

Rectifier diode

Types W0628RB/SB120 & W0628RB/SB150

Absolute Maximum Ratings

	PARAMETER	MAXIMUM LIMITS	UNITS
V_{RRM}	Repetitive peak reverse voltage, (note 1)	1200 - 1500	V
V_{RSM}	Non-repetitive peak reverse voltage, (note 1)	1300 - 1600	V
$I_{T(AV)M}$	Maximum average on-state current, $T_{case}=120^{\circ}C$	400	A
$I_{T(AV)M}$	Maximum average on-state current. $T_{case}=55^{\circ}C$	628	A
$I_{T(RMS)M}$	Nominal RMS on-state current, $T_{case}=100^{\circ}C$	630	A
$I_{T(d.c.)}$	D.C. on-state current, $T_{case}=100^{\circ}C$	630	A
I_{TSM}	Peak non-repetitive surge $t_p=10ms$, $V_{rm}=60\%V_{RRM}$, (note 2)	7.5	kA
I_{TSM2}	Peak non-repetitive surge $t_p=10ms$, $V_{rm}\leq 10V$, (note 2)	8.25	kA
I^2t	I^2t capacity for fusing $t_p=10ms$, $V_{rm}=60\%V_{RRM}$, (note 2)	281×10^3	A^2s
I^2t	I^2t capacity for fusing $t_p=10ms$, $V_{rm}\leq 10V$, (note 2)	340×10^3	A^2s
$T_{j\ op}$	Operating temperature range	-40 to +190	$^{\circ}C$
T_{stg}	Storage temperature range	-40 to +200	$^{\circ}C$

Notes:-

- 1) De-rating factor of 0.13% per $^{\circ}C$ is applicable for T_j below $25^{\circ}C$.
- 2) Half-sinewave, $190^{\circ}C$ T_j initial.

Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V_{TM}	Maximum peak on-state voltage	-	-	1.62	$I_{FM}=1500A$	V
V_{T0}	Threshold voltage	-	-	0.8		V
r_T	Slope resistance	-	-	0.55		$m\Omega$
I_{RRM}	Peak reverse current	-	-	15	Rated V_{RRM}	mA
R_{thJC}	Thermal resistance, junction to case	-	-	0.13	DC & 180° sine wave	K/W
		-	-	0.14	120° rectangular wave	K/W
R_{thCH}	Thermal resistance case to Sink	-	-	0.04		K/W
W_t	Weight	-	200	-		g

Notes:-

- 1) Unless otherwise indicated $T_j=190^{\circ}C$.

