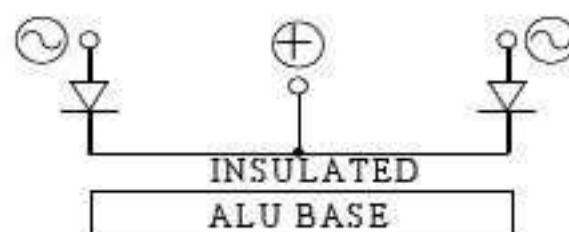


MCF600.04IS

INSULATED FAST RECOVERY DIODE MODULE

Output Current **600 A**

Blocking Voltage **400 V**



V_{RRM} [V]	V_{RSM} [V]	V_{OUT} [V]	P/N
400	500	125	MCF600.04IS

Features

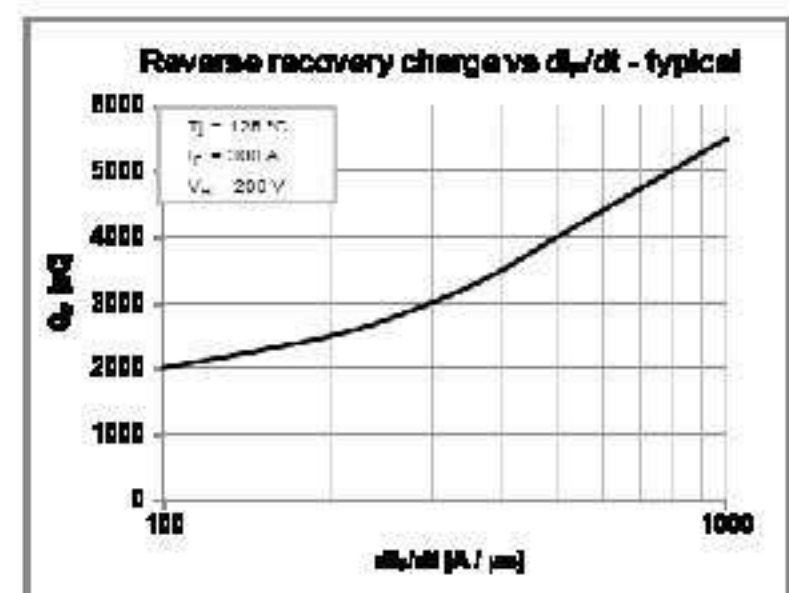
