

Dual Diode Power Modules are designed for use in power electronic circuits and equipment under normal operating conditions.

**KEY PARAMETERS**

$U_{RRM}$	up to	1600 V
$I_{F(AV)}$		470 A
$I_{FSM}$		11000 A

**Outline**

See package details for further information

**APPLICATION**

- High Voltage Power Supplies
- Motor Control
- Battery Chargers
- Resistance Welding

**FEATURES**

- electrically isolated base
- high current capabilities
- high surge current capabilities
- high rates voltages
- low thermal impedance (Aluminium Nitride Insulators)
- tested according to IEC standards
- compact size and small weight

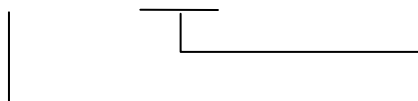
Designed for use in high power industrial and commercial power electronic circuits and equipment where high currents are encountered and high reliability is essential.

**ORDERING INFORMATION**

When ordering please refer to device code builder presented below.

Please use the complete part number when ordering, quote or in any future correspondence relating to your order.

**MD**  **-470-**



Voltage class (hundred volts)

Elements configuration (see drawings)

**ELECTRICAL PARAMETERS**

**Voltage ratings**

Voltage class	$U_{RRM}$	$U_{RSM}$	$I_{RRM}$
	V	V	mA
04	400	500	30
06	600	700	
08	800	900	
10	1000	1100	
12	1200	1300	
14	1400	1500	
16	1600	1700	

**Electrical properties**

Parameter	Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV)}$	A	470
	$T_c$	°C	100
RMS forward current	$I_{F(RMS)}$	A	738
Surge current	$I_{FSM}$	A	$T_j=T_{j,max}$ , $U_R=0,8U_{RRM}$ , $t_p=10ms$
$I^2t$ – value	$I^2t$	$KA^2S$	605
Forward voltage drop max.	$U_{FM}$	V	$T_j=25^\circ C$ , $I_{FM}=1500A$
Threshold voltage	$U_{F(T0)}$	V	
Slope resistance	$r_F$	$m\Omega$	
RMS isolation voltage	$U_{isol}$	V	1 s, circuit to base, all terminals shorted

