



Ruttonsha International Rectifier Ltd.

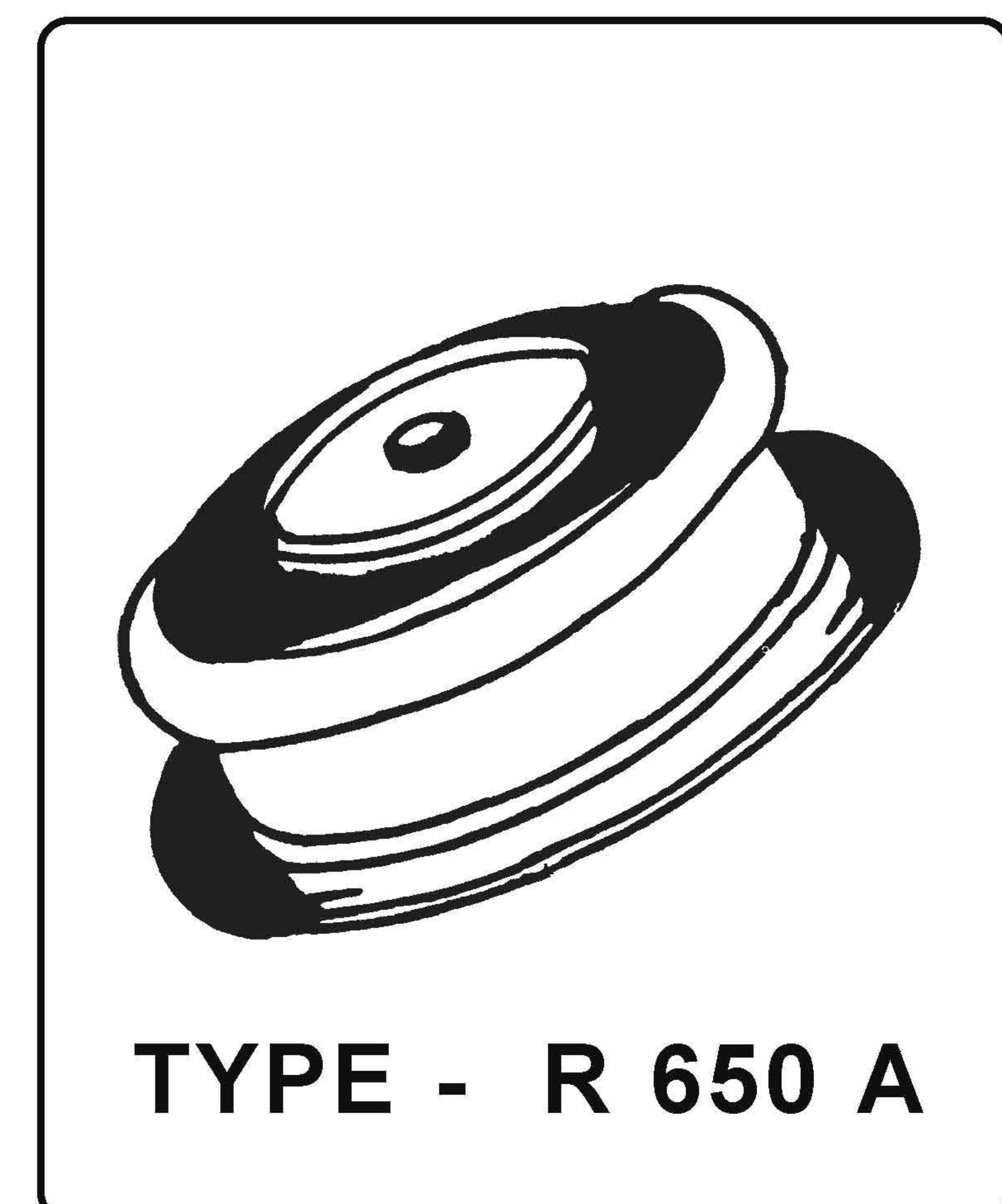
SILICON RECTIFIERS

650 Ampere Silicon Power Diodes Type R 650 A

FEATURES

- ❖ All diffused design.
- ❖ Low voltage drop.
- ❖ High surge current capability.
- ❖ Low thermal impedance.

VOLTAGE CODE	02	04	06	08	10	12	14	16
V_{RRM}	200	400	600	800	1000	1200	1400	1600
V_{RSM}	300	500	700	900	1100	1300	1500	1700
V_{RRM} = Repetitive peak voltage V_{RSM} = Non-repetitive peak voltage								



Ratings (Maximum values at 180°C T_j unless stated otherwise)

RATING	CONDITIONS	SYMBOL	
Average forward current	Half sine wave $Ths = 55^\circ C$ (double side cooled)	$I_{F(AV)}$	650A
RMS current	25°C heat sink temperature, double side cooled	$I_{F(RMS)}$	1020A
Peak one-cycle surge (non-repetitive)	10ms duration $V_R \leq 10$ volts		6050A
Maximum permissible surge energy	For fusing ≥ 10 ms	I^2t	183000A ² s
Operating temperature range	Heatsink temperature	Ths	-40+180°C
Storage temperature		T_{stg}	-40+200°C

