

Rectifier Diode

W0944WC040 to W0944WC150

The data sheet on the subsequent pages of this document is a scanned copy of existing data for this product.

(Rating Report 90NR27 Issue 2)

This data reflects the old part number for this product which is: SW02-15CXC470. This part number must **NOT** be used for ordering purposes – please use the ordering particulars detailed below.

The limitations of this data are as follows:
 No reverse recovery information available
 Device no longer available for grade 02 (200V V_{RRM})

Please use the following link to view an up to date outline drawing for this device

[Outline W1](#)

Where any information on the product matrix page differs from that in the following data, the product matrix must be considered correct

An electronic data sheet for this product is presently in preparation.

For further information on this product, please contact your local ASM or distributor.

Alternatively, please contact Westcode as detailed below.

Ordering Particulars			
W0944	WC	◆◆	0
Fixed Type Code	Fixed Outline Code	Voltage code $V_{RRM}/100$ 04-15	Fixed Code
Typical Order Code: W0944WC100, 14.4mm clamp height, 1000V V_{RRM}			

<p>IXYS Semiconductor GmbH Edisonstraße 15 D-68623 Lampertheim Tel: +49 6206 503-0 Fax: +49 6206 503-627 E-mail: marcom@ixys.de</p>	<p style="margin: 5px 0 0 0;">An IXYS Company</p> <p style="margin: 10px 0 0 0;">www.westcode.com</p> <p style="margin: 10px 0 0 0;">www.ixys.com</p>	<p>Westcode Semiconductors Ltd Langley Park Way, Langley Park, Chippenham, Wiltshire, SN15 1GE. Tel: +44 (0)1249 444524 Fax: +44 (0)1249 659448 E-mail: WSL.sales@westcode.com</p> <p>Westcode Semiconductors Inc 3270 Cherry Avenue Long Beach CA 90807 USA Tel: +1 (562) 595 6971 Fax: +1 (562) 595 8182 E-mail: WSI.sales@westcode.com</p>
---	--	---

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 Westcode Semiconductors Ltd. © Westcode Semiconductors Ltd.

In the interest of product improvement, Westcode 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.

QUALITY EVALUATION LABORATORY

Rating Report: 90NR27 Issue 2

Date: 12th May, 1992

Origin: Q.E.L.

Pages: 10

Diode Type SW02-15CXC470

Written by: M. Baker

Checked: M.B.

Approved: 

This diode consists of a diffused 24 mm silicon slice mounted in a cold weld capsule housing.

This report supersedes Report 90NR27 Issue 1.

Ratings

Voltage Grades	:	02-15
V_{RSM}	:	300-1600V
V_{RRM}	:	200-1500V
$I_{F(AV)}$: Single Phase; 50 Hz, 180° half sinewave;		
Double side cooled $T_{HS} = 55^{\circ}C, 100^{\circ}C$:	945A; 717A
Single side cooled $T_{HS} = 100^{\circ}C$:	430A
I_F (rms) max.)	:	1694A
) Double side cooled $T_{HS} = 25^{\circ}C$		
I_F max.)	:	1430A
I_{FSM} : t = 10ms half sinewave; T_J (initial) = 190°C;		
$V_{RM} = 0.6 V_{RRM}(Max)$:	9000A
I_{FSM} ; t = 10ms half sinewave; T_J (initial) = 190 °C; $V_{RM} \leq 10V$:	10,000A
I^2t : t = 10ms; T_J (initial) = 190 °C; $V_{RM} = 0.6 V_{RRM}(Max)$:	.405 x 10 ⁶ A ² SECS
I^2t : t = 10ms; T_J (initial) = 190 °C; $V_{RM} \leq 10V$:	.5 x 10 ⁶ A ² SECS
I^2t : t = 3ms; T_J (initial) = 190 °C; $V_{RM} \leq 10V$:	.36 x 10 ⁶ A ² SECS
T_{HS} Operating range	:	-40 to +190°C
T_{stg} ; Non-operating	:	-40 to +200°C

