Rectifier Diode
W1185LC300 to W1185LC450

The data sheet on the subsequent pages of this document is a scanned copy of existing data for this product.
(Rating Report 87NR6 Issue 1)

This data reflects the old part number for this product which is: SW38-44CXC515. 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

Please use the following link to view an up to date outline drawing for this device
Outline W4

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			
W1185	LC	♦♦	**0**
Fixed Type Code	Fixed Outline Code	Voltage code V_{DRM}/100 30-45	Fixed Code
Typical Order Code: W1185LC320, 27mm clamp height, 3200V V_{RRM}			

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QUALITY EVALUATION LABORATORY

Rating Report: 87NR6

Date: 27th March, 1987

Pages: 10

Diode Type SW38-44CXC515

Written by: [signature] Checked: [signature] Approved: [signature]

This diode consists of an all diffused 38 mm diameter silicon slice mounted in a cold weld capsule housing.

This Report supersedes Rating Report No. 78NR15.

Ratings

Voltage Grades	: 38-44
V_{RSM}	: 3900-4500V
V_{RRM}	: 3800-4400V
$I_{F(AV)}$: Single Phase; 50 Hz, 180° half sinewave;	
Double side cooled T_{HS} = 55°C, 100°C	: 1186, 833A
Single side cooled T_{HS} = 100°C	: 528A
I_F (rms) max.) Double side cooled T_{HS} = 25°C	: 2171A
I_F max.) Double side cooled T_{HS} = 25°C	: 1936A
I_{FSM} : t = 10ms half sinewave; T_J (initial) = 180°C; V_{RM} = 0.6 V_{RRM}(Max)	: 9200A
I_{FSM} ; t = 10ms half sinewave; T_J (initial = 180°C; $V_{RM} \leq 10V$	: 10,580A
I^2t : t = 10ms; T_J (initial) = 180°C; V_{RM} = 0.6 V_{RRM}(Max)	: $0.423 \times 10^6 A^2 SECS$
I^2t : t = 10ms; T_J (initial) = 180°C; $V_{RM} \leq 10V$	: $0.559 \times 10^6 A^2 SECS$
I^2t : t = 3ms; T_J (initial) = 180°C; $V_{RM} \leq 10V$	: $0.416 \times 10^6 A^2 SECS$
T_{HS} Operating range	: -55 to +160°C
T_{stg}; Non-operating	: -55 to +185°C

Characteristics

(Maximum values unless stated otherwise)

V_O : T_J = 160°C	:	1.0V
r_s : T_J = 160°C	:	0.575mohm
V_{FM} : I_{FM} = 2420A T_{VJ} = 160°C	:	2.4V
R_{th}(J-HS) Double side cooled	:	0.033°C/watt
Single side cooled	:	0.065°C/watt
I_{RRM} : T_J = 160°C V_{RM} = $V_{RRM(Max)}$	:	30mA
Q_{rr} : I_{TM} = dI/dt =	:	
V_{RM} = T_{VJ} =	:	
Mounting Force	:	1000-2000 Kgf
Outline drawing	:	100A243
Jedec Outline No.	:	DO-200AB

CONTENTS

Changes to Rating Report No. 78NR15

P1 : $I_{F(AV)}$ at T_{HS} = 55°C changed)
) D.S.C.
$I_{F(AV)}$ at T_{HS} = 100°C added)

$I_{F(AV)}$ at T_{HS} = 100°C changed - S.S.C.