Characteristics (Maximum values at 180°C T_j unless stated otherwise)

CHARACTERISTIC	CONDITIONS	SYMBOL	
Peak forward voltage drop	At 1500 A, I_{FM}	V_{FM}	2.08V
Forward conduction threshold voltage		V_o	0.95V
Forward conduction slope resistance		r_o	0.75m Ω
Peak reverse current	At V_{RRM}	I_{RRM}	15mA
Thermal resistance junction to heatsink for a device with a maximum forward voltage drop	Double side cooled 180° sine wave 120° rect. wave		0.090° C/W 0.094° C/W

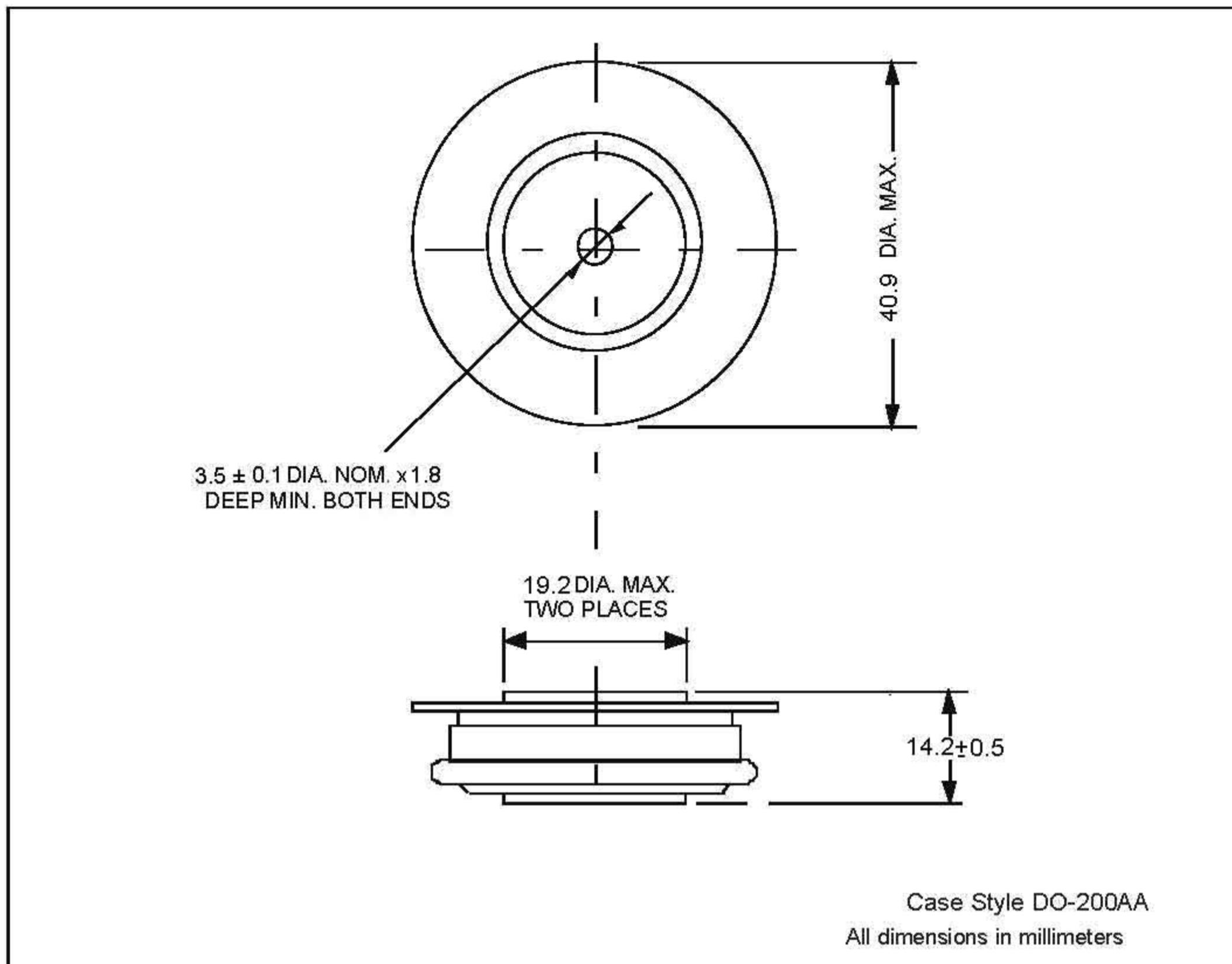
Ordering Information (please quote device code as explained below - 8 digits)

R 650 A	--	C	Typical code : R 650A 12 C = 1200 V _{RRM} , Capsule outline
5 Fixed digits	Voltage code	Capsule outline	

SILICON RECTIFIERS

R650A... SERIES

Outline Table



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R 650 A

