

Rectifier Diode

W0614WC160 to W0614WC240

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

(Rating Report 80NR7 Issue 2)

This data reflects the old part number for this product which is: SW16-24CXC320. This part number must **NOT** be used for ordering purposes – please use the ordering particulars detailed below.

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

W0614	WC	◆◆	0
Fixed Type Code	Fixed Outline Code	Voltage code $V_{DRM}/100$ 16-24	Fixed Code
Typical Order Code: W0614WC220, 14mm clamp height, 2200V V_{RRM}			

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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: 80NR7 (Issue 2)

Date: 15th January, 1987

Origin:

Pages: 10

Diode Type SW16-24CXC320

Written by:

M. J. Dunlop

Checked:

M. W. J.

Approved:

P. H. A.

This diode consists of a diffused, 24 mm diameter silicon slice mounted in a cold weld capsule housing. This Report supersedes Rating Report No. 80NR7 (Issue 1)

Ratings

Voltage Grades	: 16-24
V_{RSM}	: 1700-2500V
V_{RRM}	: 1600-2400V
$I_{F(AV)}$: Single phase; 50 Hz, 180° half sinewave; (Converter Ratings) :	
Double Side Cooled $T_{HSE} = 55^{\circ}C, 100^{\circ}C$	: 614A; 458A
Single Side Cooled $T_{HS} = 100^{\circ}C$	: 280A
$I_{F(rms)}$ $T_{HS} = 25^{\circ}C$)	: 1100A
I_F $T_{HS} = 25^{\circ}C$) Double side cooled	: 960A
I_{FSM} : $t = 10ms$ half sinewave; T_J (initial) = $180^{\circ}C$; $V_{RM} = 0.6V_{RRM(MAX)}$	: 4000A
I_{FSM} : $t = 10ms$ half sinewave; T_J (initial) = $180^{\circ}C$; $V_{RM} \leq 10V$	: 4400A
I^2t : $t = 10ms$; T_J (initial) = $180^{\circ}C$; $V_{RM} = 0.6V_{RRM(MAX)}$	: $80 \times 10^3 A^2S$
I^2t : $t = 10ms$; T_J (initial) = $180^{\circ}C$; $V_{RM} \leq 10V$	: $96.8 \times 10^3 A^2S$
I^2t : $t = 3ms$; T_J (initial) = $180^{\circ}C$; $V_{RM} \leq 10V$	: $71.6 \times 10^3 A^2S$
T_{HS} Operating Range	: -40 to $+180^{\circ}C$
T_{stg} ; Non-operating	: -40 to $+200^{\circ}C$

Characteristics

(Maximum values unless stated otherwise)

$V_D : T_J = 180^{\circ}\text{C}$	: 1.0
$r_s : T_J = 180^{\circ}\text{C}$	: 0.83mohms
$V_{FM} : I_{FM} = 1440\text{A } T_{VJ} = 180^{\circ}\text{C}$	: 2.2V
$R_{th} \text{ (J-HS) Double side cooled}$	: 0.09°C/W
Single side cooled	: 0.18°C/W
$I_{RRM} : T_J = 180^{\circ}\text{C } V_{RM} = V_{RRM(\text{MAX})}$	: 15mA
$Q_{rr} : I_{FM} = \quad ; dI/dt = \quad (50\% \text{ chord value})$	:
$V_{RM} = \quad T_{VJ} = \quad$	:
$t_{rr} \text{ (conditions as above)}$	:
Mounting Force	: 330-550Kg.f
Outline Drawing	: 100A241
JEDEC Outline No.	: D0200AA

CONTENTS

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

Changes to 80NR7 (Issue 1)

