Rectifier Diode
W1748LC080 to W1748LC220

The data sheet on the subsequent pages of this document is a scanned copy of existing data for this product.
(Rating Report 87NR9 Issue 1)

This data reflects the old part number for this product which is: SW02-22CXC805. 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:
Device not available for grades 02 to 06 (200V to 600
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.

Ordering Particulars

W1748	LC	♦♦	**0**
Fixed Type Code	Fixed Outline Code	Voltage code V_{DRM}/100 08-22	Fixed Code
Typical Order Code: W1748LC200, 27mm clamp height, 2000V V_{RRM}			

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QUALITY EVALUATION LABORATORY

Rating Report: 87NR9

Date: 11th June, 1987

Pages: 10

Diode Type SW02-22CXC805

Written by: M.W. Dunlop   Checked: MWD   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. 78NR12.

Ratings

Voltage Grades	: 02-22
V_{RSM}	: 300-2300V
V_{RRM}	: 200-2200V
$I_{F(AV)}$: Single Phase; 50 Hz, 180° half sinewave;	
Double side cooled T_{HS} = 55°C, 100°C	: 1750A; 1300A
Single side cooled T_{HS} = 100°C	: 808A
I_F (rms) max.) Double side cooled T_{HS} = 25°C	: 3160A
I_F max.)	: 2760A
I_{FSM} : t = 10ms half sinewave; T_J (initial) = 175°C; V_{RM} = 0.6 V_{RRM}(Max)	: 15,400A
I_{FSM} ; t = 10ms half sinewave; T_J (initial = 175 °C; $V_{RM} \leq 10V$	: 17,700A
I^2t : t = 10ms; T_J (initial) = 175 °C; V_{RM} = 0.6 V_{RRM}(Max)	: $1.19 \times 10^6 A^2$SECS
I^2t : t = 10ms; T_J (initial) = 175 °C; $V_{RM} \leq 10V$	: $1.57 \times 10^6 A^2$SECS
I^2t : t = 3ms; T_J (initial) = 175 °C; $V_{RM} \leq 10V$	: $1.16 \times 10^6 A^2$SECS
T_{HS} Operating range	: -40 to 175°C
T_{stg}; Non-operating	: -40 to 200°C

Characteristics

(Maximum values unless stated otherwise)

V_O : T_J = 175°C	: 0.87V
r_s : T_J = 175°C	: 0.28mohms
V_{FM} : I_{FM} = 3770A T_{VJ} = 175°C	: 1.93V
R_{th}(J-HS) Double side cooled	: 0.033°C/W
Single side cooled	: 0.065°C/W
I_{RRM} : T_J = 175°C V_{RM} = $V_{RRM(Max)}$	: 30mA
Q_{rr} : I_{TM} = dI/dt =	:
V_{RM} = T_{VJ} =	:
Mounting Force	: 1000-2000Kg.f
Outline drawing	: 100A243
Jedec Outline No.	: DO-200AB

CONTENTS

Changes to Rating Rep ort No. 78NR12

p1 : $I_{T(AV)}$ at T_{HS} = 55°C changed)
" " = 100°C added) D.S.C.

" " = 100°C changed - S.S.C.

I^2t_1)
) corrected
I^2t_2)

