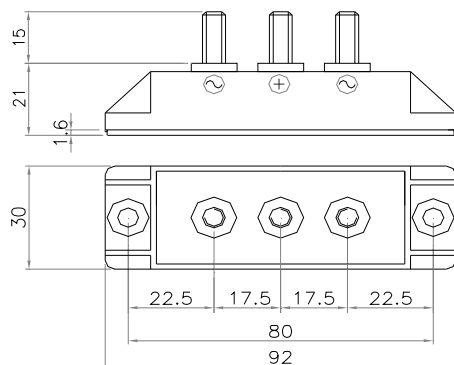


Fig.4 MCF500.04IS-MM6x15-FIX5-HP-P80-TA

Code:950005000017

MCF500.04IS-MM5x15-FIX5-HP-P80-TA

Code:950005000013

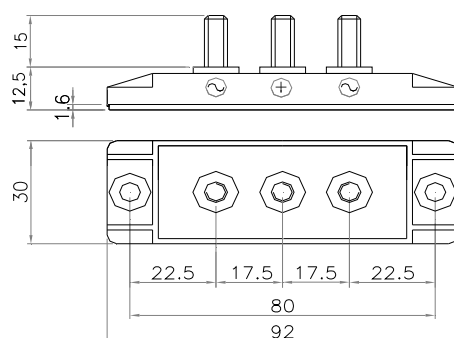


Fig.5 MCF500.04IS-MM6x15-FIX5-LP-P80-TA

Code:950005000016

MCF500.04IS-MM5x15-FIX5-LP-P80-TA

Code:950005000012

Power fix:

SS=Screw (M6 or M5)

MM=Bolt (M6 or M5)

Mounting fix:

FIX= Ø5,5

Profile:

HP=High Profile LP=Low Profile