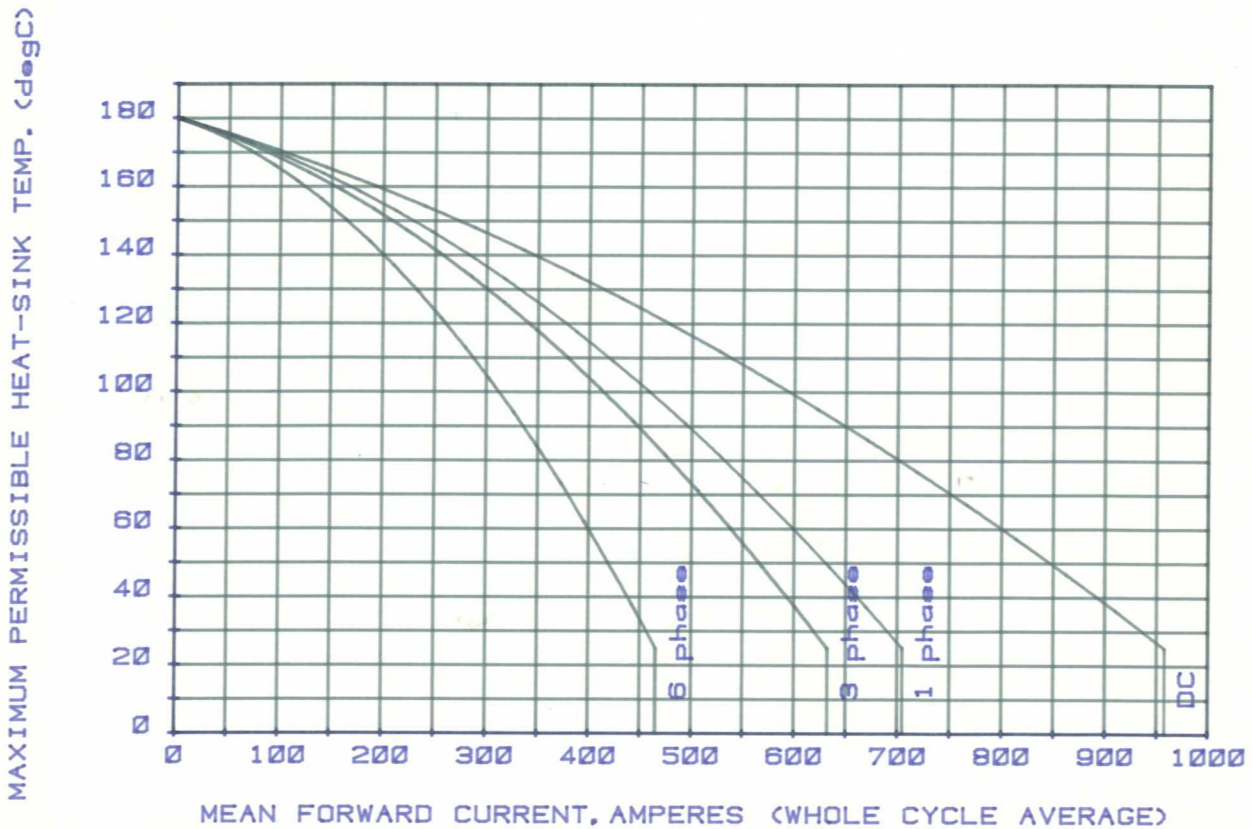
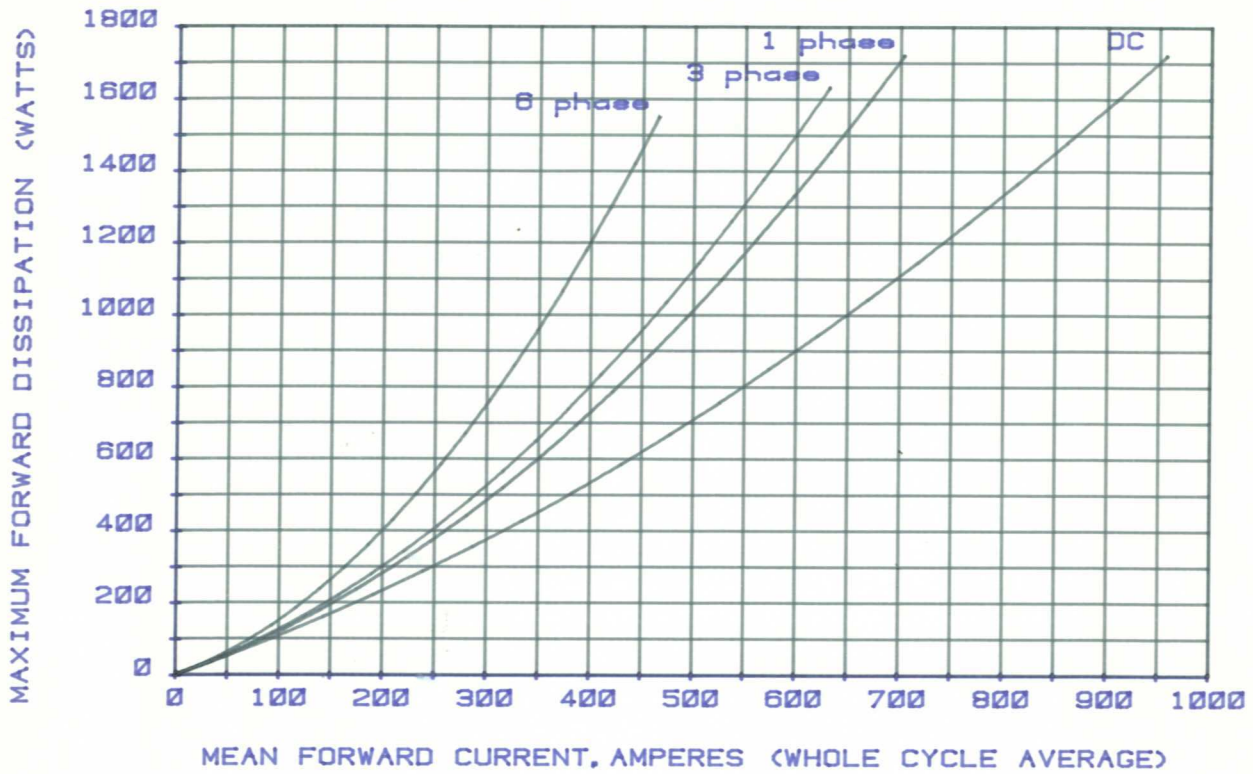
p1	V_{RWM} omitted
	T_{HS} (Operating range) MIN reduced to $-40^{\circ}C$
p7	$I_F - V_F$ and Z_{th} v t curves drawn on separate sheets