$I_{F(rms)}$ MAX changed

$T_{HS(MIN)}$ reduced to - 40°C

P2 : JEDEC outline No. added

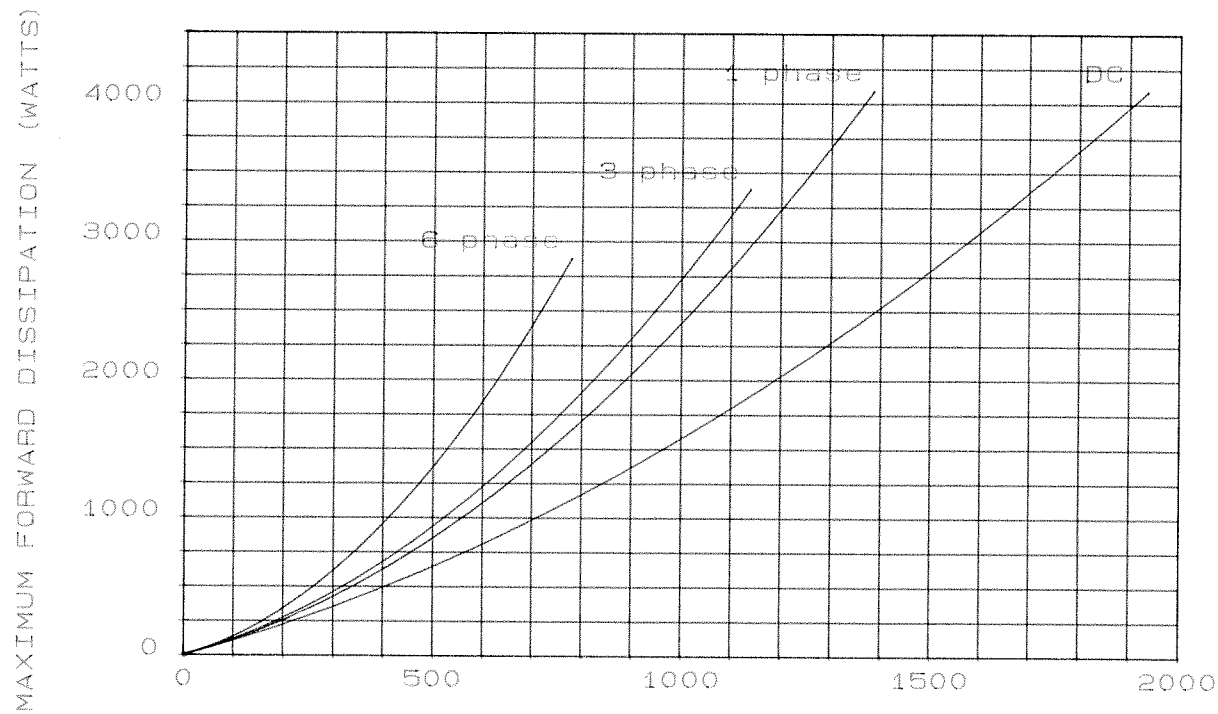
P5-9 : Redrawn with changes on p5 and p6.