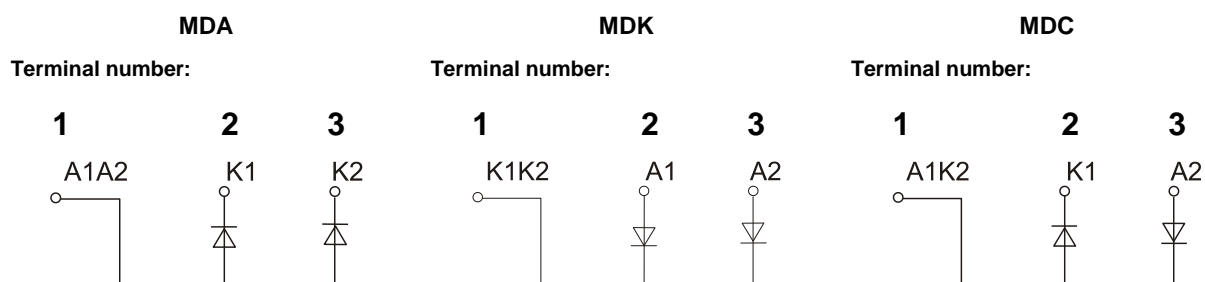
### Thermal properties

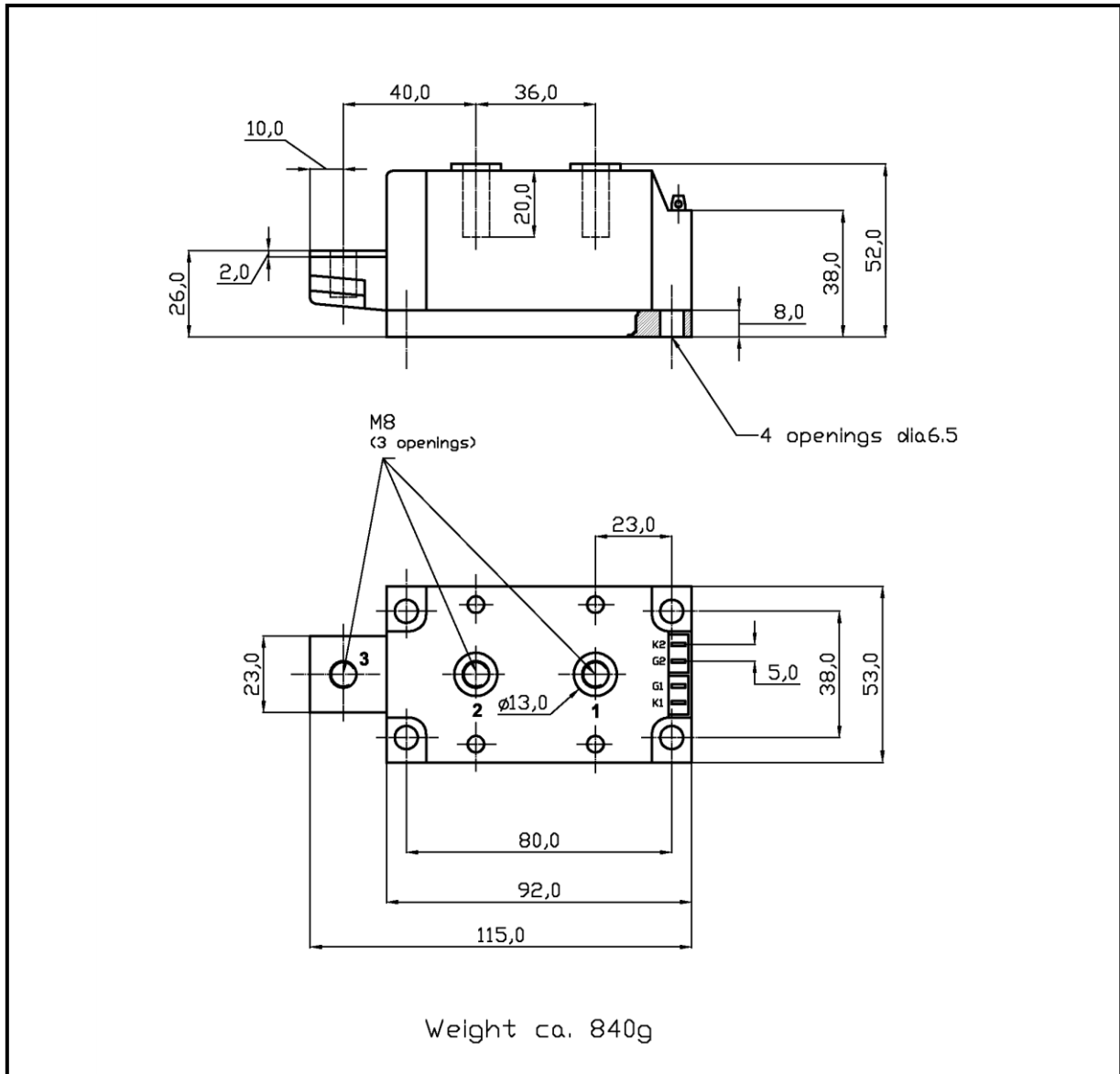
Parameter	Unit	Test conditions	Value	
Thermal resistance, junction to case per diode/per module	$R_{thjc}$	°C/W	DC	0,11 / 0,055
Thermal resistance, case to heatsink per diode/per module	$R_{thch}$	°C/W		0,04 / 0,02
Operating junction temperature	$T_{jmin}...T_{jmax}$	°C		-40...+150
Storage temperature	$T_{stg}$	°C		-40...+150

### Mechanical properties

Parameter	Unit	Value	
Mounting torque (M6)	M1	Nm	5,00 ±15%
Terminal connection torque (M8)	M2	Nm	12,00 ±10%
Weight	M	g	840