Curves

Figure 1 – On-state characteristics of Limit device

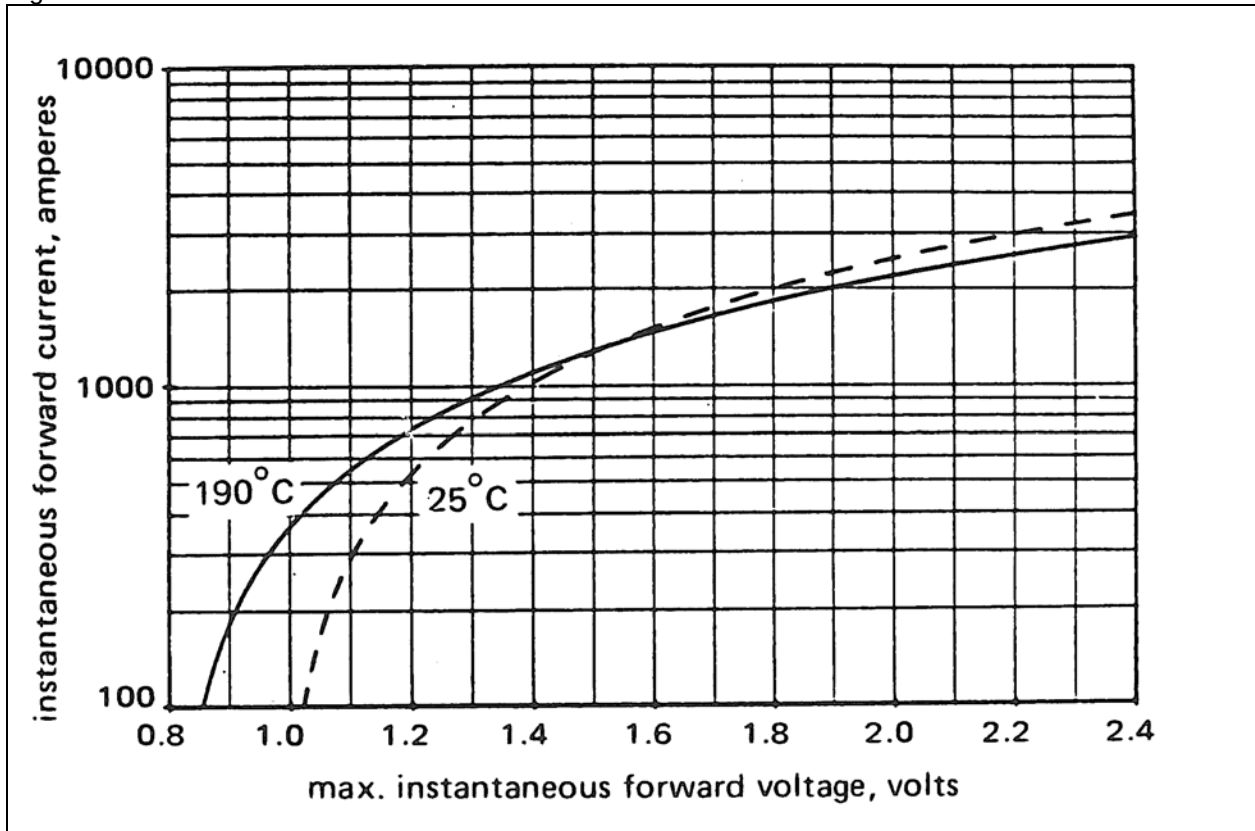