$T_{HS\ (MIN)}$ reduced to -40°C

p2 : JEDEC outline No. added

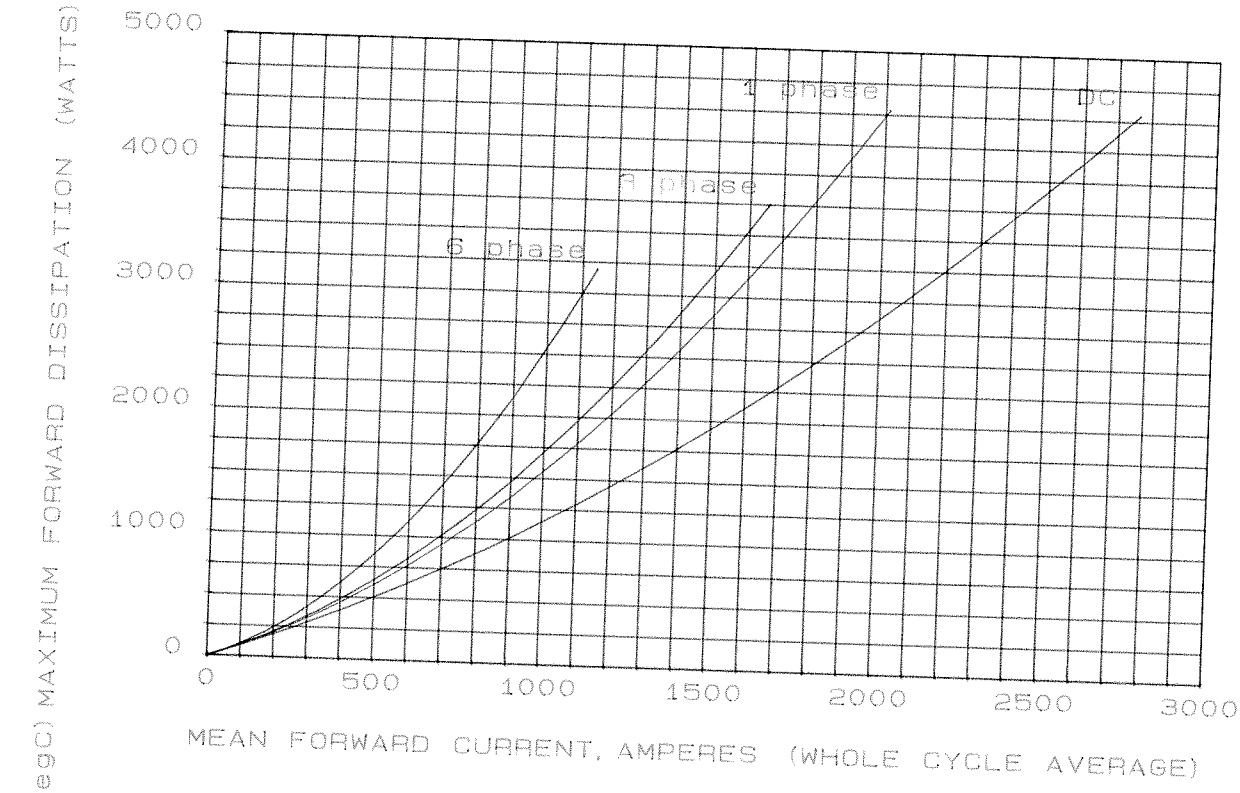
pp5-9 : Re-drawn with changes on p5 and p6.