Characteristics

(Maximum values unless stated otherwise)

V_O :	$T_J = 190^\circ\text{C}$:	0.79V	
r_s :	$T_J = 190^\circ\text{C}$:	0.342mohms	
COLD				
A :	$T_J = 25^\circ\text{C}$:	0.933861601	
B :	$T_J = 25^\circ\text{C}$:	-1.98094636E-2	
C :	$T_J = 25^\circ\text{C}$:	2.35239372E-4	
D :	$T_J = 25^\circ\text{C}$:	5.52084713E-3	
HOT				
A :	(Constant)	:	0.717850746	
B :	$(B \times \ln i)$:	-1.13820768E-2	
C :	$(C \times i)$:	2.83402379E-4	
D :	$(D \times \sqrt{i})$:	6.10133431E-3	
V_{FM} :	$I_{FM} = 1930A$	$T_{VJ} = 190^\circ\text{C}$:	1.45V
R_{th} (J-HS)	double side cooled		:	0.09 K/W
	Anode side cooled		:	0.186 K/W
	Cathode side cooled		:	0.174 K/W
I_{RRM} :	$T_J = 190^\circ\text{C}$	$V_{RM} = V_{RRM(Max)}$:	15mA
Q_{RA} :	$I_{TM} =$	$T_{VJ} =$:	
	$V_{RM} =$	$T_{VJ} =$:	
Mounting Force			:	330-550 Kg.f
Outline Drawing			:	100A241
JEDEC Outline No.			:	DO-200AA

CONTENTS

	<u>Page</u>
Ratings	1
Characteristics	2
Contents	3
Voltage Ratings	4
Dissipation and Heatsink Temperature vs Mean Current	5 & 6
Limit Forward Voltage Characteristic	7
Transient Thermal Impedance Characteristic	8
Surge Current and I^2t vs Duration of Surge	9
Outline Drawing	10