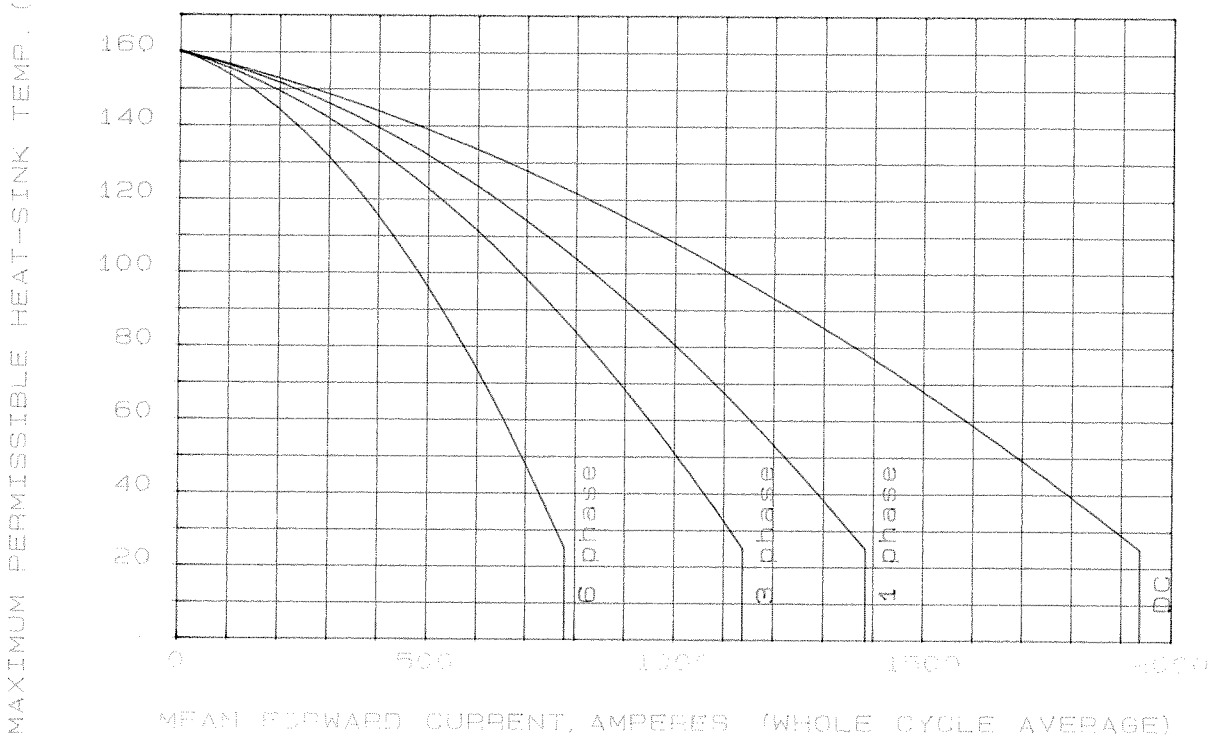
Voltage Ratings

Voltage Class SW	V_{RRM}	V_{RSM} V
38	3800	3900
40	4000	4100
42	4200	4300
44	4400	4500

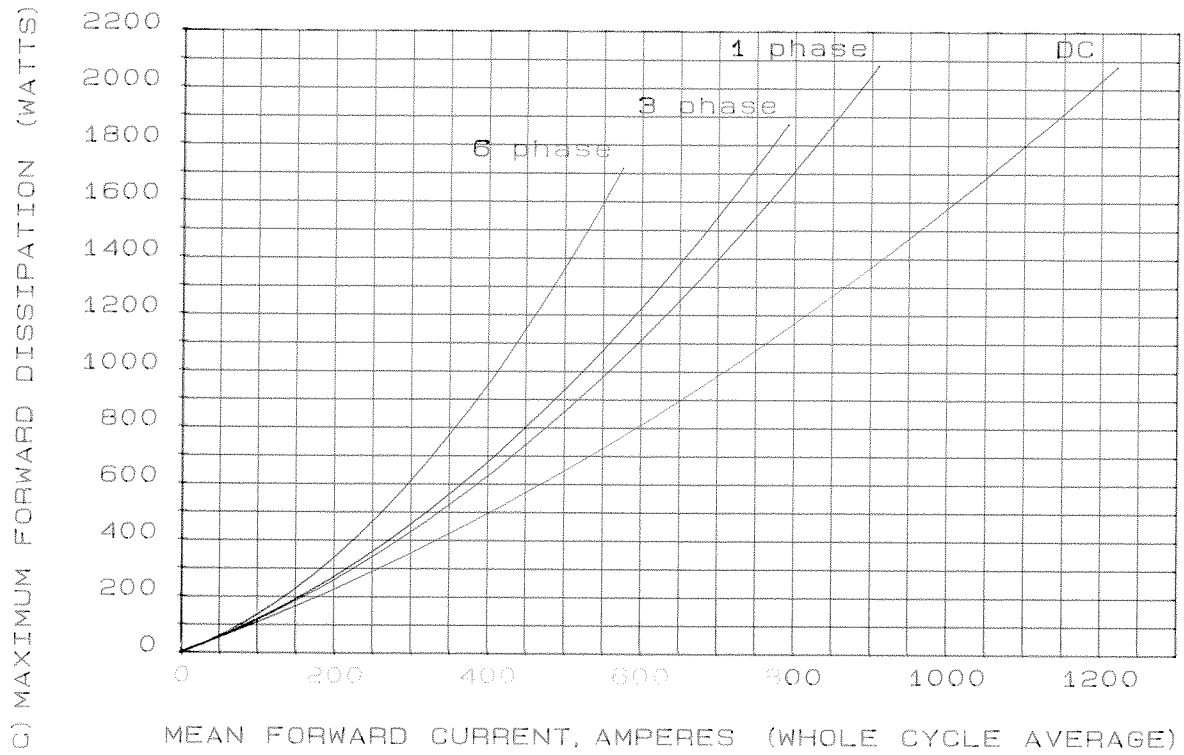
This report is applicable to higher or lower voltage grades when supply has been agreed by Sales/Production.