Figure 2 – Transient thermal impedance

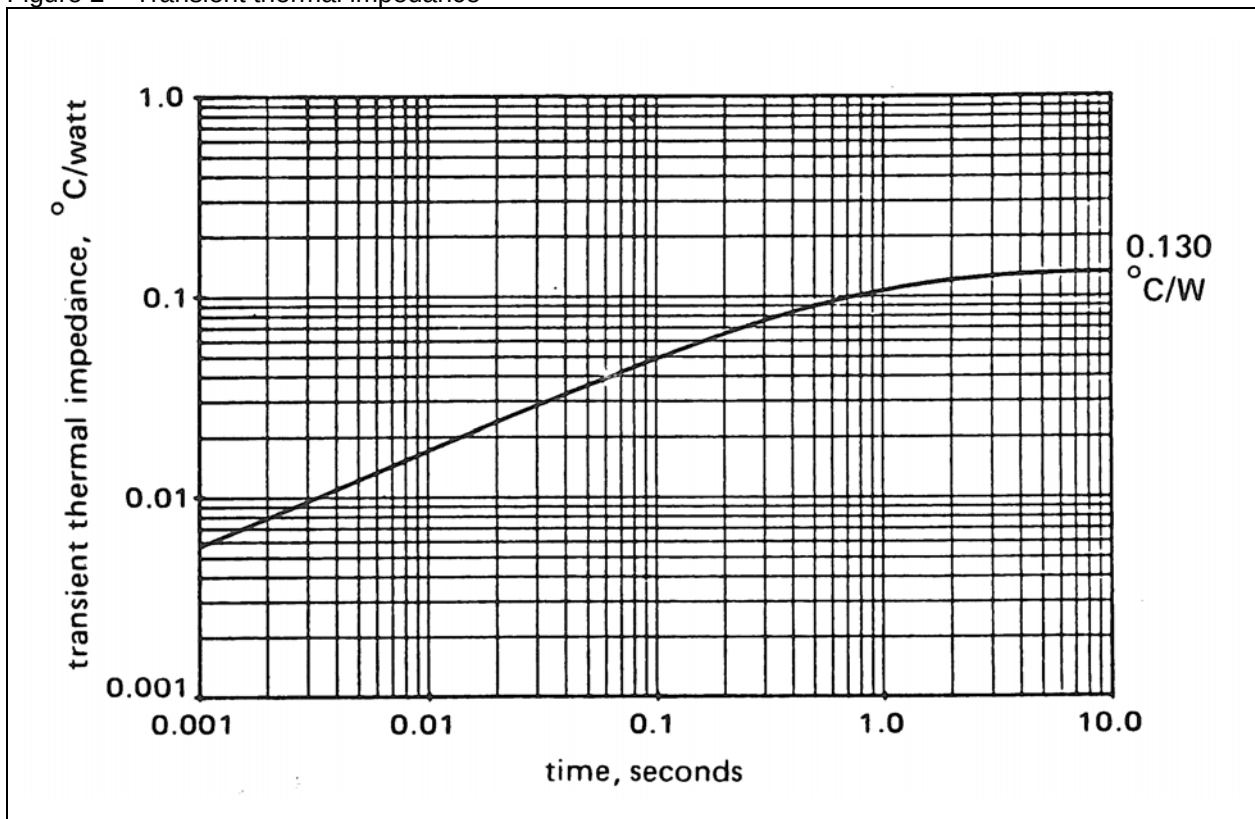


Figure 3 – Maximum surge and I^2t Ratings

