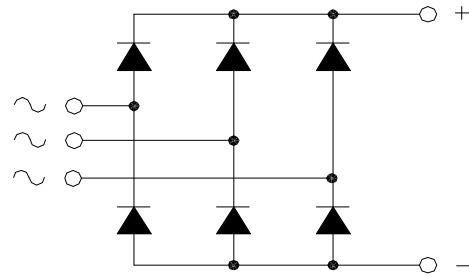


MTS90

POWER RECTIFIER BRIDGE

Output Current **90 A**



V_{RRM}	V_{RSM}	P/N
400	500	MTS90.04
600	700	MTS90.06
800	900	MTS90.08
1200	1300	MTS90.12
1600	1700	MTS90.16

Features

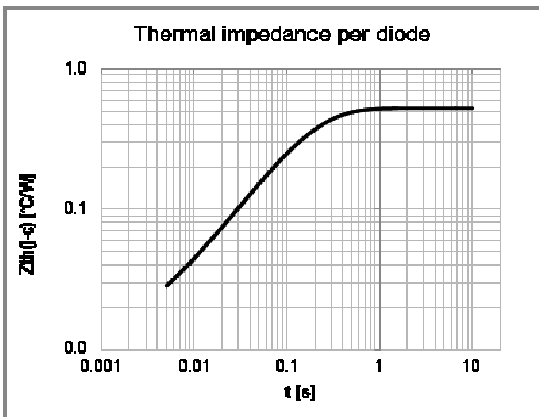
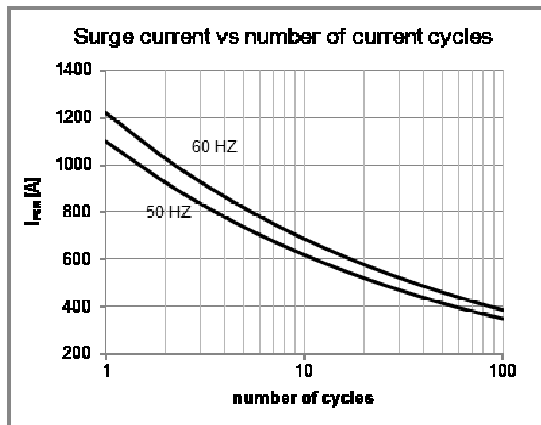
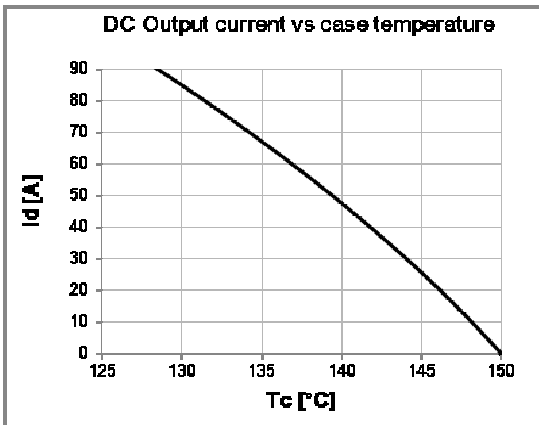
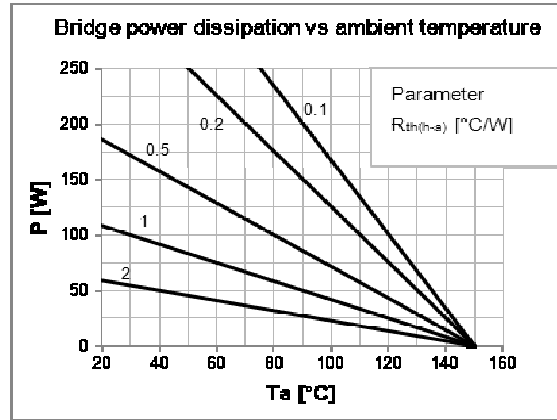
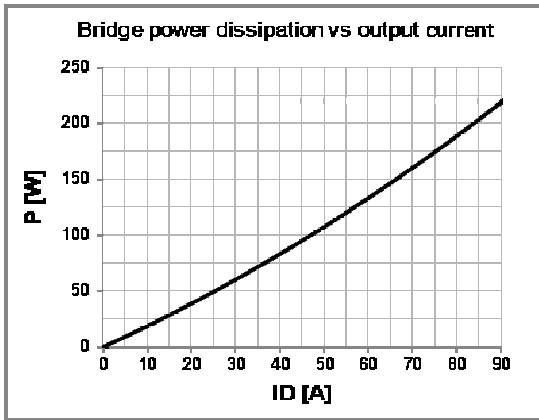
- Low forward voltage diodes for high surge capability
- Low thermal impedance packaging
- Electrically insulated case