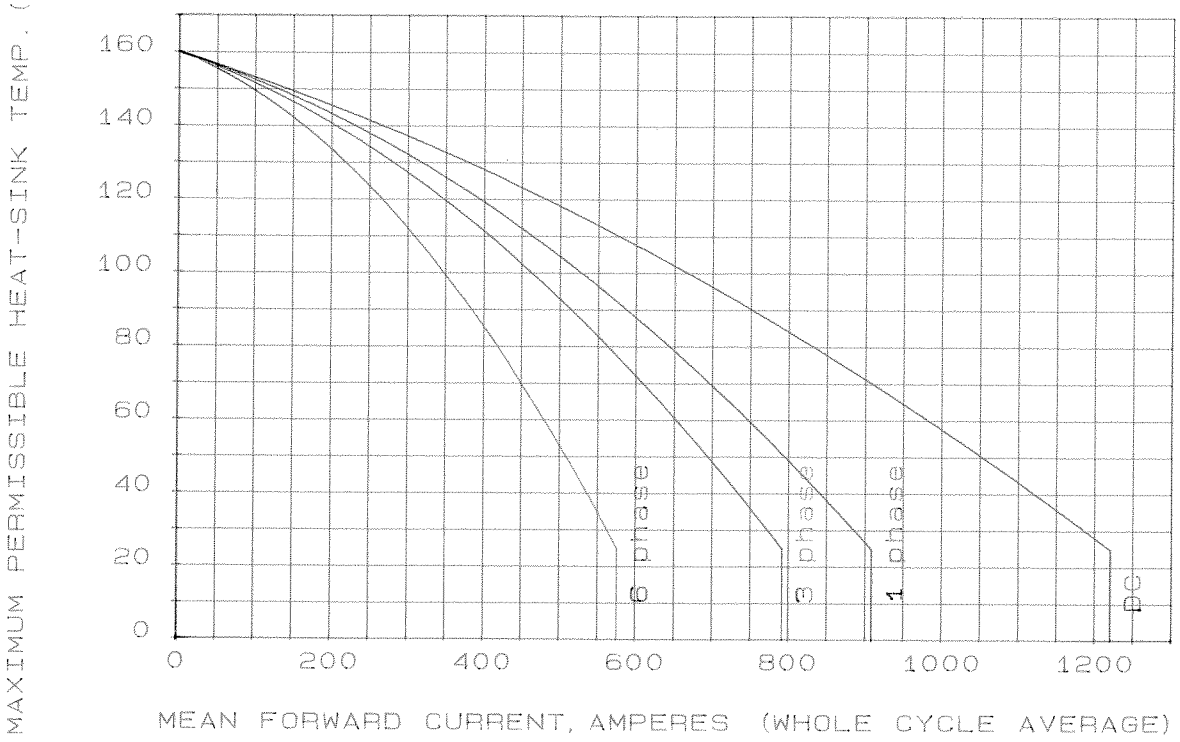
DOUBLE SIDE COOLED

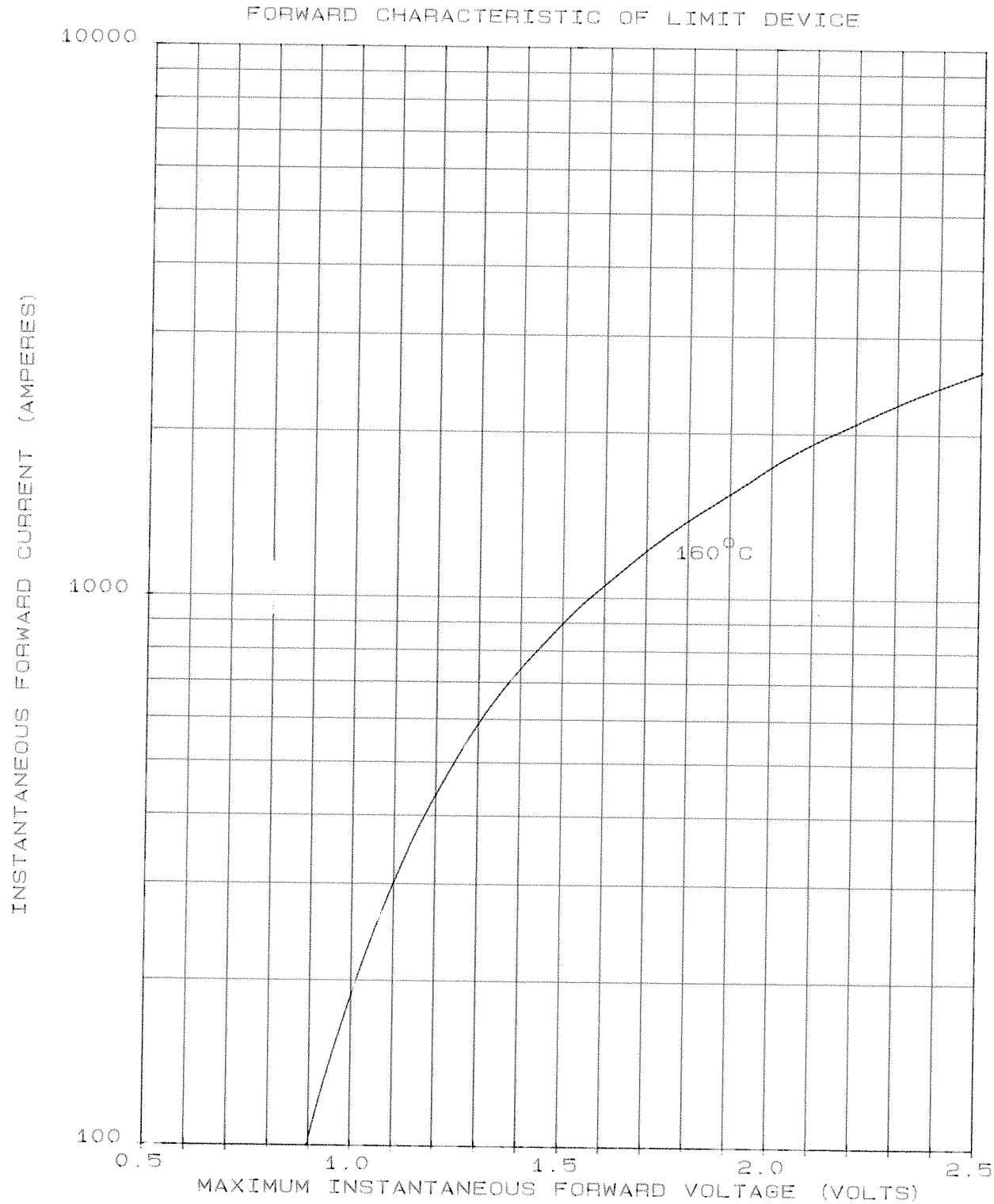


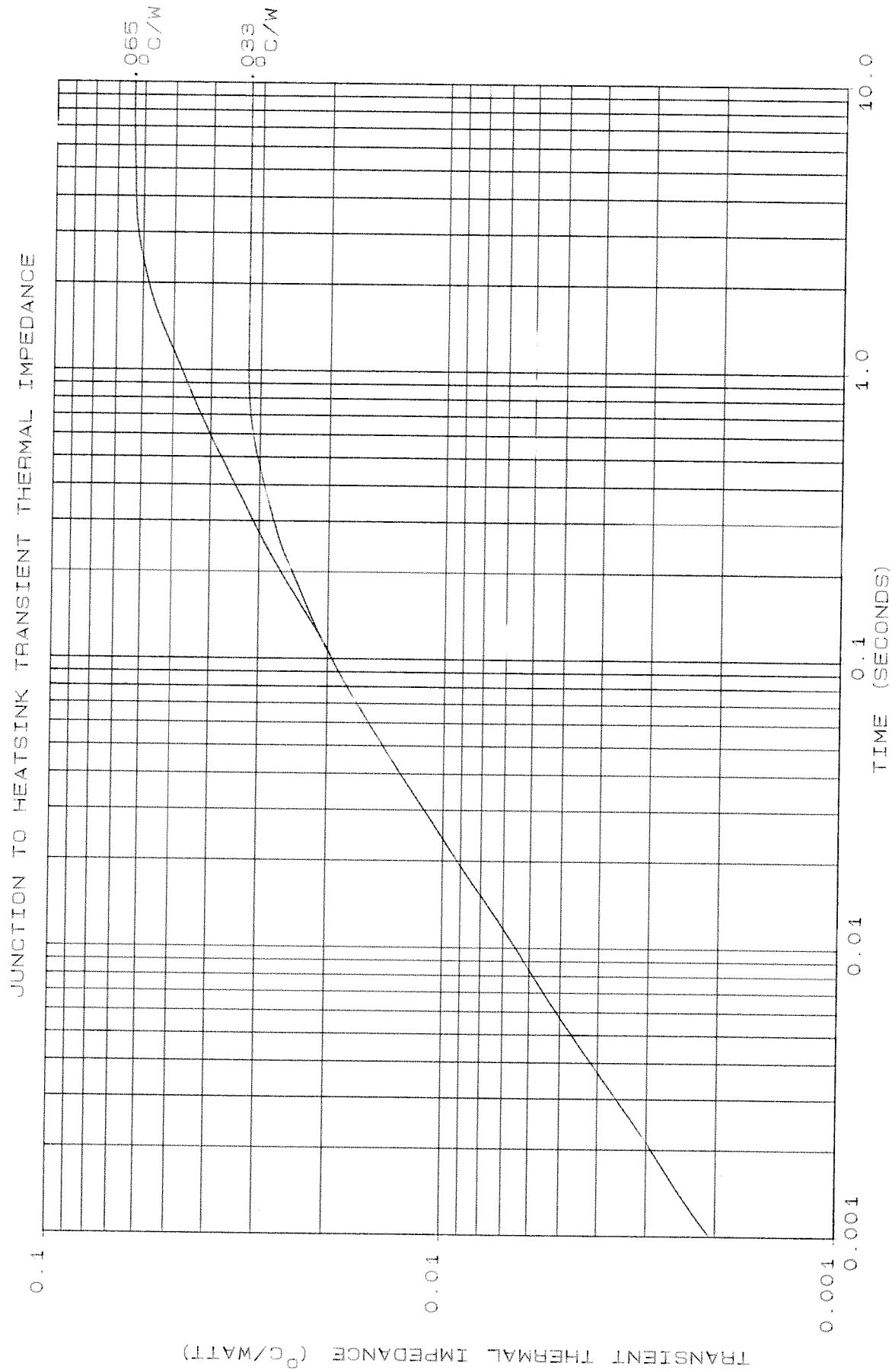


SINGLE SIDE COOLED