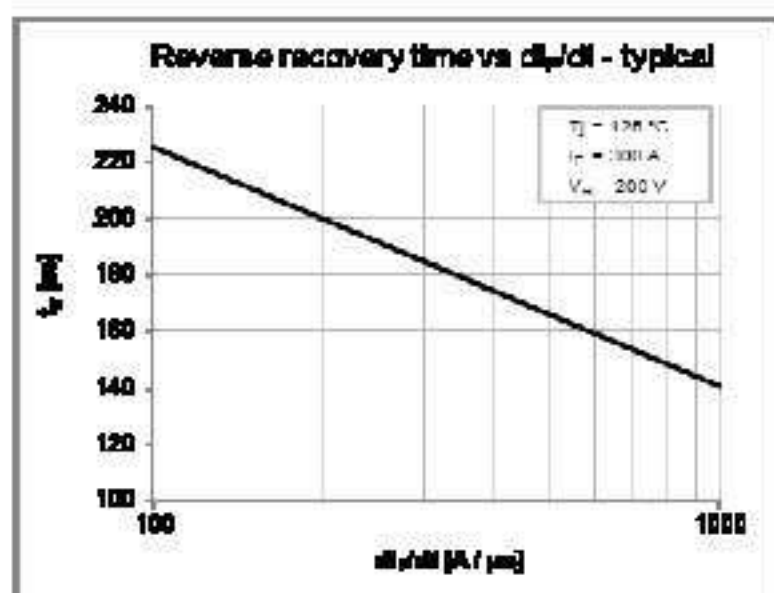
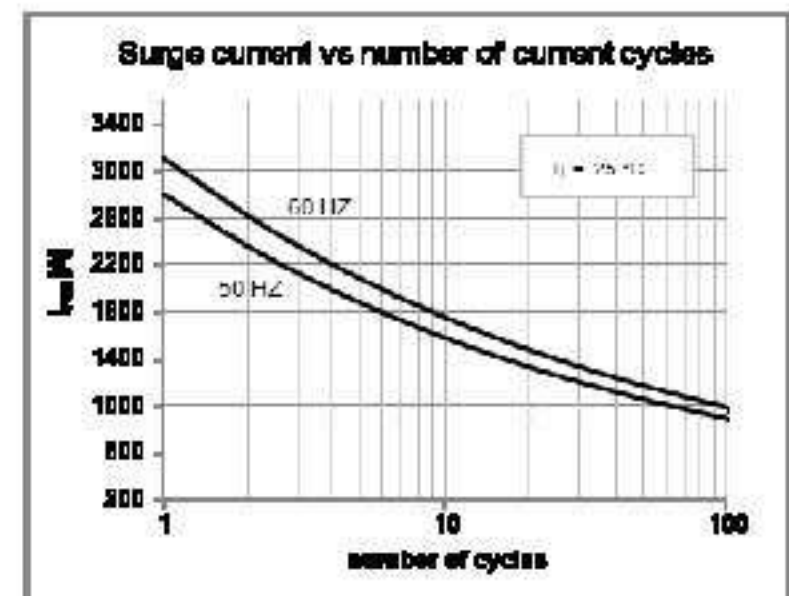
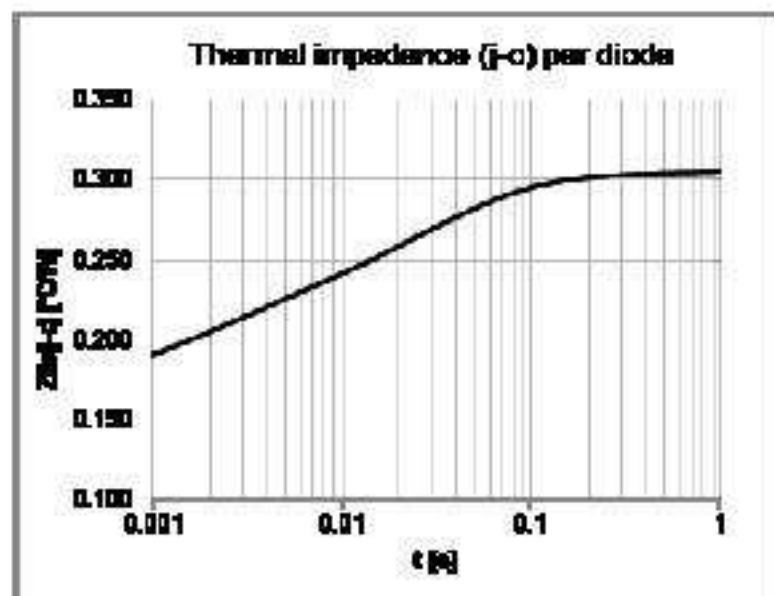
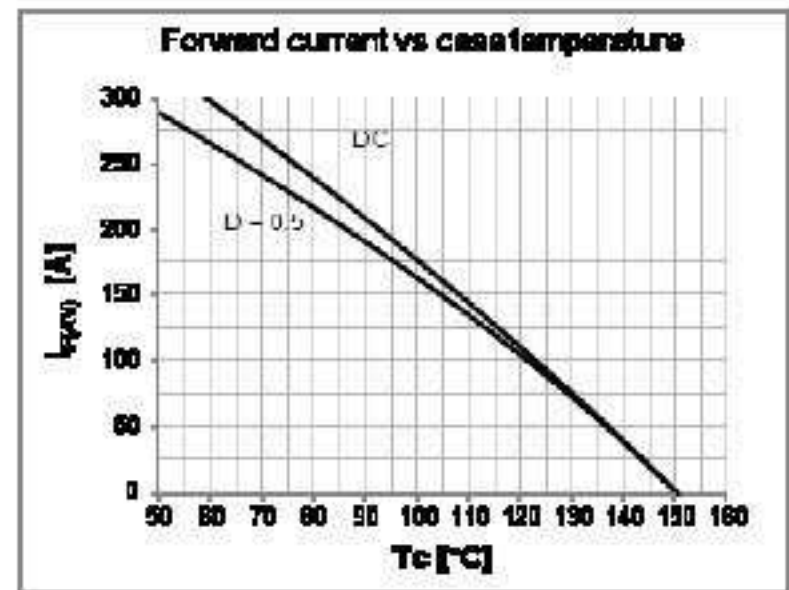
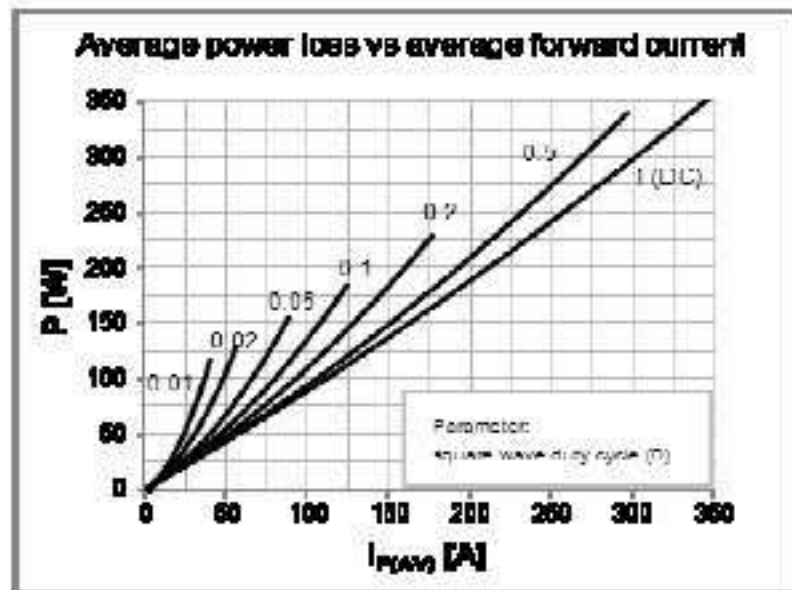
- Short recovery time
- Low switching losses
- Soft recovery behavior
- Electrically insulated case