Voltage Ratings

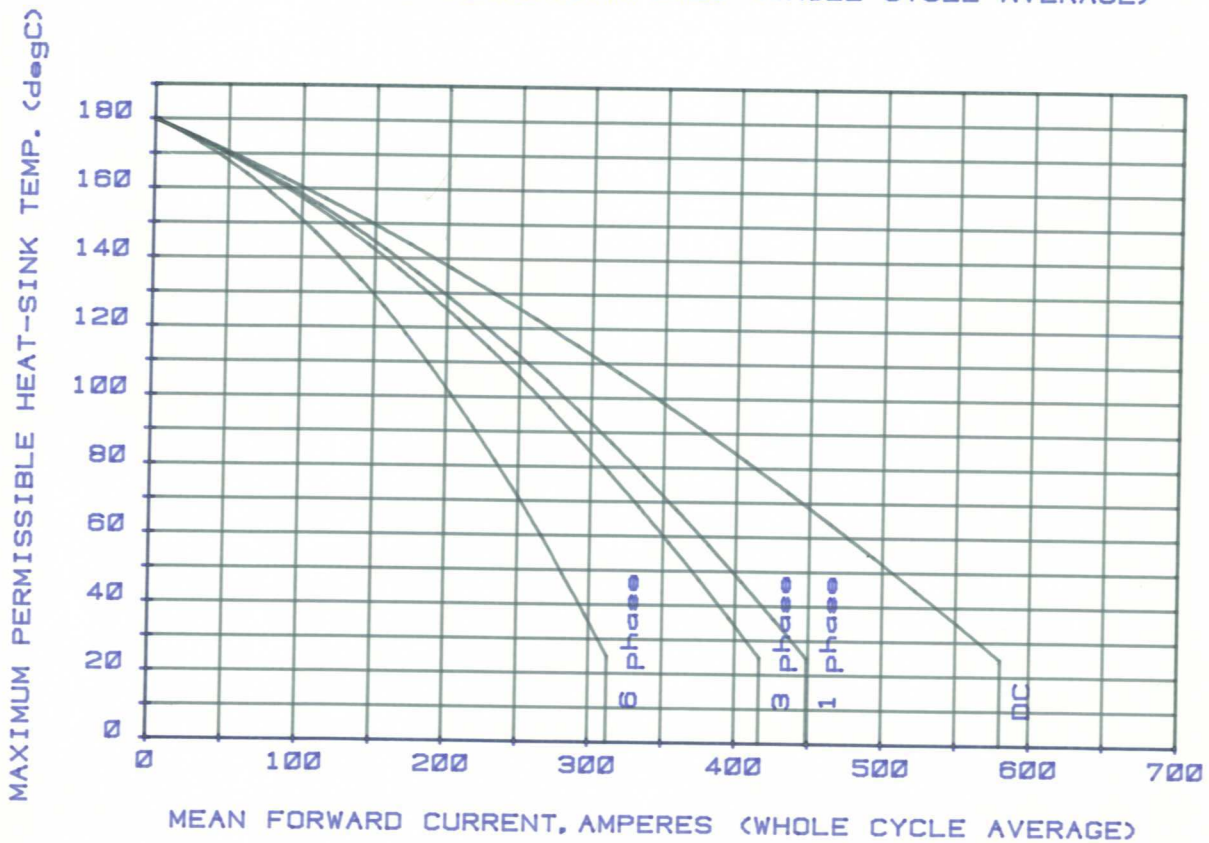
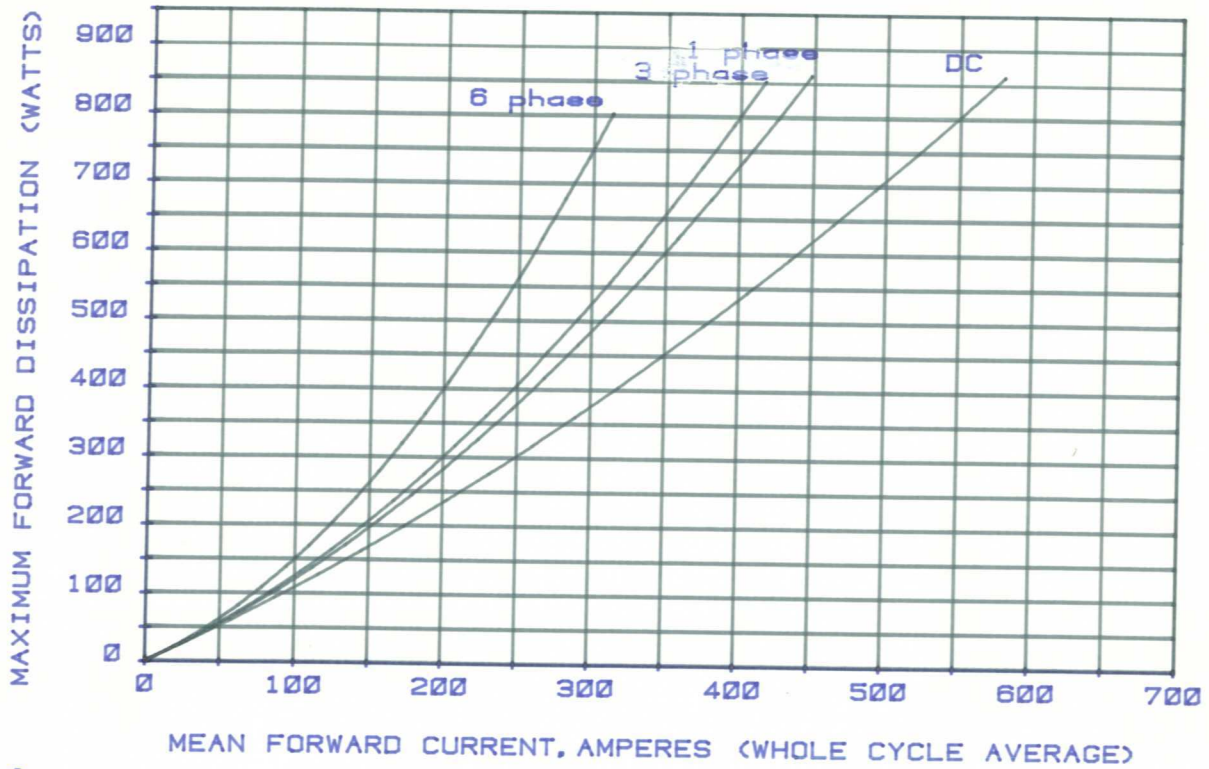
Voltage Class	V_{RRM} V	V_{RSM} V
16	1600	1700
18	1800	1900
20	2000	2100
22	2200	2300
24	2400	2500