Applications

- Input rectifier for variable frequency drives
- Battery charger rectifiers
- Single phase rectifier for power supplies
- Rectifiers for DC motor fields supplies

Diodes characteristics		Conditions	T_j [°C]	Value
I_{RRM}	Max repetitive peak reverse current	$V = V_{RRM}$	150	4 mA
$V_{F(TO)}$	Threshold voltage		150	0,9 V
r_F	Forward slope resistance		150	3,5 mΩ
V_{FM}	Peak forward voltage, max	$I_F = 100A$	25	1,2 V
I_{FSM}	Surge forward current	Half sine wave, 10 ms	150	1100 A
I^2t	Max I^2t for fusing		150	6050 A ² s
T_{jmax}	Operating junction temperature			-40 / 150 °C
$R_{th(j-c)}$	Thermal resistance (junction to case)	DC operation		0,53 °C/W
$R_{th(j-c)}$	Thermal resistance (junction to case)	Rectangular wave 120° conduction		0,59 °C/W

Module characteristics		Conditions	Value
I_D	DC output current	$T_c = 128$ °C	90 A
I_D	DC output current	$T_a = 40$ °C ; freely suspended	8 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
$R_{th(j-c)}$	Thermal resistance (junction to case)	DC operation	0,088 °C/W
$R_{th(j-c)}$	Thermal resistance (junction to case)	Rect. wave 120° conduction	0,098 °C/W
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Mounting surface flat, smooth and greased	0,100 °C/W
$R_{th(j-a)}$	Thermal resistance (junction to ambient)	Freely suspended or mounted on an insulator	8,5 °C/W
$R_{th(j-a)}$	Thermal resistance (junction to ambient)	Mounted on a painted metal sheet 250x250x1 mm	3,0 °C/W
T_{stg}	Max storage temperature		150 °C
W	Weight		97 g
M_1	Mounting torque, ± 15 %		4,5 N·m
			40 lb·inch
M_2	Terminal connection torque, ± 15 %		3,0 N·m
			26 lb·inch



(dimensions in mm)

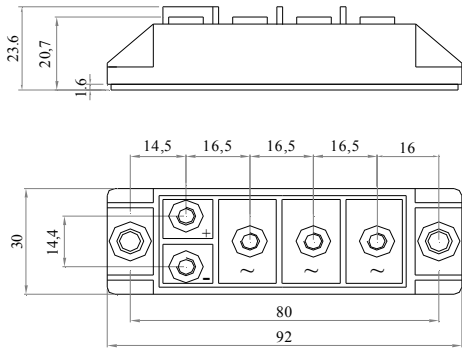


Fig.1 MTS90.04-SS5-FIX5-HP-P80-TA
Code:970000900003
MTS90.06-SS5-FIX5-HP-P80-TA
Code:970000900007
MTS90.08-SS5-FIX5-HP-P80-TA
Code:970000900011
MTS90.12-SS5-FIX5-HP-P80-TA
Code:970000900015
MTS90.16-SS5-FIX5-HP-P80-TA
Code:970000900019

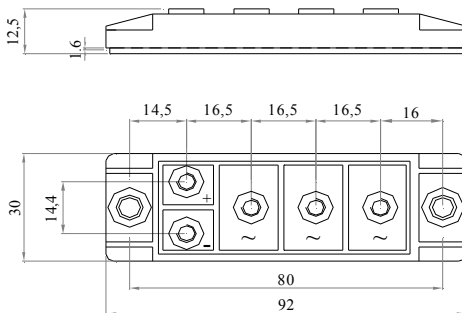


Fig.2 MTS90.04-SS5-FIX5-LP-P80-TA
Code:970000900002
MTS90.06-SS5-FIX5-LP-P80-TA
Code:970000900006
MTS90.08-SS5-FIX5-LP-P80-TA
Code:970000900010
MTS90.12-SS5-FIX5-LP-P80-TA
Code:970000900014
MTS90.16-SS5-FIX5-LP-P80-TA
Code:970000900018

