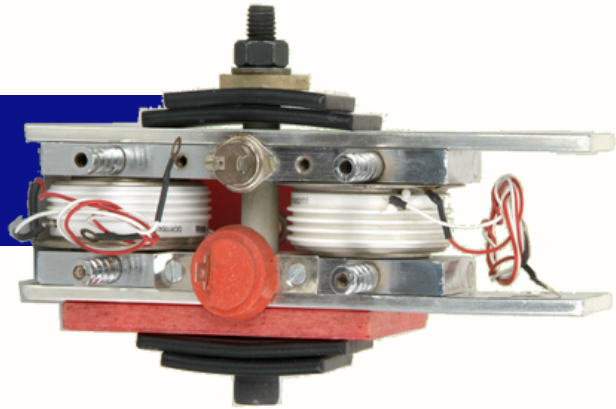


AC SWITCH (WATER COOLED)

2XDCR1278SD



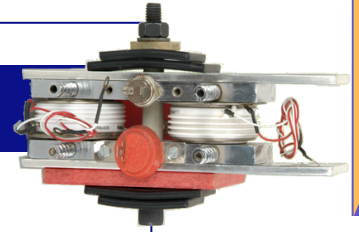
FEATURES

- 👉 **Non-Isolated water cooled blocks**
- 👉 **Provided with thermostat & M.O.V.**
- 👉 **Two thyristors connected in anti-parallel configuration**

TYPICAL APPLICATIONS

- 👉 **Resistance welding equipment**
- 👉 **Electroplating equipment**
- 👉 **Induction heating equipment**

AC SWITCH
(WATER COOLED)
2XDCR1278SD



TECHNICAL DATA

DEVICE TYPE

V_{DRM} / V_{RRM}
(V)

V_{RSM}
(V)

2XDCR1278SD1717	1700	1800
2XDCR1278SD2020	2000	2100

SYMBOL	CONDITIONS	VALUES
I_{RMS}	50 Hz, water flow -4L/min, Water temp = 60°C	1650 amp.
V_{TM}	Maximum peak forward Voltage drop @ 2900AP	2.125 V
I_{TSM}	Maximum peak one cycle (non-rep.) surge current 10 msec	16.4 KA
I²t	Max. I ² t rating (non-rep.) for 10 msec	1350 x 10 ³ A ² s
I_{RRM}/I_{DRM}	Peak reverse current at T _{vj} = 125°C	100 mA
I_{GT} V_{GT} di/dt dv/dt		400 mA 4.0 V 100 A/us 300 V/us
V₀ R₀	T _{vj} =max T _{vj} =max	1.15V 0.48 mΩ
R_{th(w)} T_{vj} T_{stg}	Junction temperature Storage temperature	0.11°C/W 125 °C 125 °C
Mounting force		20 KN
Weight	Approx.	4.8 Kg
Package Outline		IR-39

**AC SWITCH
(WATER COOLED)
2XD CR1278SD**

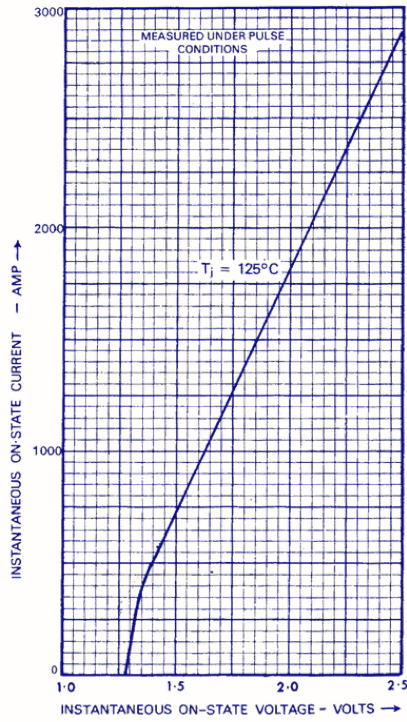
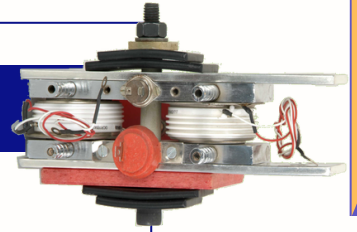
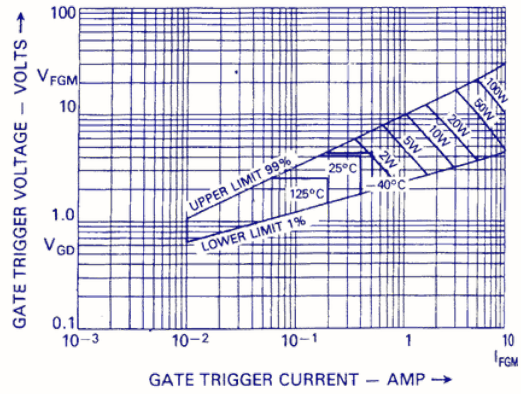