Changes to Report 90NR27

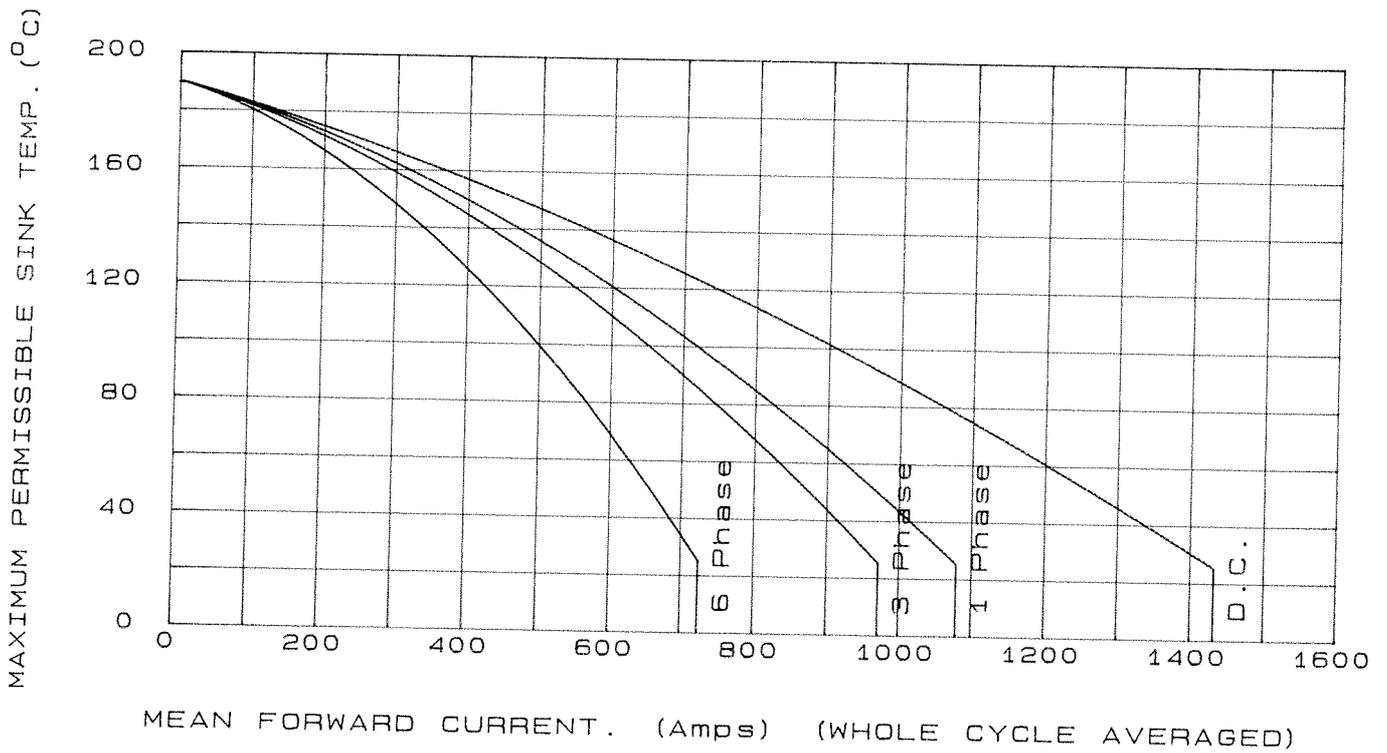
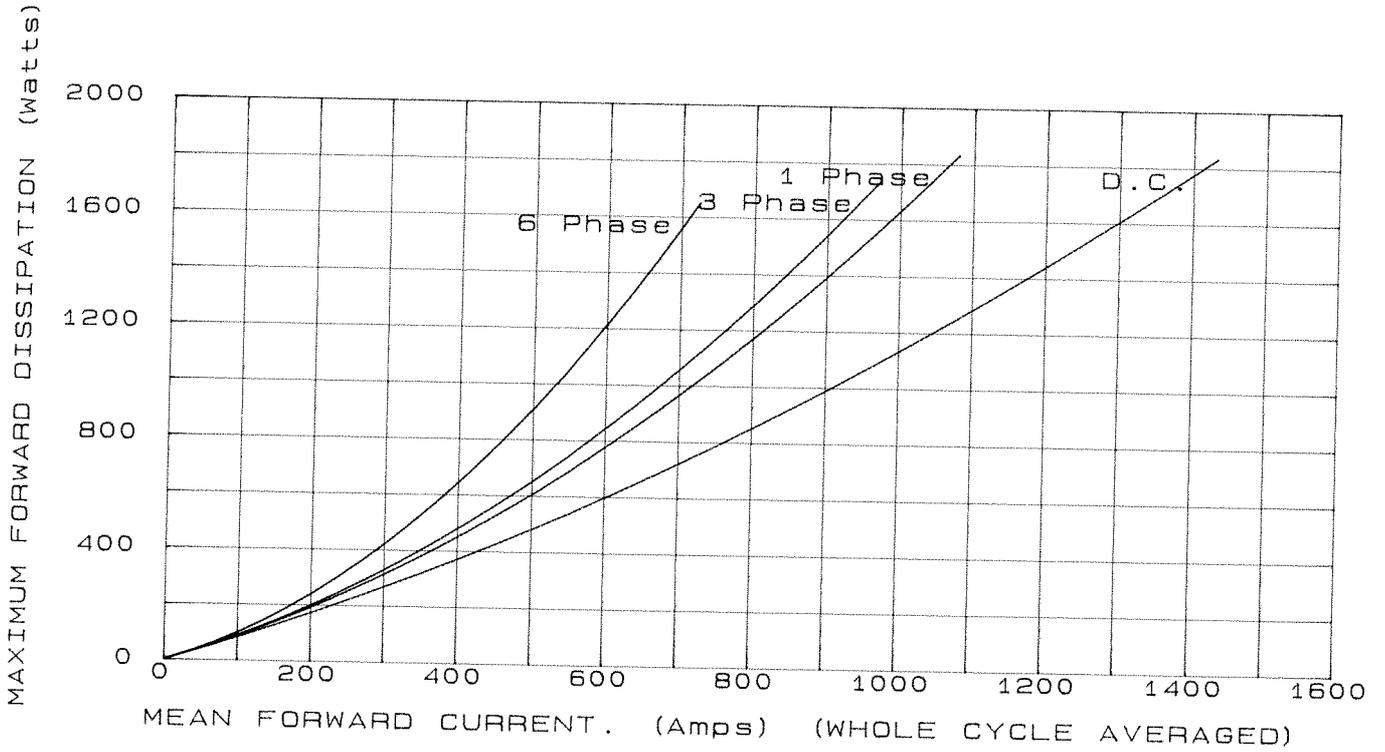
- Page 1 $I_{F(AV)}$, $I_{F(rms)}$ and I_F max.
- Page 2 V_o , r_s , Hot A B C D co-efficients
New cold A B C D co-efficients
- Page 3 This list
- Page 5-8 Re-drawn