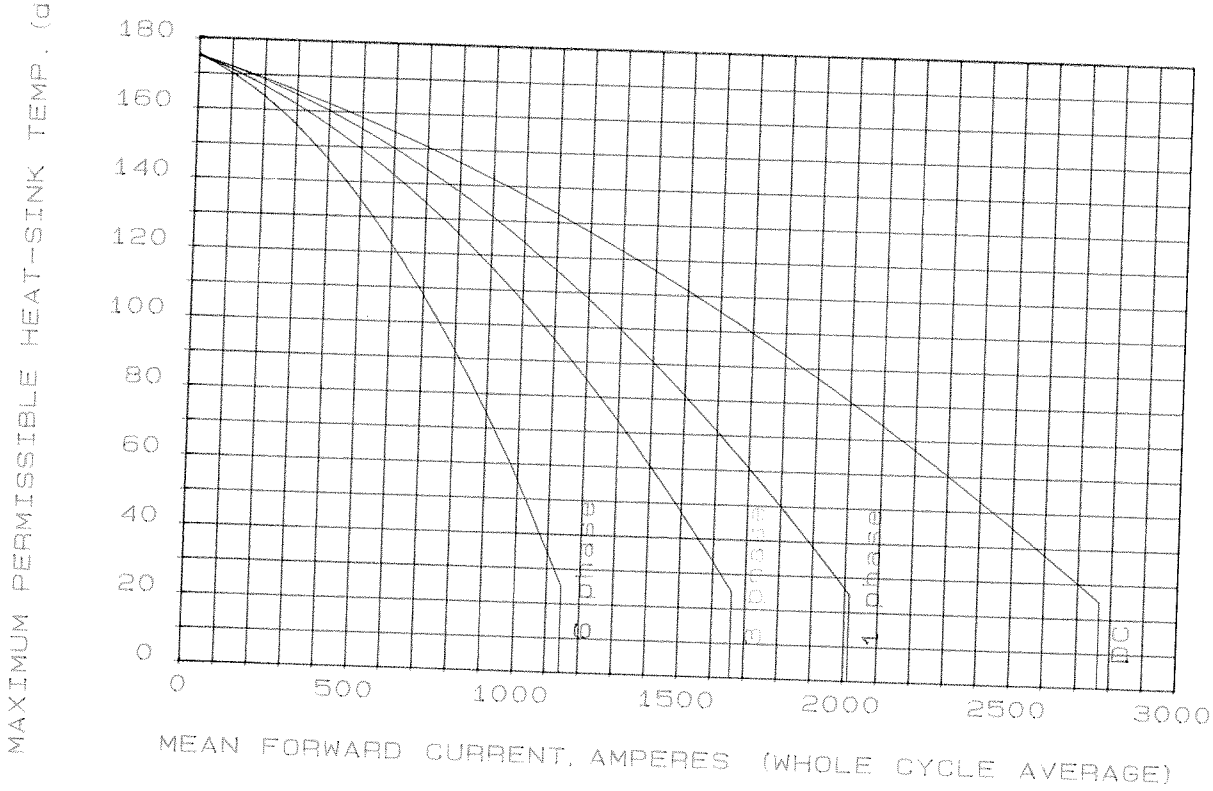
Voltage Ratings

Voltage Class SW	V_{RRM}	V_{RSM} V
02	200	300
04	400	500
06	600	700
08	800	900
10	1000	1100
12	1200	1300
14	1400	1500
16	1600	1700
18	1800	1900
20	2000	2100
22	2200	2300

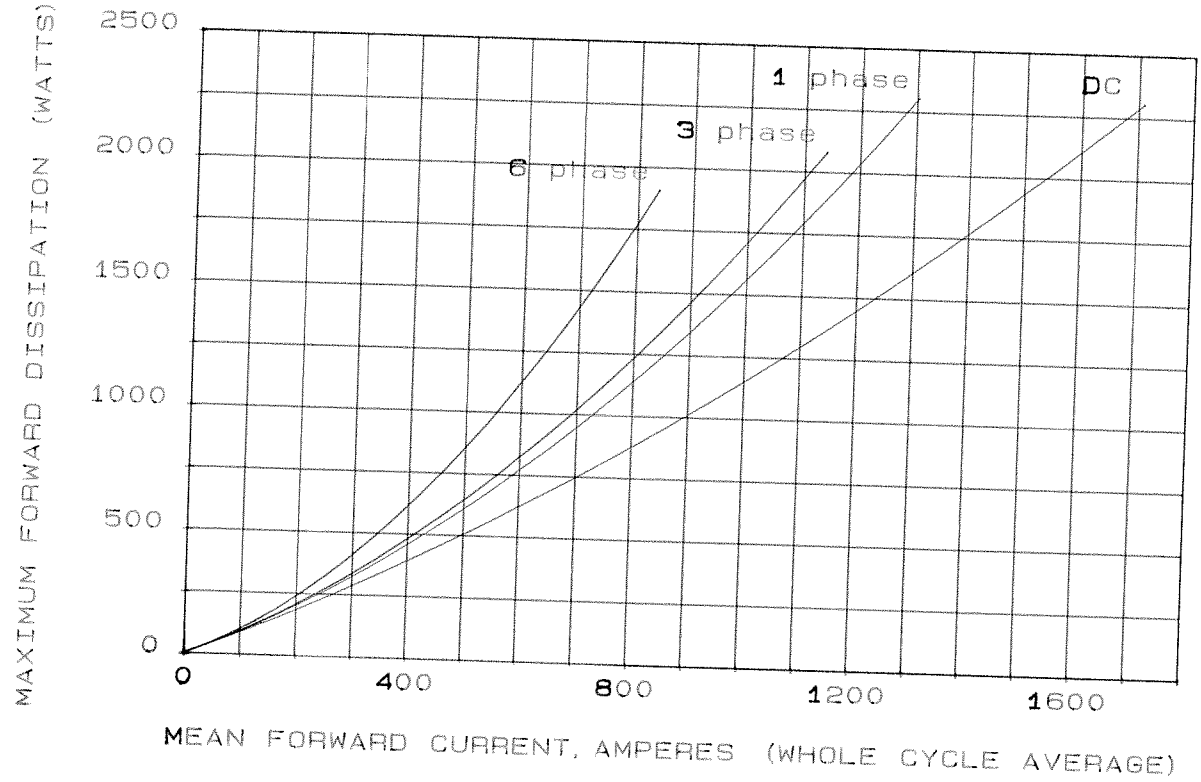
This report is applicable to higher or lower voltage grades when supply has been agreed by Sales/Production.