FIG. 1 maximum (limit) on-state characteristics

FIG. 2 gate characteristics



Pulse Width μ s	Pulse Frequency Hz		
	50	100	400
100	150	150	150
200	150	150	125
500	150	150	100
1mS	150	100	25
10mS	20	10	2.5

TABLE GIVES GATE PULSE POWER IN P_{GM} IN WATTS

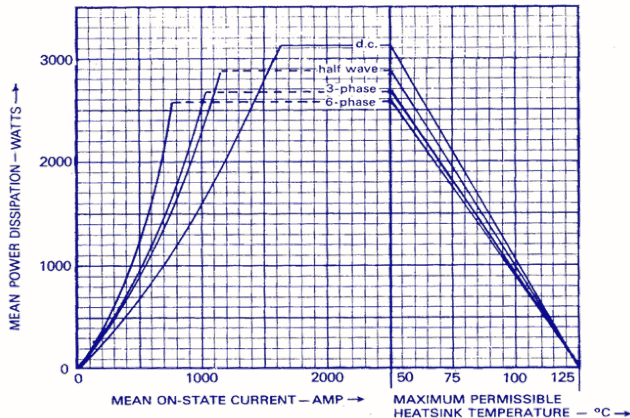
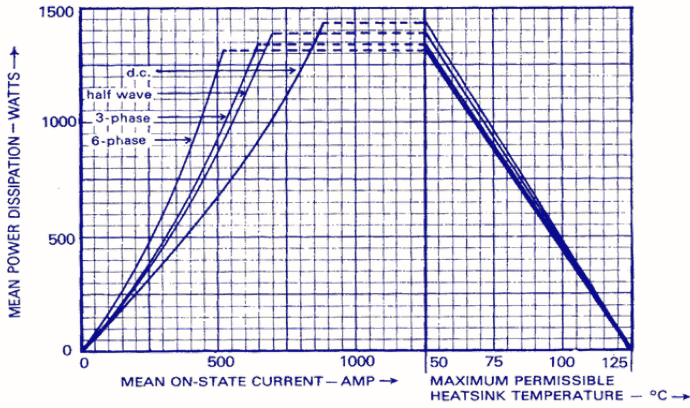
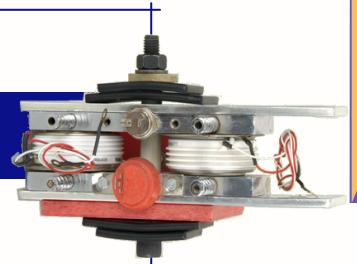


FIG. 3 dissipation curves: double side cooled

**AC SWITCH
(WATER COOLED)
2XDCR1278SD**

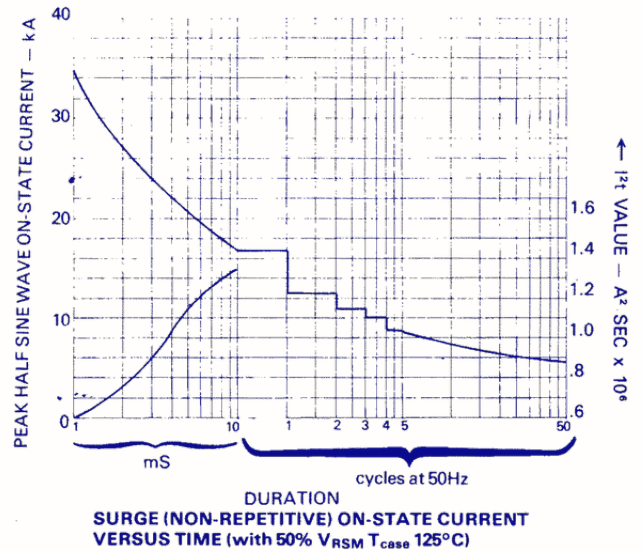


**DISSIPATION CURVES:
SINGLE SIDE COOLED**

FIG. 4 dissipation curves: single side cooled

FIG. 5 surge (non-repetitive) on-state current vs time (with 50% V_{RRM} at $T_{case} = 125^{\circ}C$)

