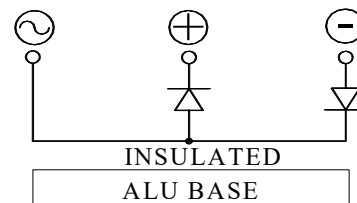


## MRS100.25

### INSULATED DIODE MODULE

**Output Current**            **100 A**

**Blocking Voltage**        **2500 V**



$V_{RRM}$ [V]	$V_{RSM}$ [V]	P/N
2500	2600	MRS100.25

#### Features

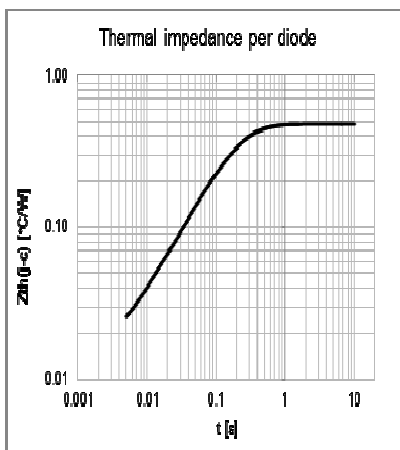
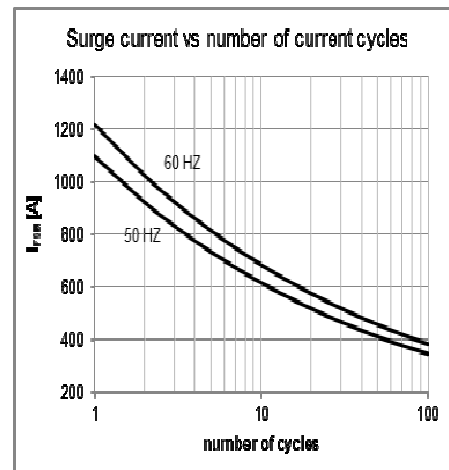
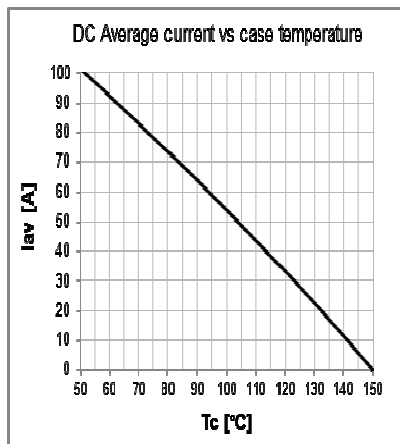
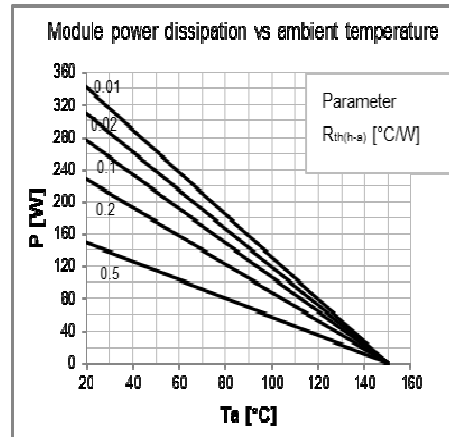
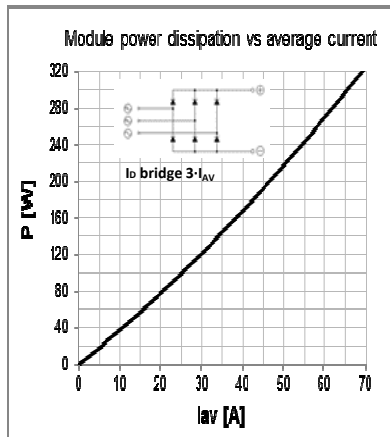
Low forward voltage diodes for high surge capability  
Low thermal impedance packaging  
Electrically insulated case