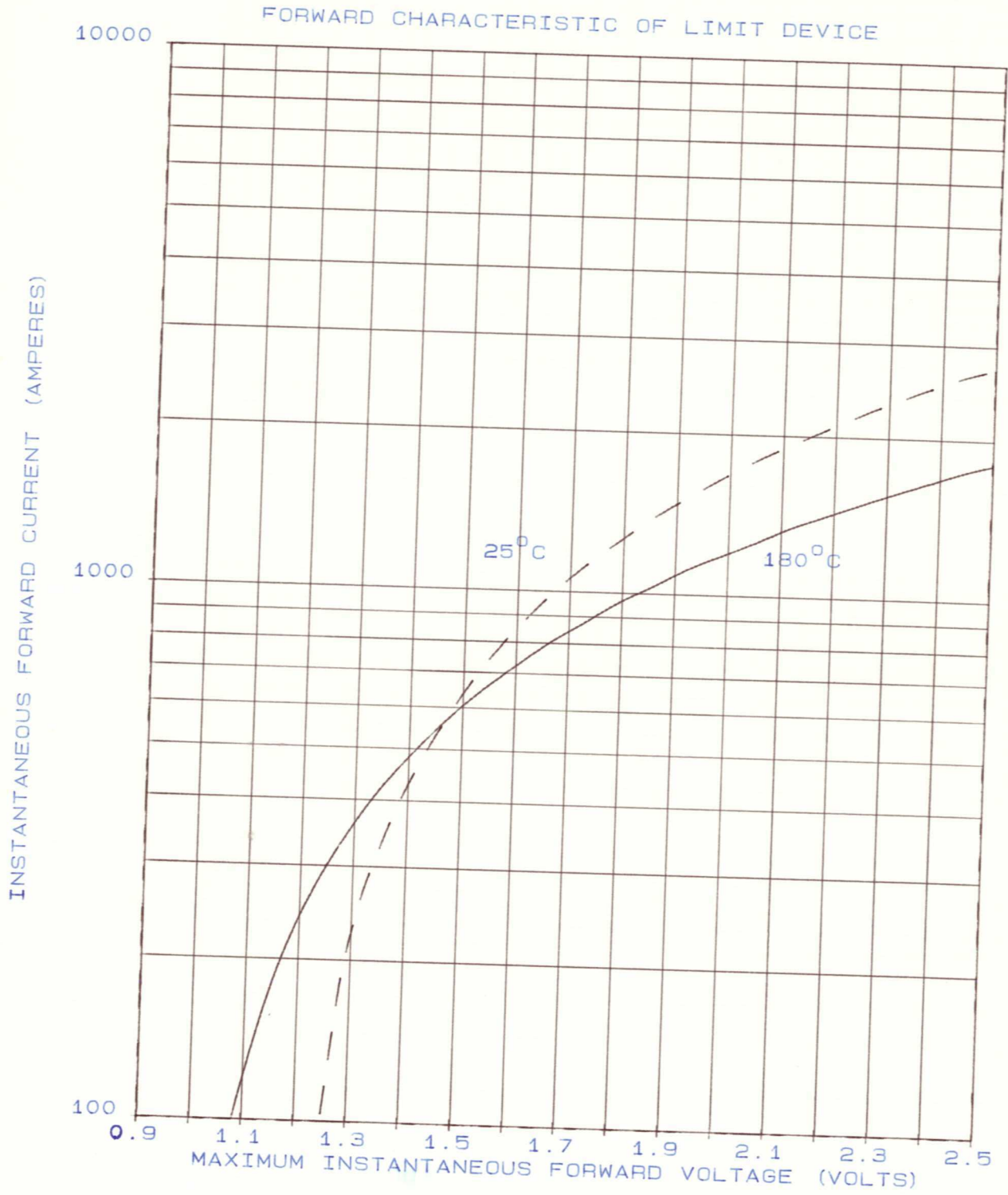
This Report is applicable to higher or lower voltage grades when supply has been agreed by Sales/Production.