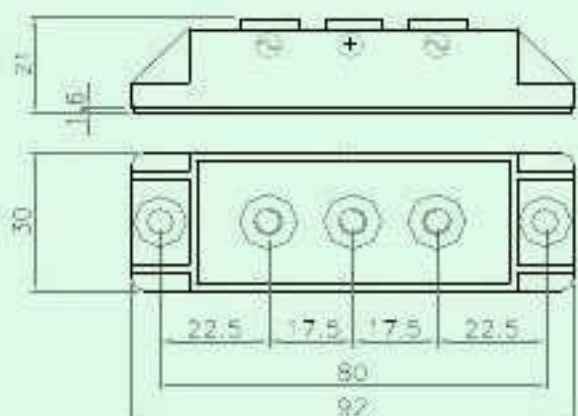
Applications

- 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	T_j [°C]	Value
I_F (AV)	Average forward current	$T_c = 45^\circ\text{C}$		300 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	0,84 V
r_F	Forward slope resistance		150	0,5 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_{T1}	Max I_{T1} for fusing		25	39200 A ² s
C_T	Junction capacitance, typ	$V = V_{RRM}$	25	360 pF
Q_{rr}	Reverse recovery charge, typ	$I_f = 300\text{ A}$	125	2500 nC
I_{rr}	Reverse recovery current, typ	$V_R = 200\text{ V}$		25 A
t_{rr}	Reverse recovery time, typ	$di_f / dt = 200\text{ A} / \mu\text{s}$		200 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)	$T_c = 45^\circ\text{C}$	600 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
$R_{th(c-s)}$	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

