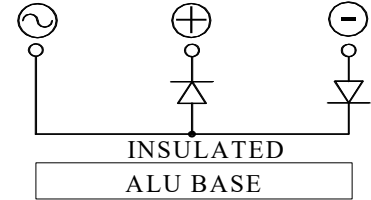


MRS100.16

INSULATED DIODE MODULE

Output Current **100 A**

Blocking Voltage **1600 V**



V_{RRM} [V]	V_{RSM} [V]	P/N
1600	1700	MRS100.16

Features

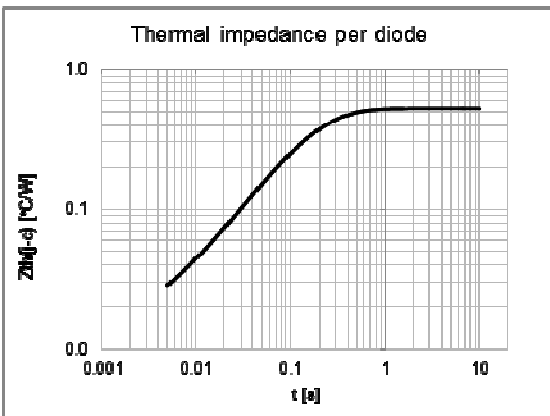
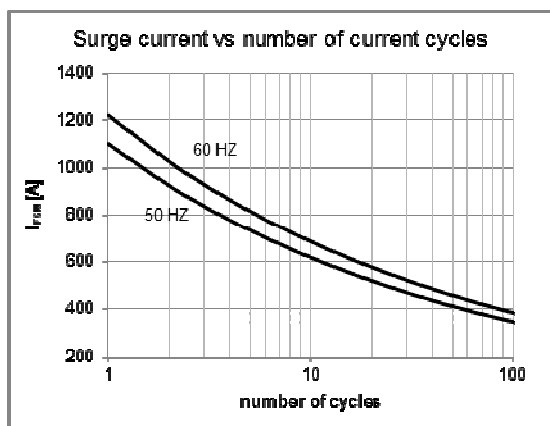
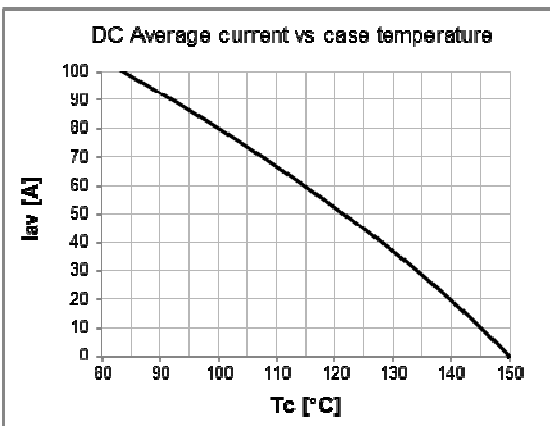
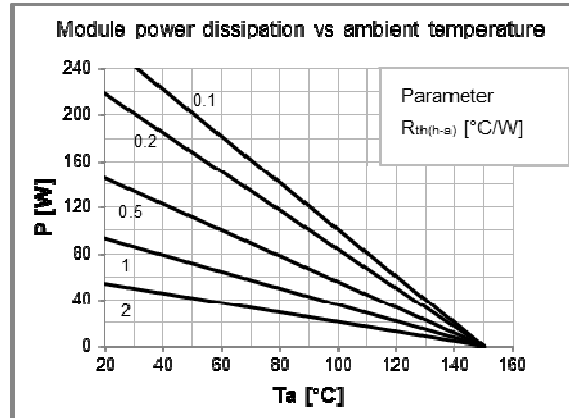
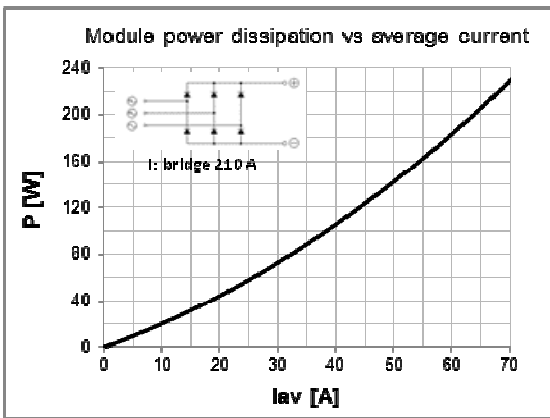
Low forward voltage diodes for high surge capability
Low thermal impedance packaging
Electrically insulated case

Applications

Input rectifier for variable frequency drives
Battery charger rectifiers
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	4 mA
VF(TO)	Threshold voltage		150	0,9 V
rF	Forward slope resistance		150	3,5 mΩ
VFM	Peak forward voltage, max	$I_F = 100A$	25	1,2 V
IFSM	Surge forward current	Half sine wave, 10 ms	150	1100 A
I²t	Max I²t for fusing		150	6050 A²s
IF(AV)	Average forward current	Tc = 83 °C - DC		100 A
IF(AV)	Average forward current	Tc = 83 °C - in three phase bridge configuration		70 A
IF(AV)	Average forward current	Tc = 83 °C - in single phase bridge configuration		73 A
Tjmax	Operating junction temperature			-40 / 150 °C
Rth(j-c)	Thermal resistance (junction to case)	DC operation		0,53 °C/W
Rth(j-c)	Thermal resistance (junction to case)	Rectangular wave 120° conduction		0,59 °C/W