Voltage Ratings

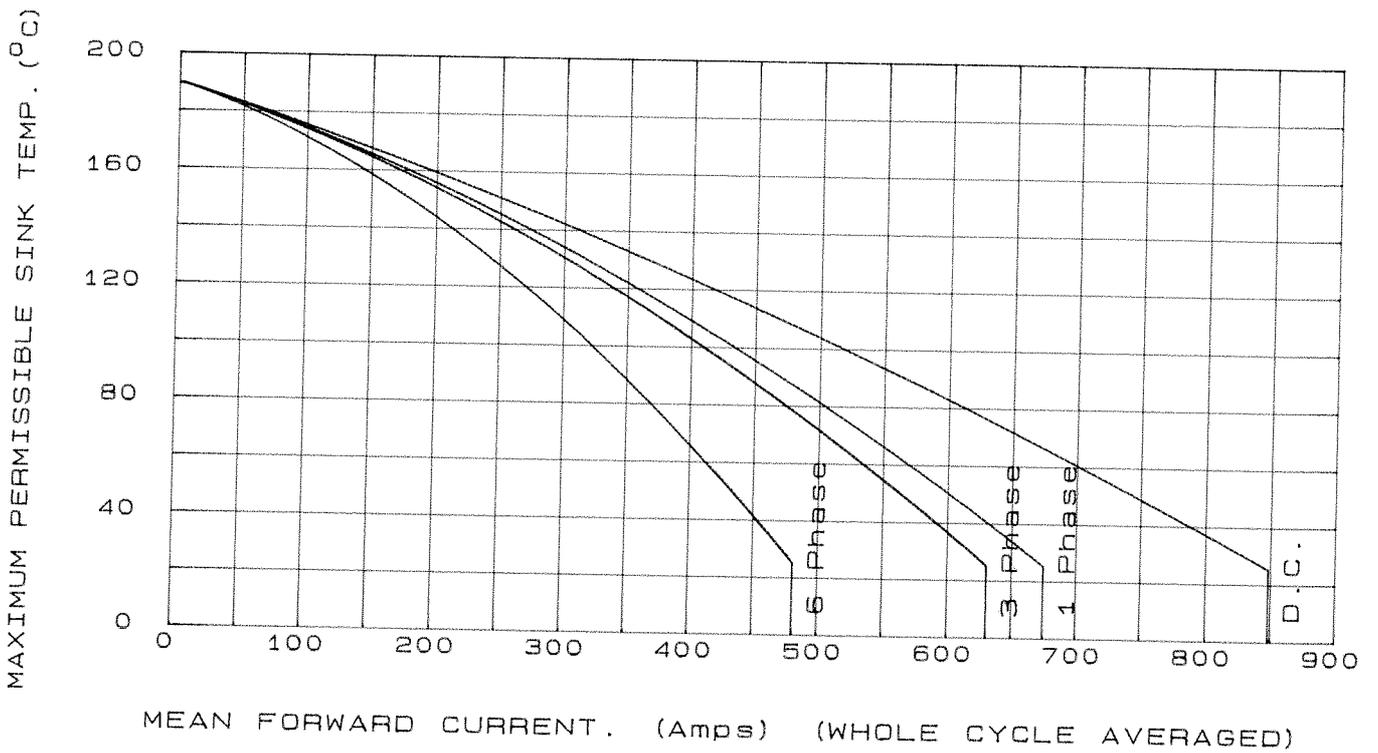
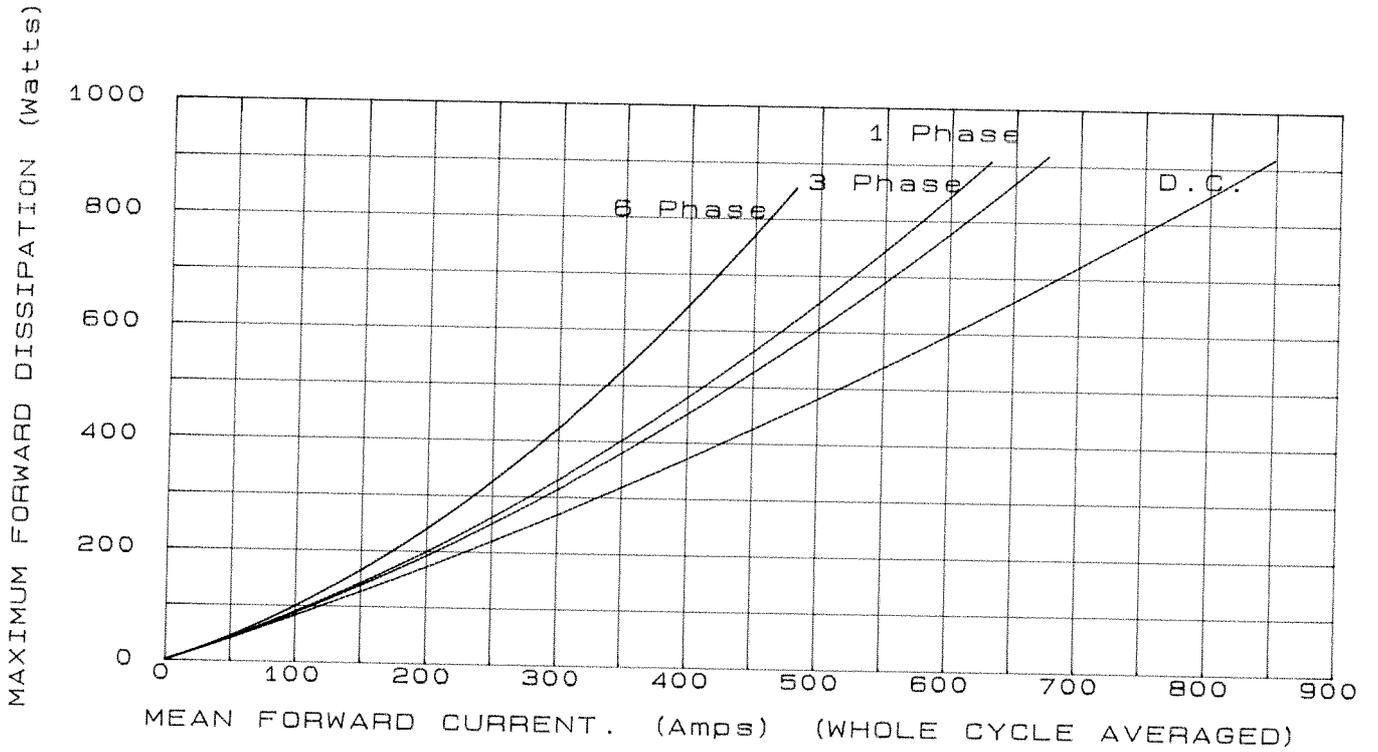
Voltage Class	V_{RRM} V	V_{RSM} V
2	200	300
4	400	500
6	600	700
8	800	900
10	1000	1100
12	1200	1300
14	1400	1500
15	1500	1600

This Report is applicable to higher or lower voltage grades when supply has been agreed by Sales/Production.