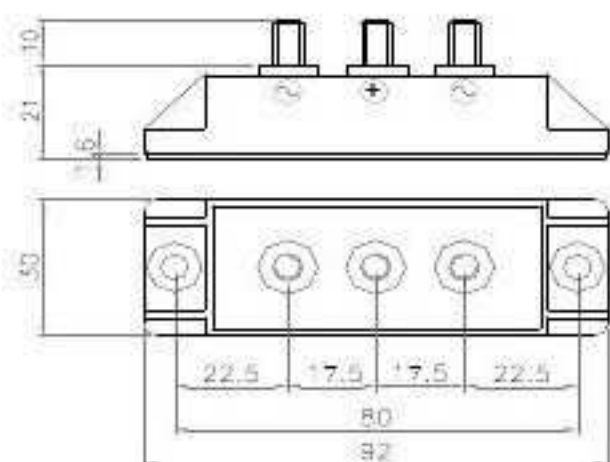



Fig.1 MCF600.04IS-SS6-FIX5-HP-P80-TA

Code:950006000019

MCF600.04IS-SS5-FIX5-HP-P80-TA

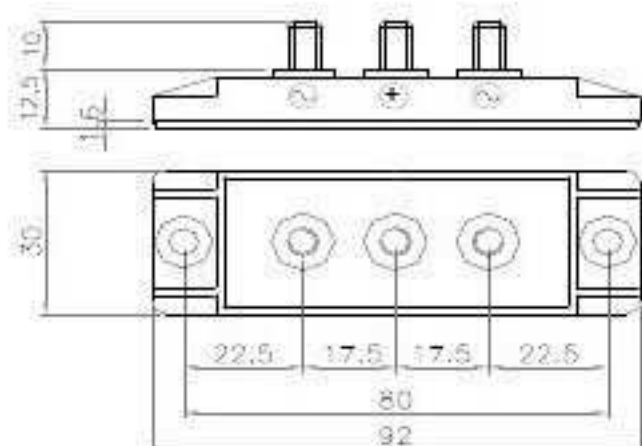
Code:950006000018


Fig.2 MCF600.04IS-MM6x10-FIX5-HP-P80-TA

Code:950006000015

MCF600.04IS-MM5x10-FIX5-HP-P80-TA

Code:950006000011


Fig.3 MCF600.04IS-MM6x10-FIX5-LP-P80-TA

Code:950006000014

MCF600.04IS-MM5x10-FIX5-LP-P80-TA

Code:950006000010

Power fix:

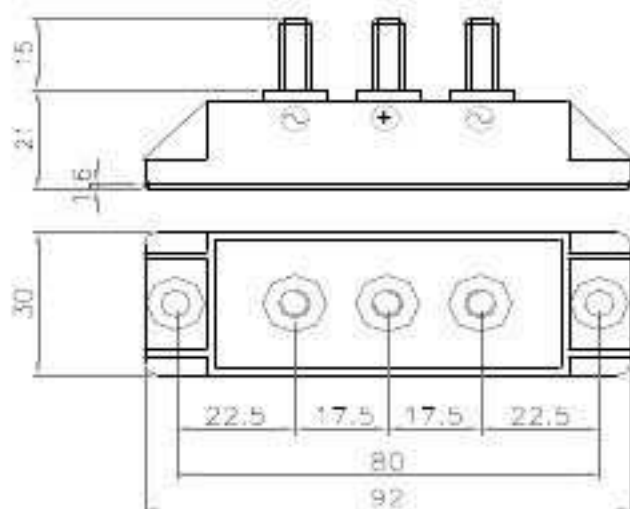
SS=Screw (M6 or M5)

MM=Bolt (M6 or M5)

Mounting fix:

FIX= $\varnothing 5,5$
Profile:

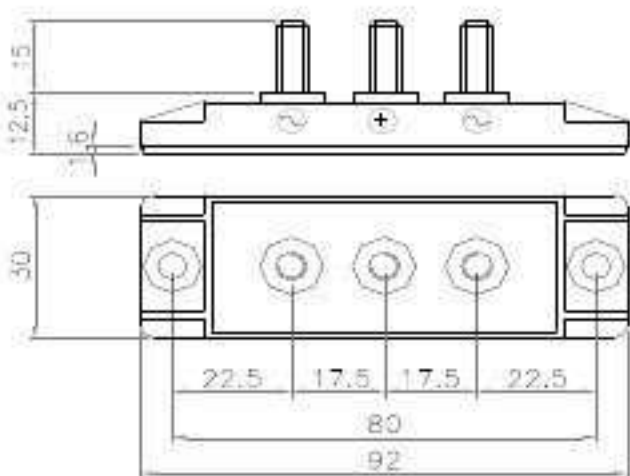
HP=High Profile LP=Low Profile


Fig.4 MCF600.04IS-MM6x15-FIX5-HP-P80-TA

Code:950006000017

MCF600.04IS-MM5x15-FIX5-HP-P80-TA

Code:950006000013


Fig.5 MCF600.04IS-MM6x15-FIX5-LP-P80-TA

Code:950006000016

MCF600.04IS-MM5x15-FIX5-LP-P80-TA

Code:950006000012

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