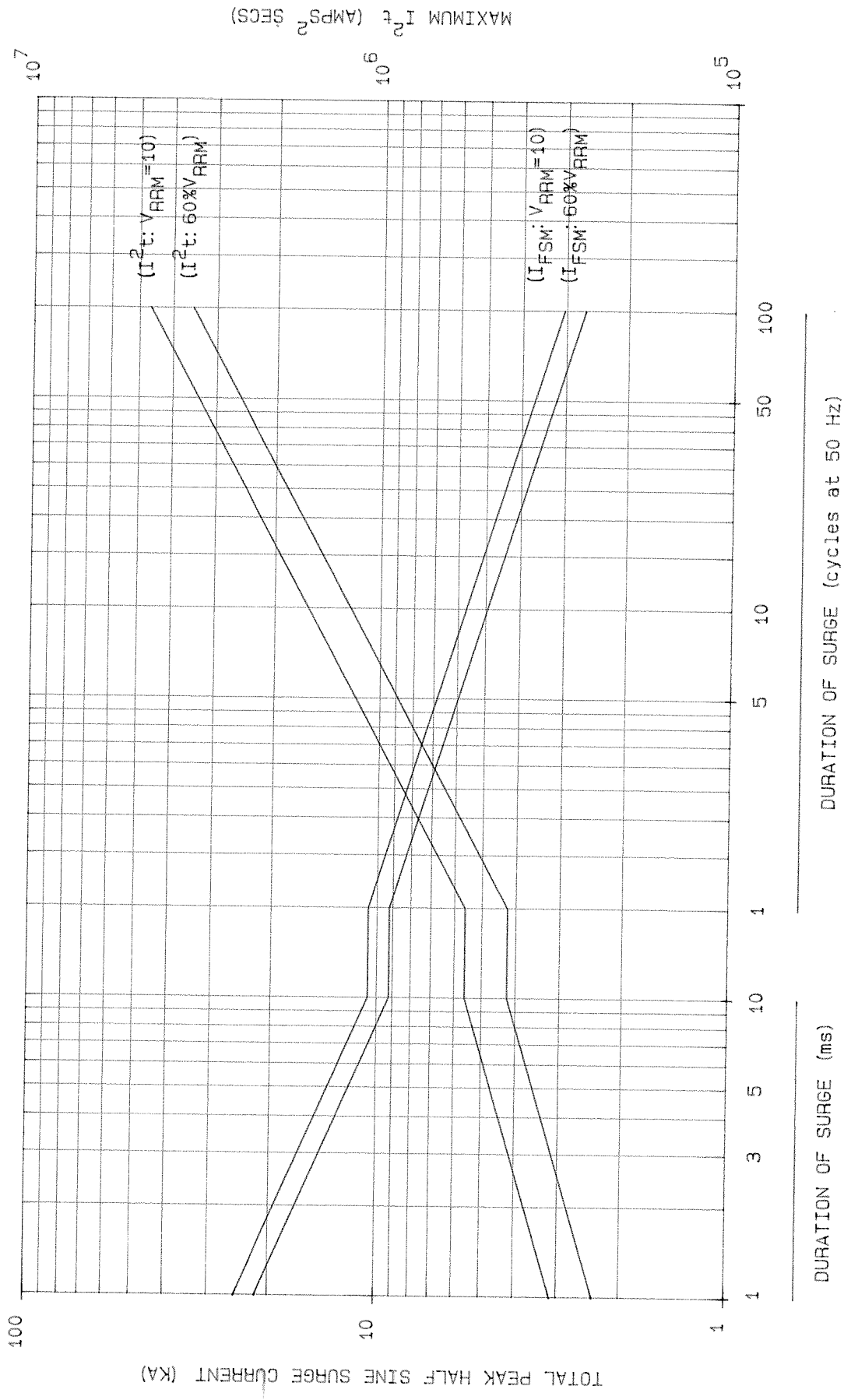





FORWARD CHARACTERISTIC OF LIMIT DEVICE
10000
1000
100
INSTANTANEOUS FORWARD CURRENT (AMPERES)
160°C
0.5
1.0
1.5
2.0
2.5
MAXIMUM INSTANTANEOUS FORWARD VOLTAGE (VOLTS)


JUNCTION TO HEATSINK TRANSIENT THERMAL IMPEDANCE
.065 °C/W
.033 °C/W
TRANSIENT THERMAL IMPEDANCE (°C/WATT)
0.1
0.01
0.001
0.0001
0.001
0.01
0.1
1.0
10.0
TIME (SECONDS)

MAXIMUM NON REPETITIVE SURGE CURRENT AT INITIAL JUNCTION TEMPERATURE 160°C



SCALE	1/1
DRN	
CHKD	
APPD	
	GEC 1 QS 1 QA 1 LP 2 HP 2 A
S	NI

INTERNATIONAL OUTLINE No. DO-200AB

WEIGHT. 340 GRAMS.