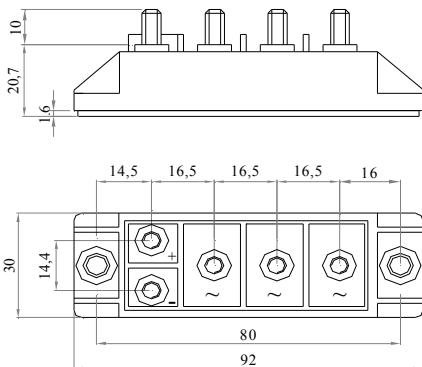


Fig.3 MTS90.04-MM5x10-FIX5-HP-P80-TA
Code:970000900001
MTS90.06-MM5x10-FIX5-HP-P80-TA
Code:970000900005
MTS90.08-MM5x10-FIX5-HP-P80-TA
Code:970000900009
MTS90.12-MM5x10-FIX5-HP-P80-TA
Code:970000900013
MTS90.16-MM5x10-FIX5-HP-P80-TA
Code:970000900017

Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V

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

Mounting fix:
FIX= \varnothing 5,5

(dimensions in mm)

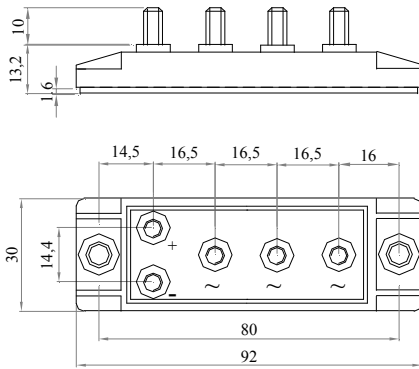


Fig.4

MTS90.04-MM5x10-FIX5-LP-P80-TA
Code:970000900000
MTS90.06-MM5x10-FIX5-LP-P80-TA
Code:970000900004
MTS90.08-MM5x10-FIX5-LP-P80-TA
Code:970000900008
MTS90.12-MM5x10-FIX5-LP-P80-TA
Code:970000900012
MTS90.16-MM5x10-FIX5-LP-P80-TA
Code:970000900016

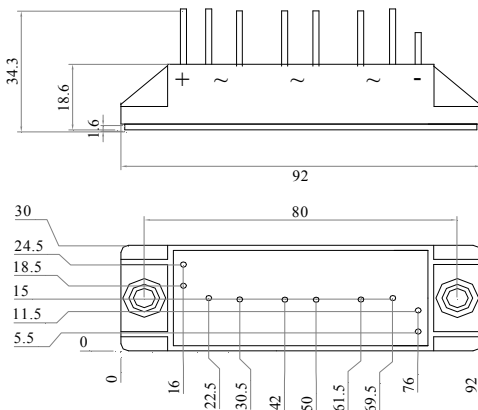


Fig.5

MTS90.04-LL-FIX5-HP-P80-TA
Code:970000900023
MTS90.06-LL-FIX5-HP-P80-TA
Code:970000900025
MTS90.08-LL-FIX5-HP-P80-TA
Code:970000900027
MTS90.12-LL-FIX5-HP-P80-TA
Code:970000900029
MTS90.16-LL-FIX5-HP-P80-TA
Code:970000900021

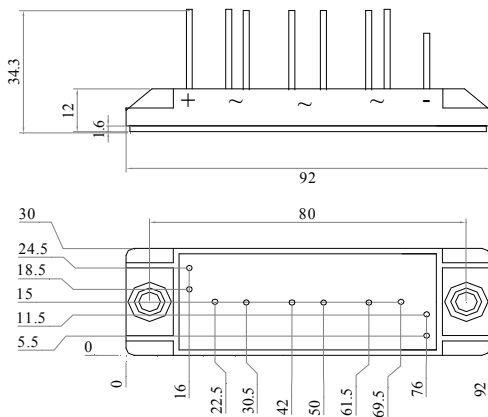


Fig.6

MTS90.04-LL-FIX5-LP-P80-TA
Code:970000900022
MTS90.06-LL-FIX5-LP-P80-TA
Code:970000900024
MTS90.08-LL-FIX5-LP-P80-TA
Code:970000900026
MTS90.12-LL-FIX5-LP-P80-TA
Code:970000900028
MTS90.16-LL-FIX5-LP-P80-TA
Code:970000900020

Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V

Power fix:

MM=Bolt (M5)
LL=Legs (Ø1,2)

Mounting fix:

FIX= Ø5,5