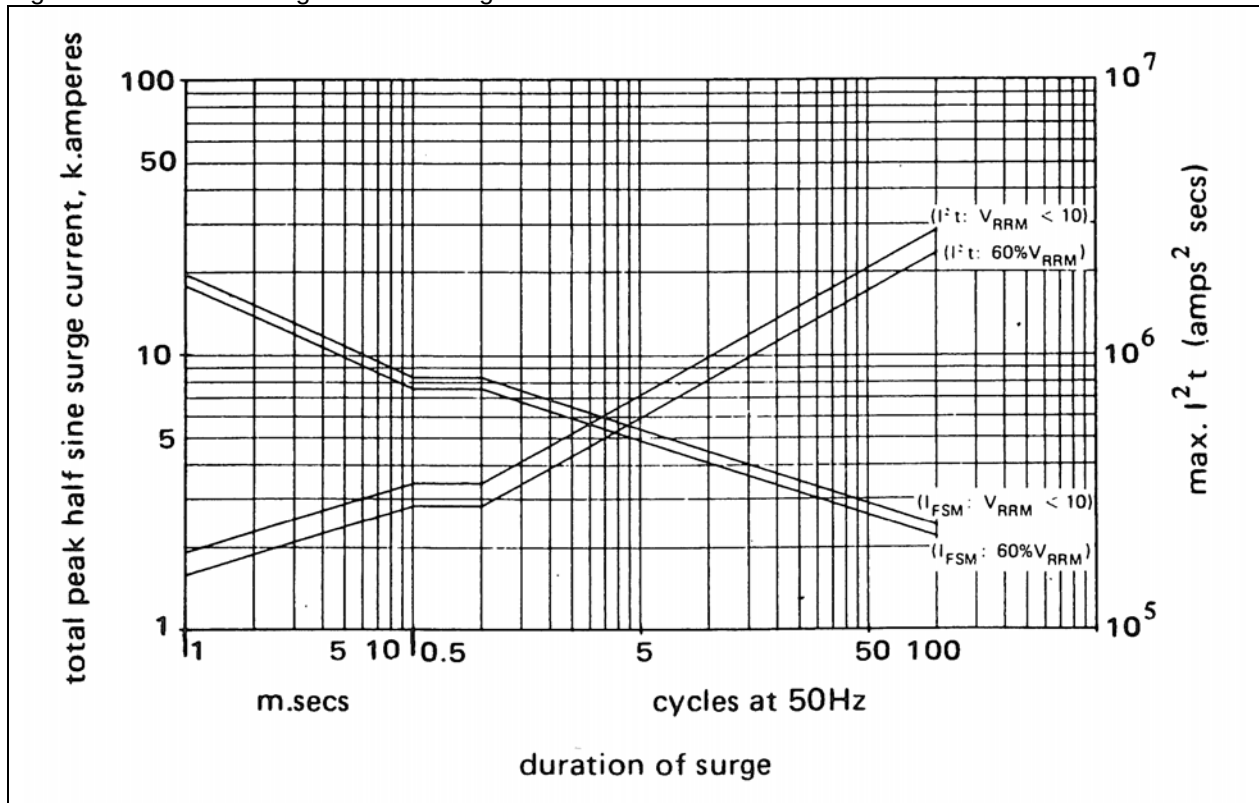
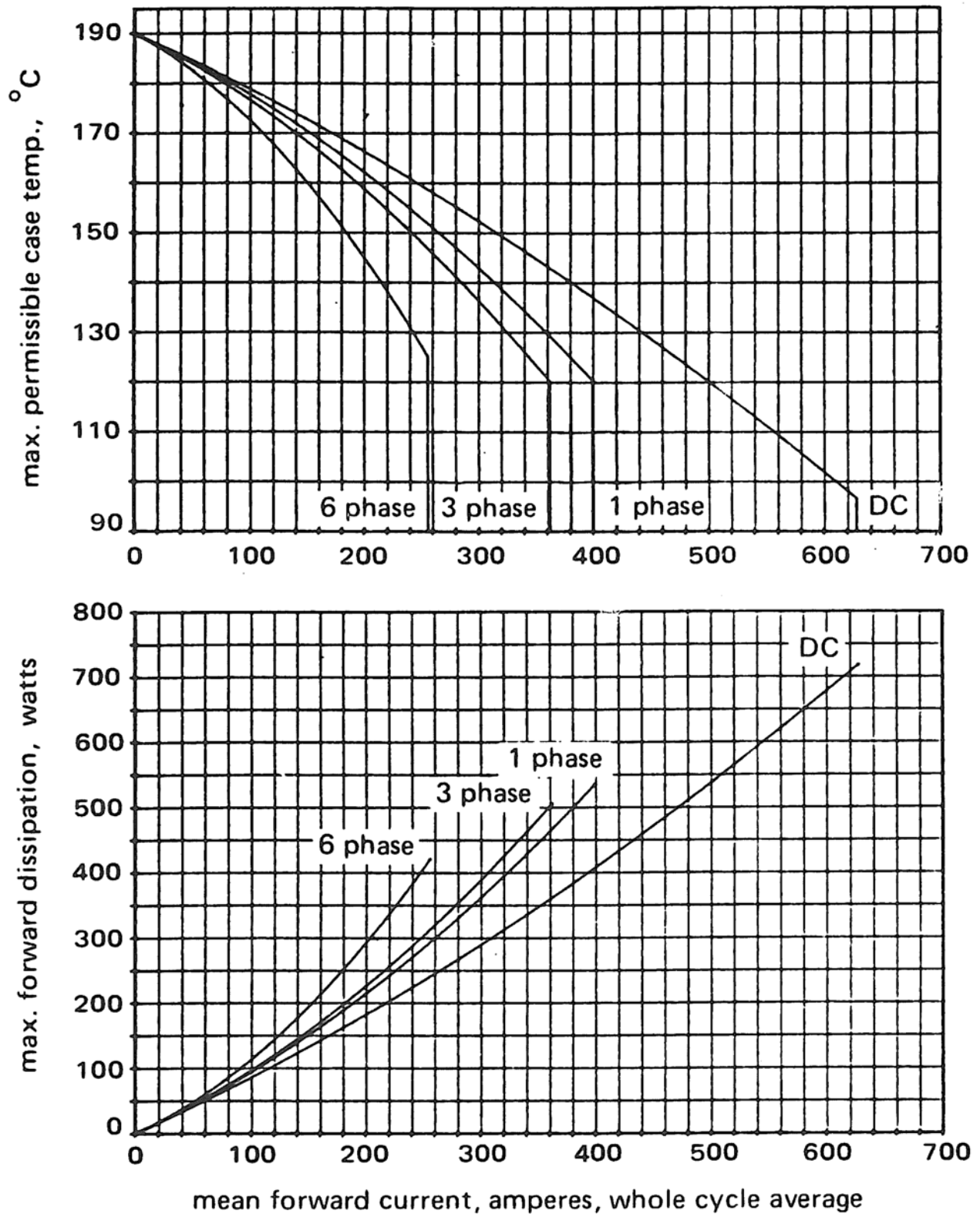
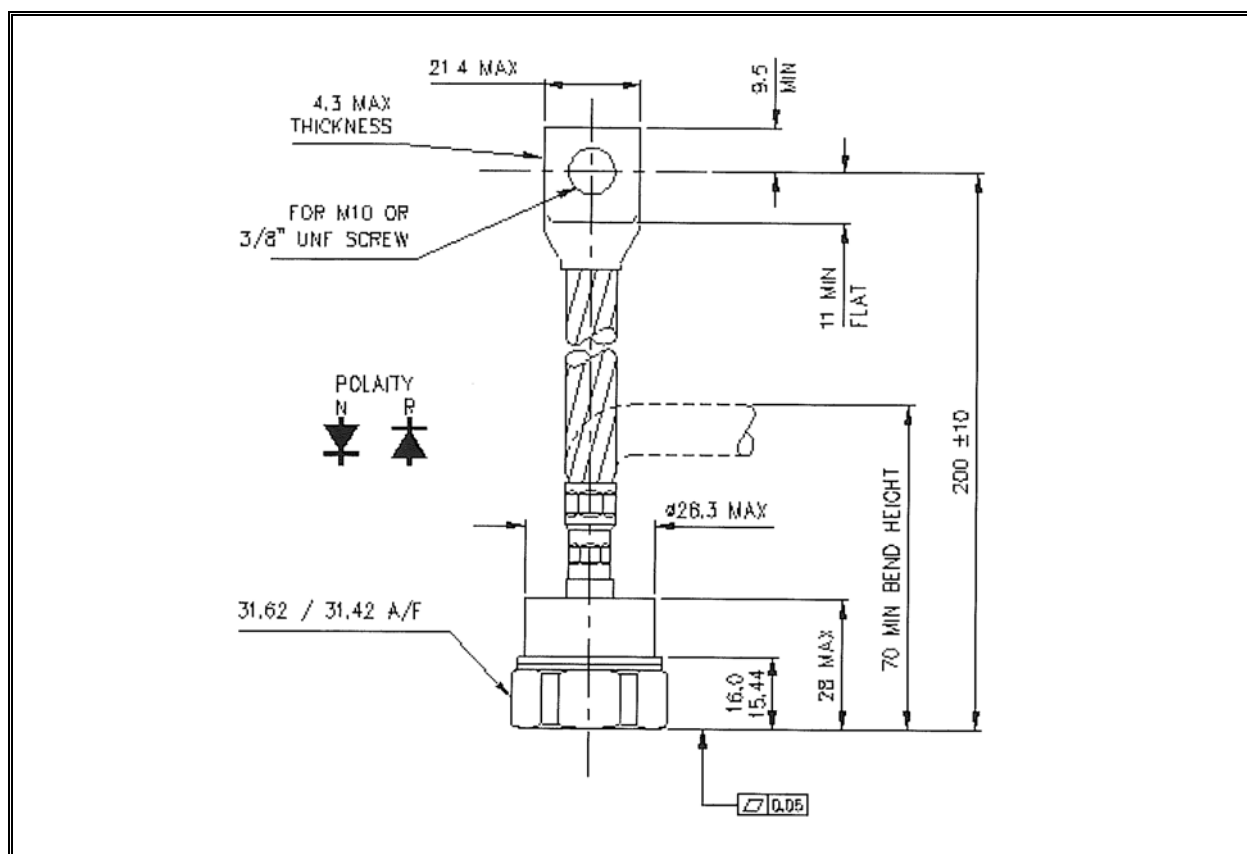