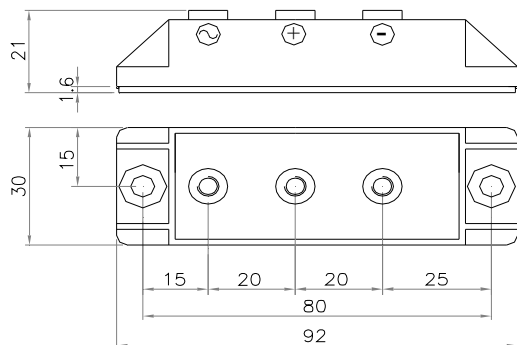
#### Applications

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

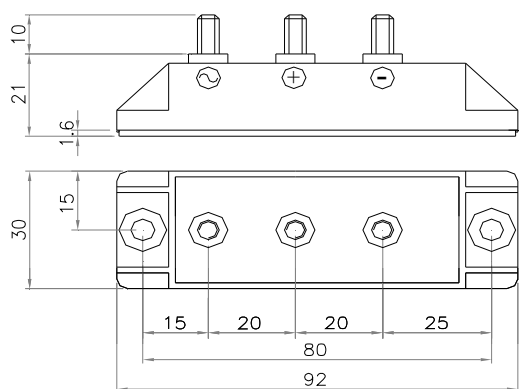
Diodes characteristics		Conditions	Tj [°C]	Value
IRRM	Max repetitive peak reverse current	$V = V_{RRM}$	150	5 mA
VF(TO)	Threshold voltage		150	1,8 V
rF	Forward slope resistance		150	2,5 mΩ
VFM	Peak forward voltage, max	$I_F = 100A$	25	2 V
IFSM	Surge forward current	Half sine wave, 10 ms	150	1500 A
I²t	Max I²t for fusing		150	11250 A²s
IF(AV)	Average forward current	Tc = 50 °C - DC		100 A
IF(AV)	Average forward current	Tc = 60 °C - in three phase bridge configuration		70 A
IF(AV)	Average forward current	Tc = 60 °C - in single phase bridge configuration		72 A
Tjmax	Operating junction temperature			-40 / 150 °C
Rth(j-c)	Thermal resistance (junction to case)	DC operation		0,48 °C/W
Rth(j-c)	Thermal resistance (junction to case)	Rectangular wave 120° conduction		0,54 °C/W

Module characteristics		Conditions	Value
V <sub>INS</sub>	RMS Insulating voltage	50 / 60 Hz t = 1 s (i < 1 mA)	3600 V
V <sub>INS</sub>	RMS Insulating voltage	50 / 60 Hz t = 60 s (i < 1 mA)	3000 V
Rth(j-c)	Thermal resistance (junction to case)	DC operation	0,240 °C/W
Rth(j-c)	Thermal resistance (junction to case)	Rect. wave 120° conduction	0,270 °C/W
Rth(c-h)	Thermal resistance (case to heatsink)	Mounting surface flat, smooth and greased	0,100 °C/W
Rth(j-a)	Thermal resistance (junction to ambient)	Freely suspended or mounted on an insulator	8,5 °C/W
Rth(j-a)	Thermal resistance (junction to ambient)	Mounted on a painted metal sheet 250x250x1 mm	3,0 °C/W
T <sub>stg</sub>	Max storage temperature		150 °C
M1	Mounting torque, ± 15 %		4,5 N·m
			40 lb·inch
M2	Terminal connection torque, ± 15 %		3,0 N·m
			26 lb·inch

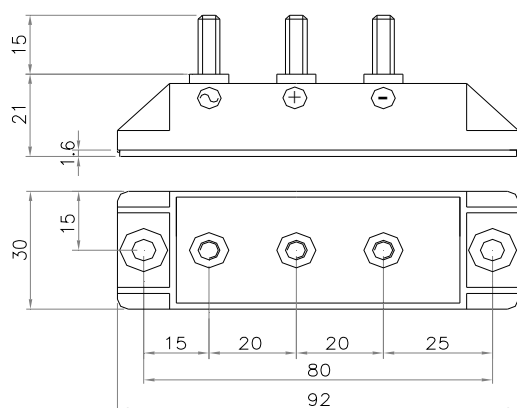




**Fig.1** MRS100.25-SS5-FIX5-HP-P80-TA  
Code:990001000006



**Fig.2** MRS100.25-MM5x10-FIX5-HP-P80-TA  
Code:990001000007



**Fig.3** MRS100.25-MM5x15-FIX5-HP-P80-TA  
Code:990001000008

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

**Mounting fix:**  
FIX=  $\varnothing$ 5,5