DOUBLE SIDE COOLED

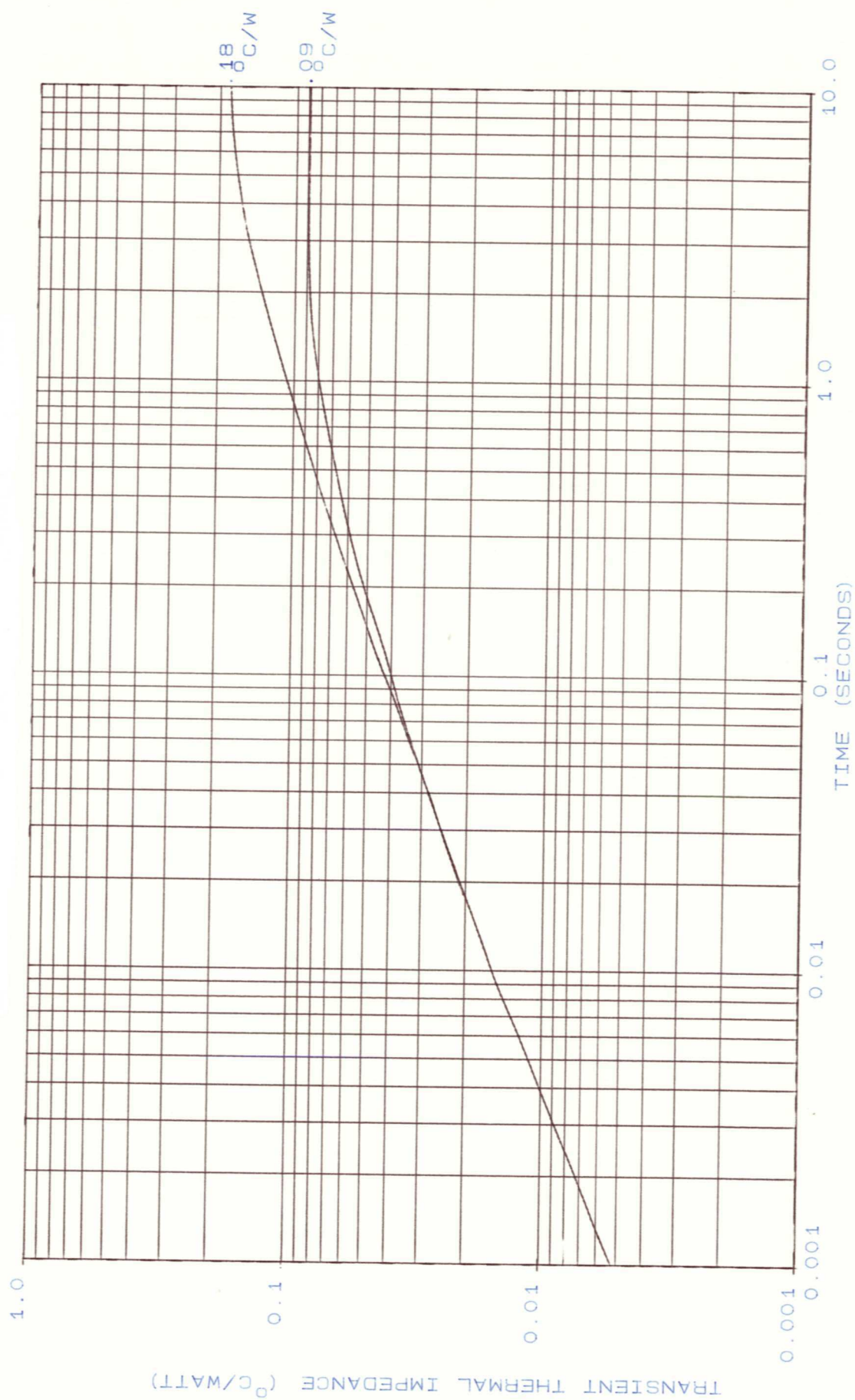


SINGLE SIDE COOLED

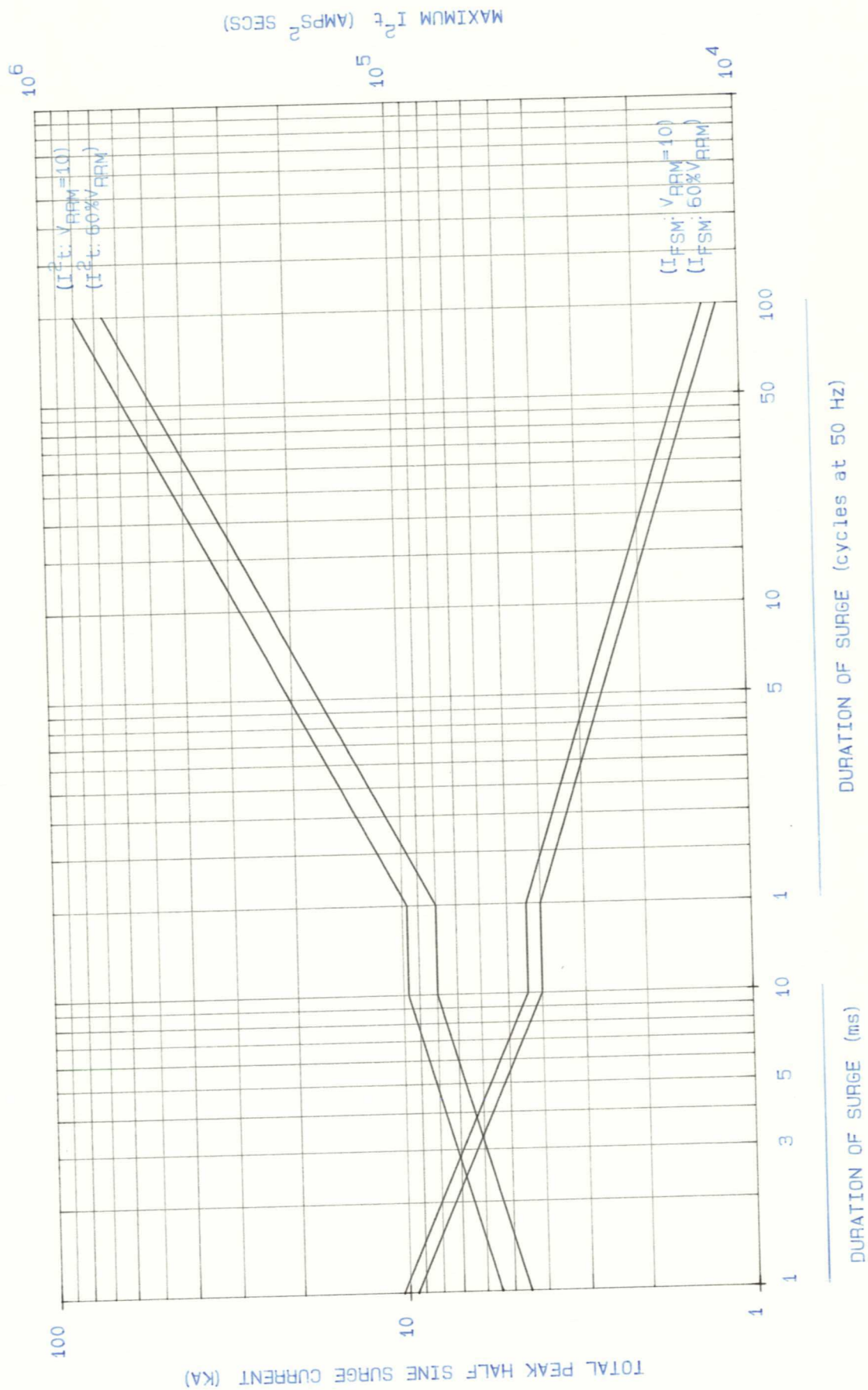




JUNCTION TO HEATSINK THERMAL IMPEDANCE



MAXIMUM NON REPETITIVE SURGE CURRENT AT INITIAL JUNCTION TEMPERATURE 180°C

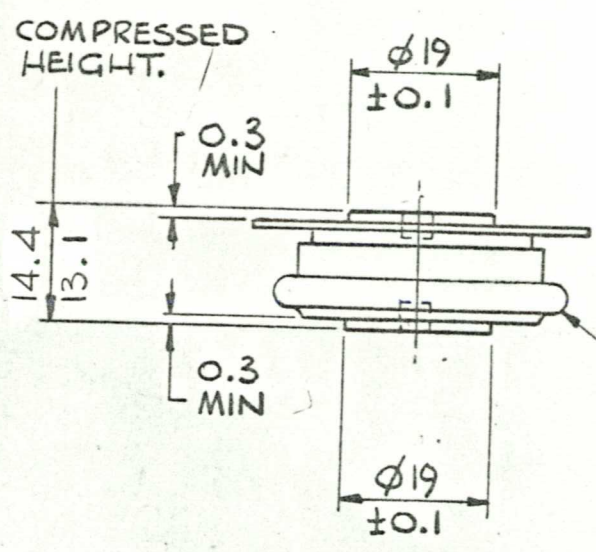
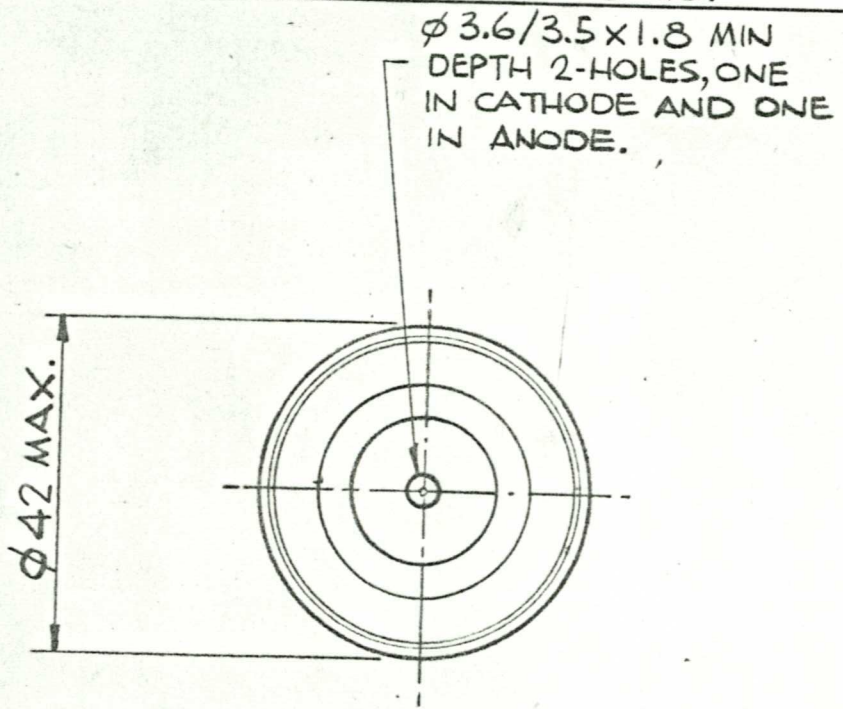


SCALE	1/1
DRN	1/1
CHKD	1/1
APPD	
A	
S	NI

INTERNATIONAL OUTLINE No. **DO-200AA.**
 WEIGHT. **70 GRAMS.**