FINISH. ET TO BS 1872

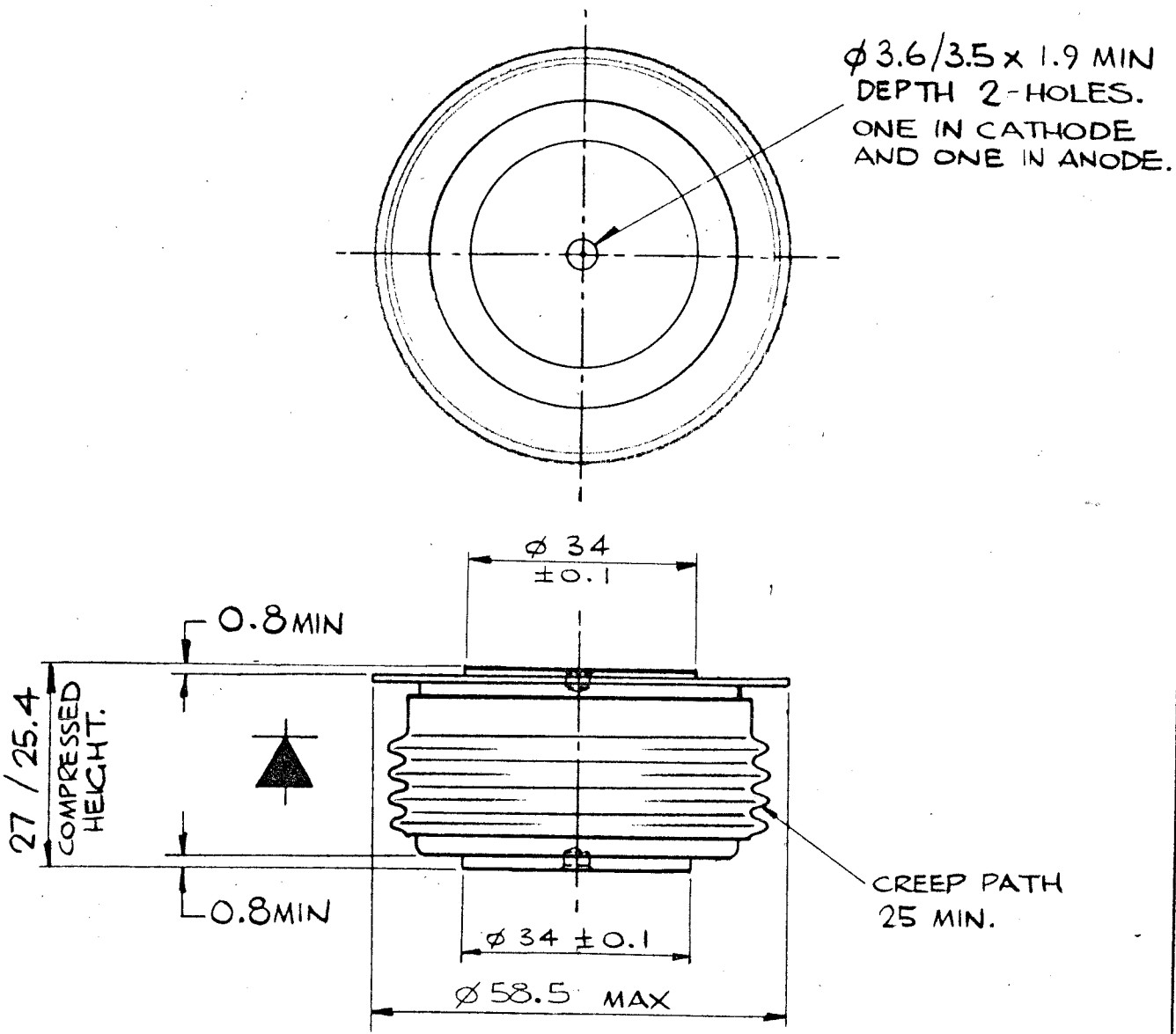
DEVICE MARKING INCLUDES MONOGRAM, TYPE No., SPEC. No. AND POLARITY SYMBOL.

DEVICE MOUNTING: CLAMPING FORCE: 1000 - 2000 kgf.

CLAMPING FORCE TO BE APPLIED ON ℄ OF LOCATION HOLES & BE EVENLY DISTRIBUTED OVER AREA OF CONTACT. FLATNESS TOL ON SURFACES TO WHICH DEVICE IS CLAMPED TO BE 0.04 WIDE.

G.A. DRG. No. 159B100H204

TYPE NUMBER	
CXC 935	CXC 220
CXC 805	CXC 224
CXC 635	CXC 474
CXC 595	CXC 524
CXC 515	CXC 724



WESTINGHOUSE BRAKE AND SIGNAL CO. LTD.
CHIPPENHAM, WILTSHIRE, SN15 1JD, ENGLAND.

WESTCODE ® SEMICONDUCTORS

THIRD ANGLE PROJECTION

DIMNS. IN MILLIMETRES

DRG. No. 100A243

ISS	REVISIONS
1	7.9.77 P188
2	P304 15.5.78 ø34 WAS ø38. 1.9 MIN WAS 3 MIN. 0.8 MIN WAS 0.5 & 1.5 MIN.
3	12.9.78 ø58.5 WAS ø60. CLAMP FORCE WAS 1000-1800 kgf.
4	12.10.78 TYPE Nº ADDED