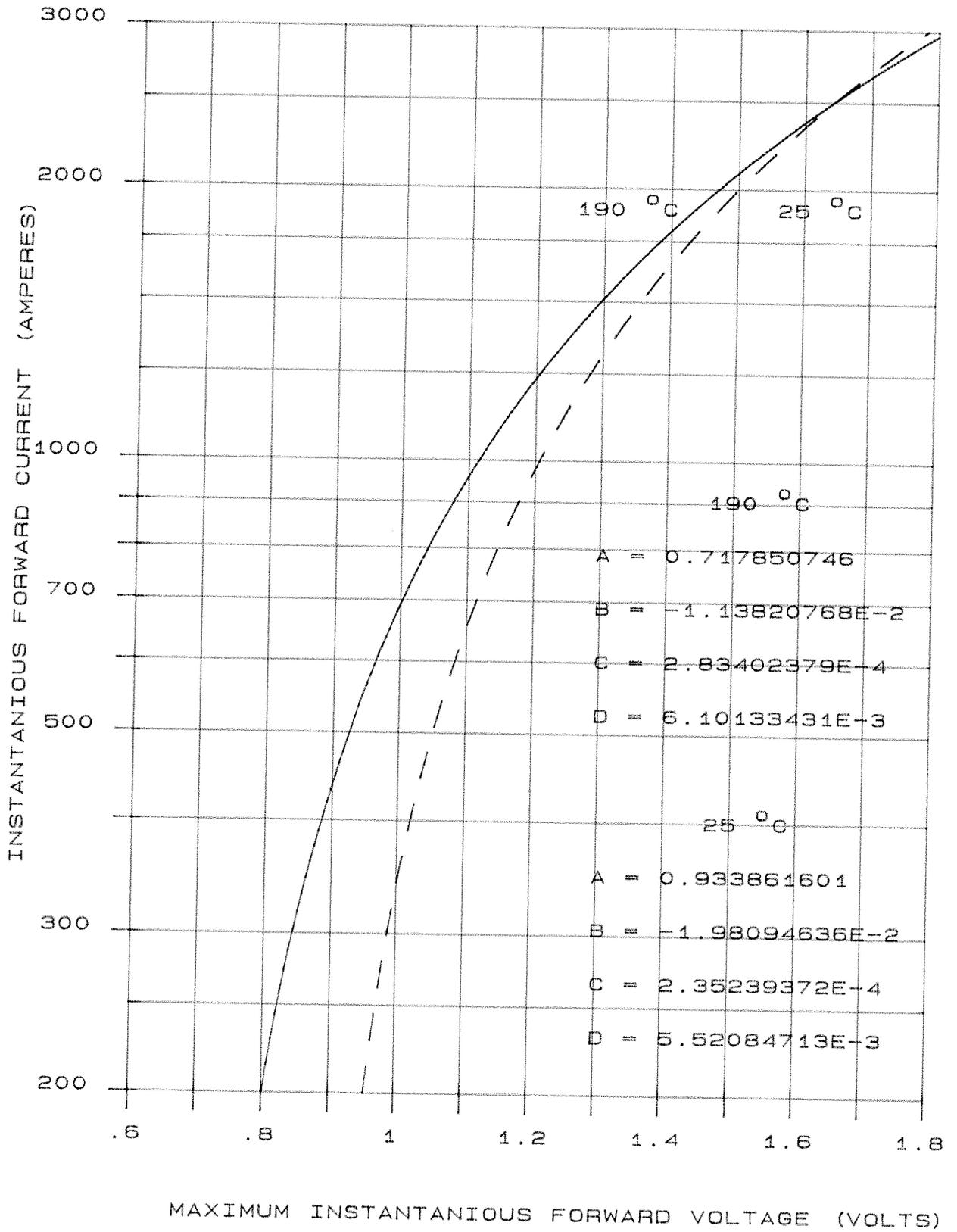
DOUBLE SIDE COOLED

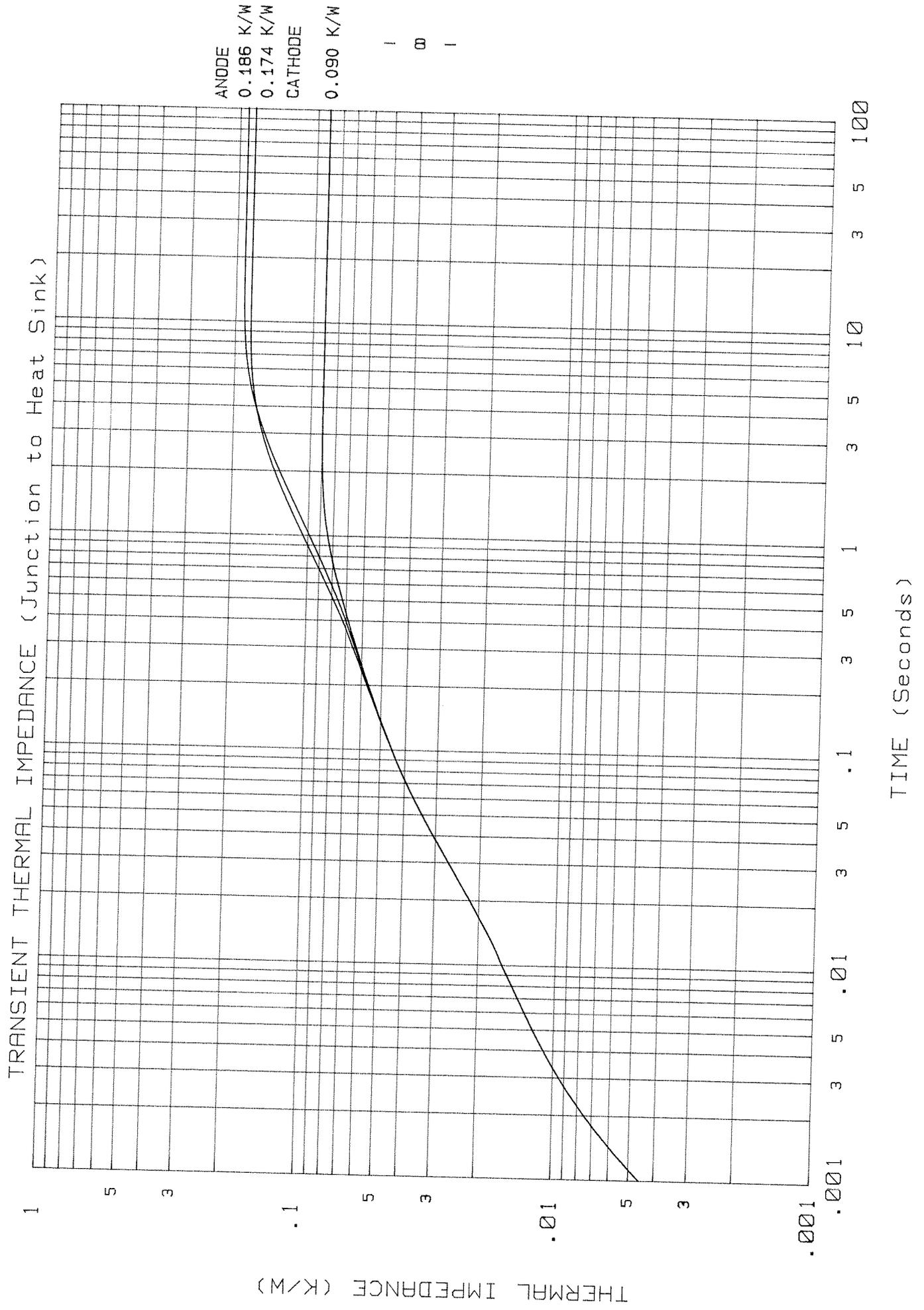


SINGLE SIDE COOLED



FORWARD CHARACTERISTIC OF LIMIT DEVICE





INTERNATIONAL OUTLINE No. DO-200AA
 G.A. DWG No. 159B100H100-H110.