Figure 4 – Dissipation /Sink temperature v Mean forward current



Outline Drawing & Ordering Information



ORDERING INFORMATION

(Please quote 10 digit code as below)

W0628	◆	B	◆◆◆
Fixed Type Code	Polarity R = Base Anode S = Base cathode	Fixed outline code	Voltage code $V_{DRM}/10$ 120 or 150

Order code: W0628RB150, V_{RRM} 1500V, base anode

IXYS Semiconductor GmbH
Edisonstraße 15
D-68623 Lampertheim
Tel: +49 6206 503-0
Fax: +49 6206 503-627
E-mail: marcom@ixys.de



IXYS UK Westcode Ltd
Langley Park Way, Langley Park,
Chippenham, Wiltshire, SN15 1GE.
Tel: +44 (0)1249 444524
Fax: +44 (0)1249 659448
E-mail: sales@ixysuk.com

IXYS Corporation
1590 Buckeye Drive
Milpitas CA 95035-7418
Tel: +1 (408) 457 9000
Fax: +1 (408) 496 0670
E-mail: sales@ixys.net

www.ixysuk.com

www.ixys.com

IXYS Long Beach
IXYS Long Beach, Inc
2500 Mira Mar Ave, Long Beach
CA 90815
Tel: +1 (562) 296 6584
Fax: +1 (562) 296 6585
E-mail: service@ixyslongbeach.com

The information contained herein is confidential and is protected by Copyright. The information may not be used or disclosed except with the written permission of and in the manner permitted by the proprietors IXYS UK Westcode Ltd.

© IXYS UK Westcode Ltd.

In the interest of product improvement, IXYS UK Westcode Ltd reserves the right to change specifications at any time without prior notice.

Devices with a suffix code (2-letter, 3-letter or letter/digit/letter combination) added to their generic code are not necessarily subject to the conditions and limits contained in this report.