### Configurations

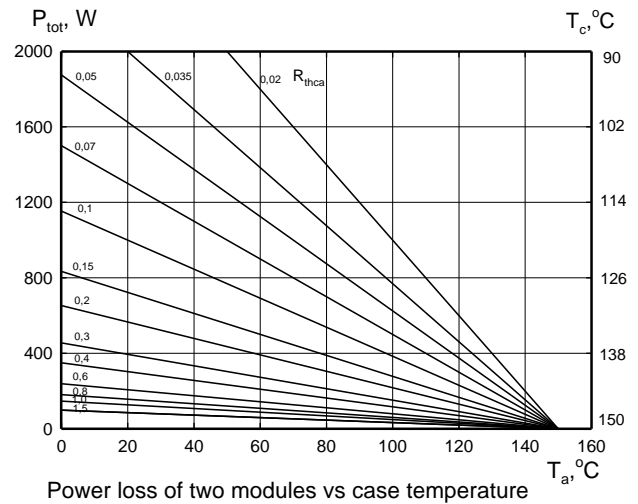
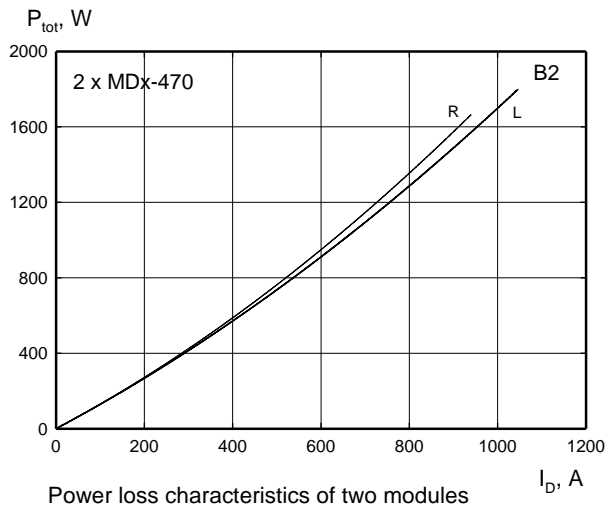
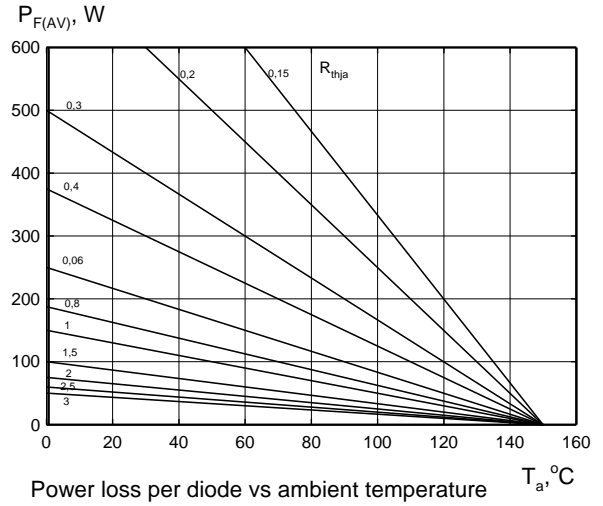
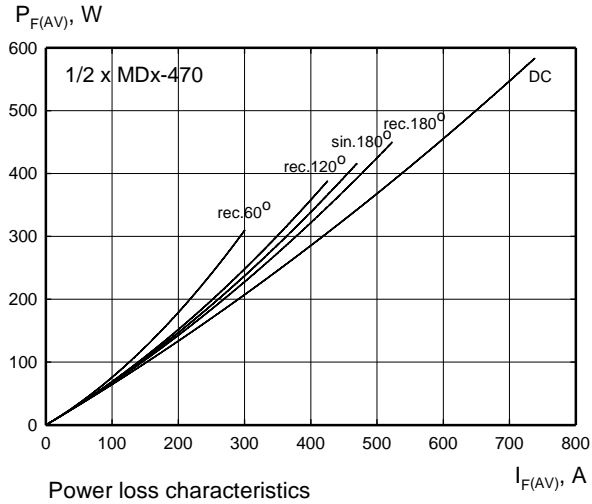


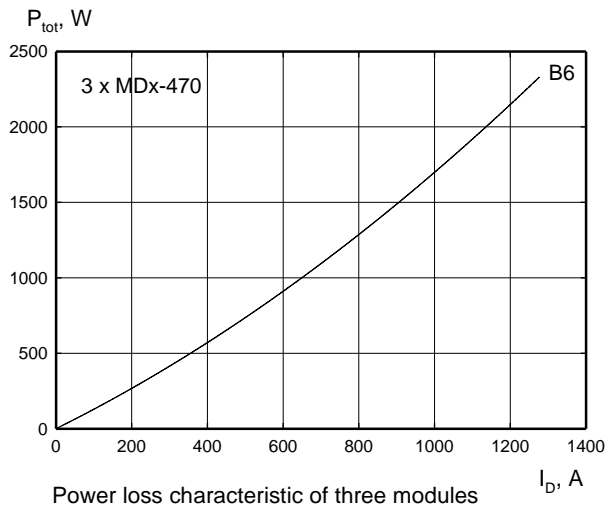
**Package details**

For further package information, please contact Sales & Marketing Department. All dimensions in mm, unless stated otherwise.