$$I^2 t = \frac{I^2 \times t}{2}$$



**SURGE (NON-REPETITIVE) ON-STATE CURRENT
VERSUS TIME (with 50% V_{RSM} $T_{case} 125^{\circ}C$)**

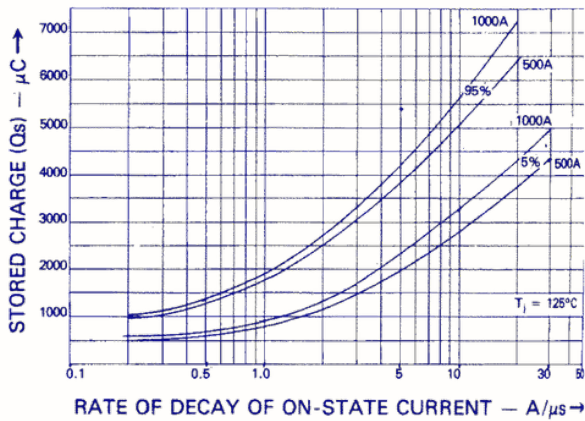


FIG. 6 stored charge

**AC SWITCH
(WATER COOLED)
2XDCR1278SD**

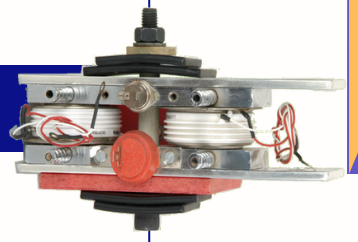
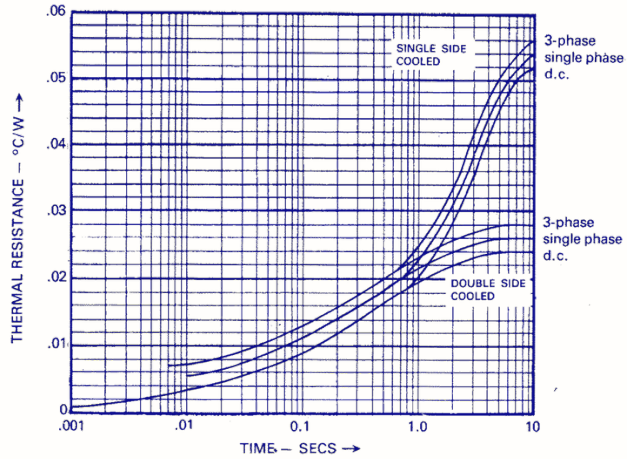
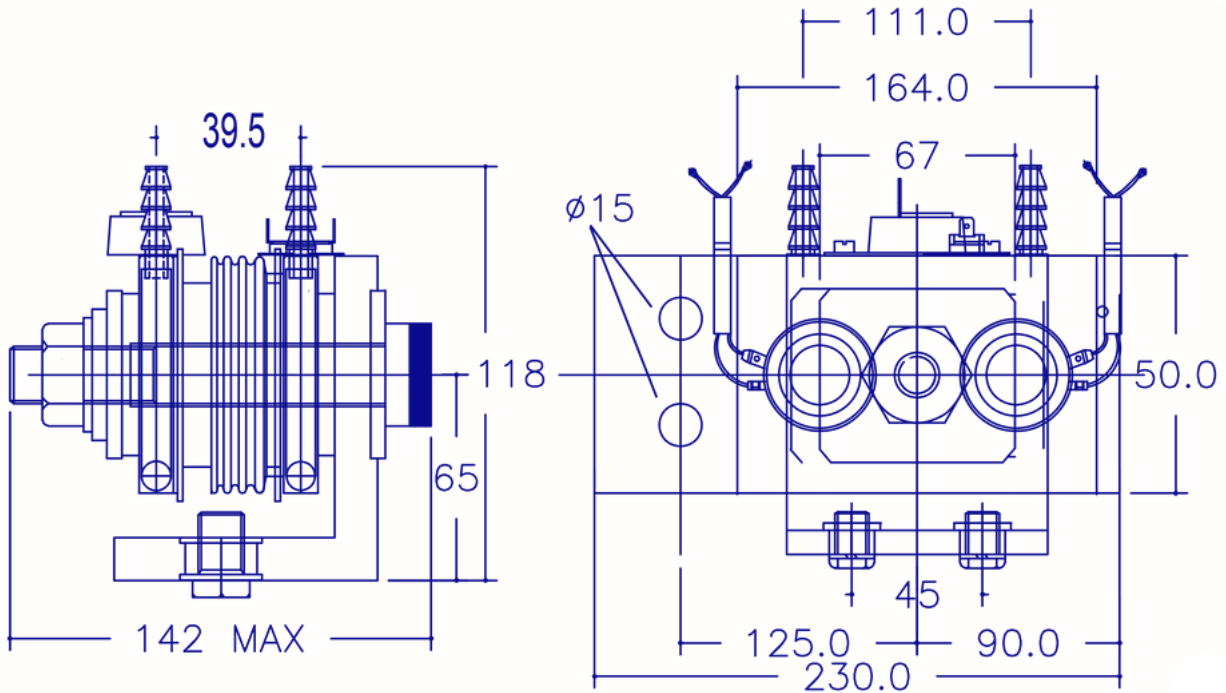


FIG. 7 maximum (limit) transient thermal resistance



PACKAGE OUTLINE

GENERAL TOLERANCE : ±0.5mm



all dimensions in mm