WEIGHT. 70 GRAMS

FINISH. NICKEL PLATE

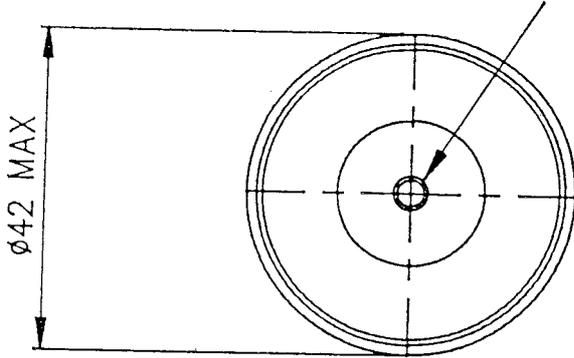
- 10 -

TYPE NUMBER

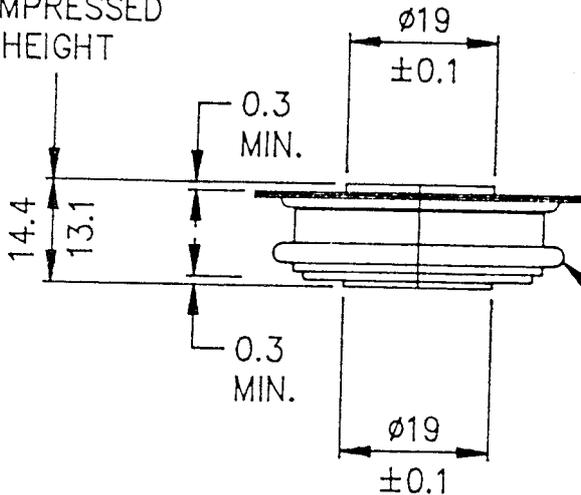
CXC300	CXC134
CXC320	CXC144
CXC380	CXC170
CXC400	CXC174
CXC470	

DEVICE MOUNTING: CLAMPING FORCE TO BE APPLIED ON CENTRE LINE OF LOCATION HOLES AND BE EVENLY DISTRIBUTED OVER AREA OF CONTACT. FLAT TOL ON SURFACES TO WHICH DEVICE IS CLAMPED TO BE 0.04 WIDE. CLAMPING FORCE = 330-550kgf.

∅3.6/3.5x1.8 MIN.
 DEPTH 2-HOLES, ONE IN CATHODE AND ONE IN ANODE.



COMPRESSED HEIGHT

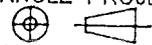


CREEP PATH OVER CONVOLUTION = 12 MIN.



THE INFORMATION CONTAINED IN THIS DWG IS PROTECTED BY COPYRIGHT. THE INFORMATION MAY NOT BE DISCLOSED EXCEPT BY THE WRITTEN PERMISSION OF WESTCODE SEMICONDUCTORS LIMITED.

SCALE 1/1	ISS REVISIONS
DRAWN HDN 10	10-09-90
	REDRAWN ON CAD HDN

THIRD ANGLE PROJECTION.

 DWG. COMPLIES WITH BS 308.
 DIMNS. IN MILLIMETRES.
 DWG No. 100A241

 WESTCODE SEMICONDUCTORS LTD.,
 P.O. BOX 57, CHIPPENHAM, WILTSHIRE, SN15 1EL, ENGLAND.
 TEL 0249 654141, TELEX 44751 WESCDE G, TELEFAX 0249 659448.