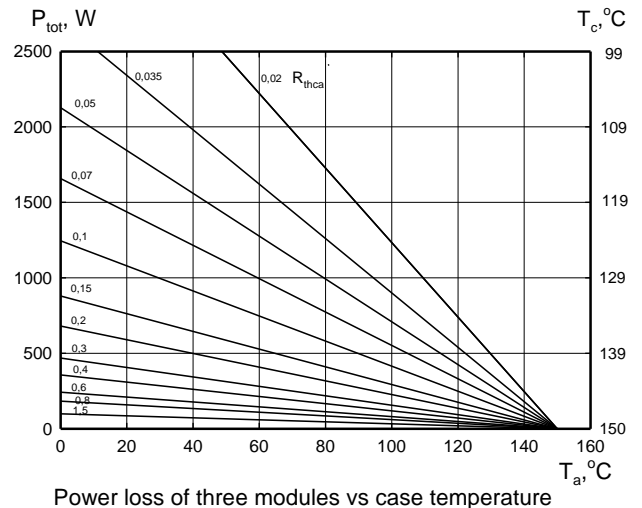
Do not scale.

**CHARACTERISTICS**

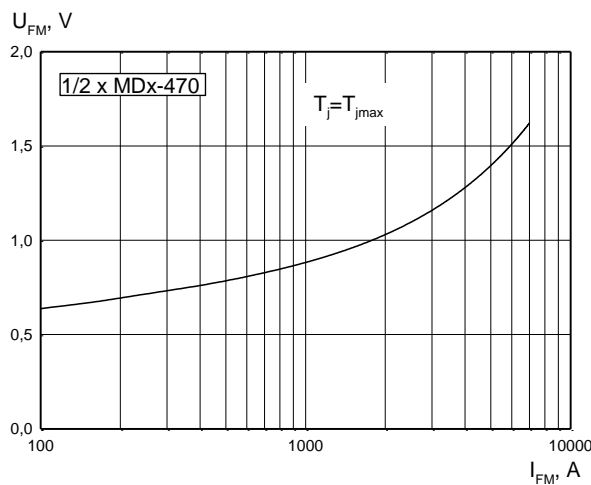




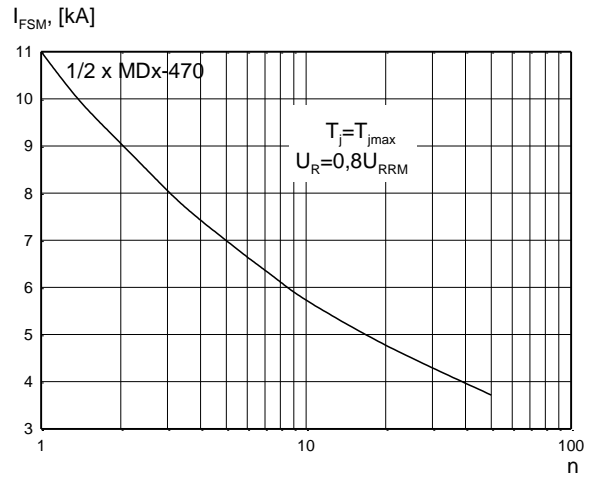
Power loss characteristic of three modules



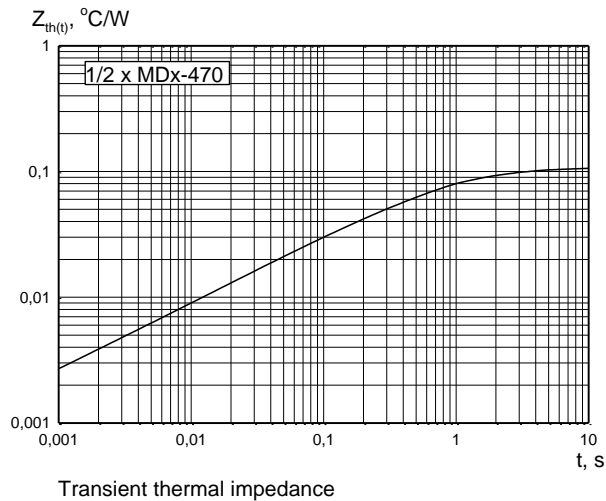
Power loss of three modules vs case temperature



Forward characteristic



Non-repetitive surge current rating



## HEATSINKS

**KUBARA LAMINA SA** has its own proprietary range of extruded aluminium heatsinks designed to optimise the performance of our semiconductors with natural and forced air flow.

## POWER ASSEMBLY CAPABILITY

**KUBARA LAMINA SA** provides a support for those customers requiring more than a basic semiconductor and offers precisely assembled Power Blocks according to factory or customer standards.