 FINISH. **NICKEL PLATE.** - 10 -
 DEVICE MARKING INCLUDES MONOGRAM, TYPE No., SPEC. No. AND POLARITY SYMBOL.
 DEVICE MOUNTING: CLAMPING FORCE TO BE APPLIED ON Φ 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 - 550 kgf.

CXC300	TYPE NUMBER
CXC320	CXC170
CXC380	CXC174
CXC400	

G.A. DRG. No. **159B100H100-H110. 102B213.**



CREEP PATH OVER CONVOLUTION = 8 MIN.



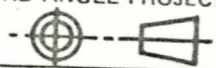
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WESTCODE®
 SEMICONDUCTORS

THIRD ANGLE PROJECTION



DIMNS. IN MILLIMETRES

DRG. No.

100A241

ISS	REVISIONS	REDAWN:
1	10.9.76	PI18
2	15.2/14	WAS 15.2/12.5. Ø19 WAS Ø29. P304 18.5.78
3	CLAMPING FORCE WAS 500-1200 kgf. 7.9.78	
4	11.9.78	Ø42 WAS Ø43 14.35/13.08 WAS 15.2/14. CLAMP FORCE WAS 400-700 kgf
5	19.9.78 14.4/13.1 WAS 14.35/13.08	
6	30.10.78 M670 TYPE N° ADDED	
7	17.9.79 M773 550 kgf WAS 700 kgf.	