Module characteristics		Conditions	Value
VINS	RMS Insulating voltage	50 / 60 Hz t = 1 s (i < 1 mA)	3600 V
VINS	RMS Insulating voltage	50 / 60 Hz t = 60 s (i < 1 mA)	3000 V
Rth(j-c)	Thermal resistance (junction to case)	DC operation	0,265 °C/W
Rth(j-c)	Thermal resistance (junction to case)	Rect. wave 120° conduction	0,295 °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
Tstg	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



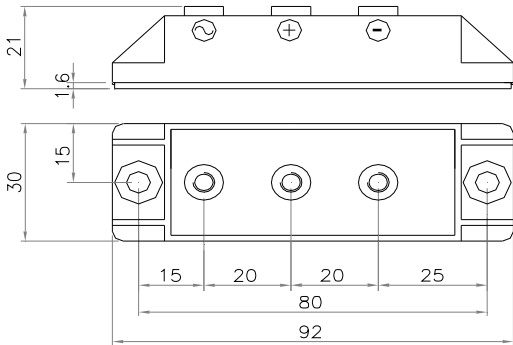


Fig.1 MRS100.16-SS5-FIX5-HP-P80-TA
Code:990001000000

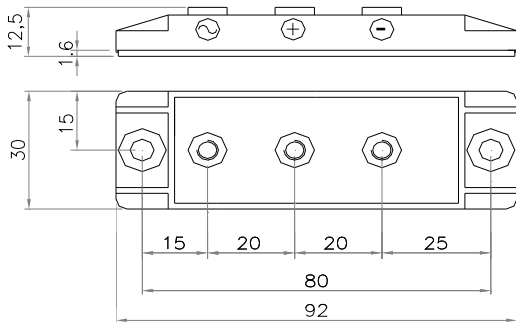


Fig.2 MRS100.16-SS5-FIX5-LP-P80-TA
Code:990001000001

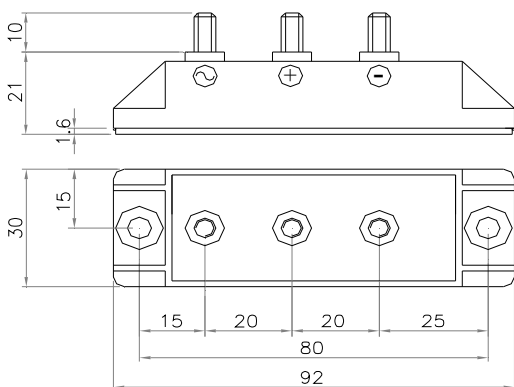


Fig.3 MRS100.16-MM5x10-FIX5-HP-P80-TA
Code:990001000002

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

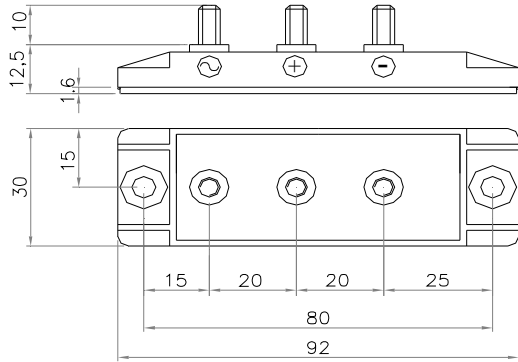


Fig.4 MRS100.16-MM5x10-FIX5-LP-P80-TA
Code:990001000003

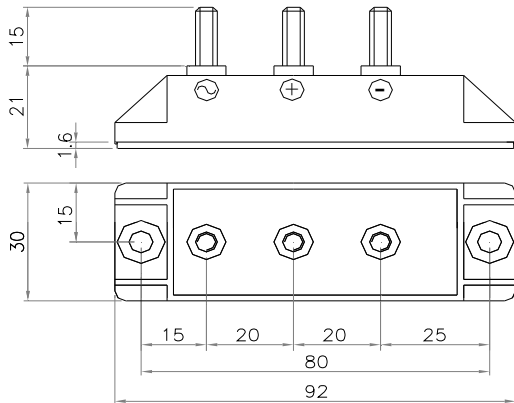


Fig.5 MRS100.16-MM5x15-FIX5-HP-P80-TA
Code:990001000004

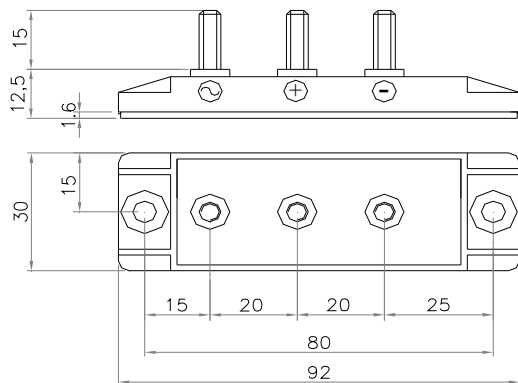


Fig.6 MRS100.16-MM5x15-FIX5-LP-P80-TA
Code:990001000005

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

Mounting fix:
FIX= Ø5,5

Profile:
HP=High Profile LP=Low Profile