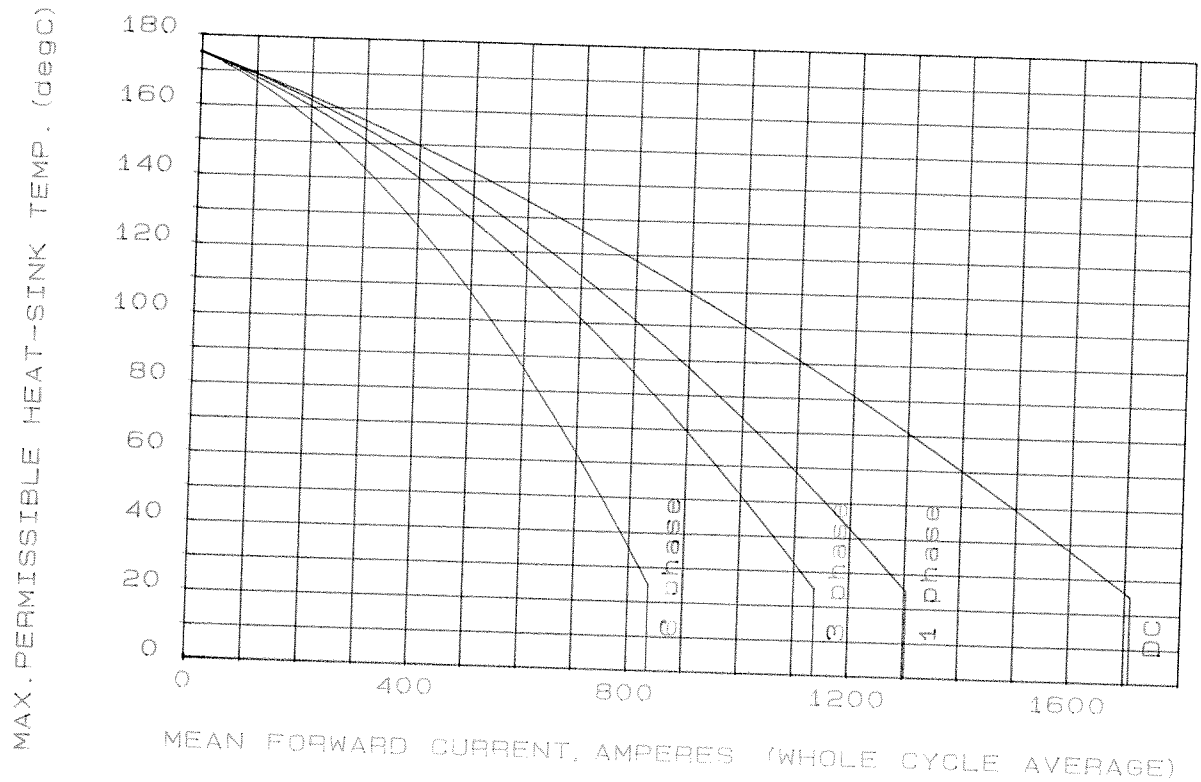
DOUBLE SIDE COOLED

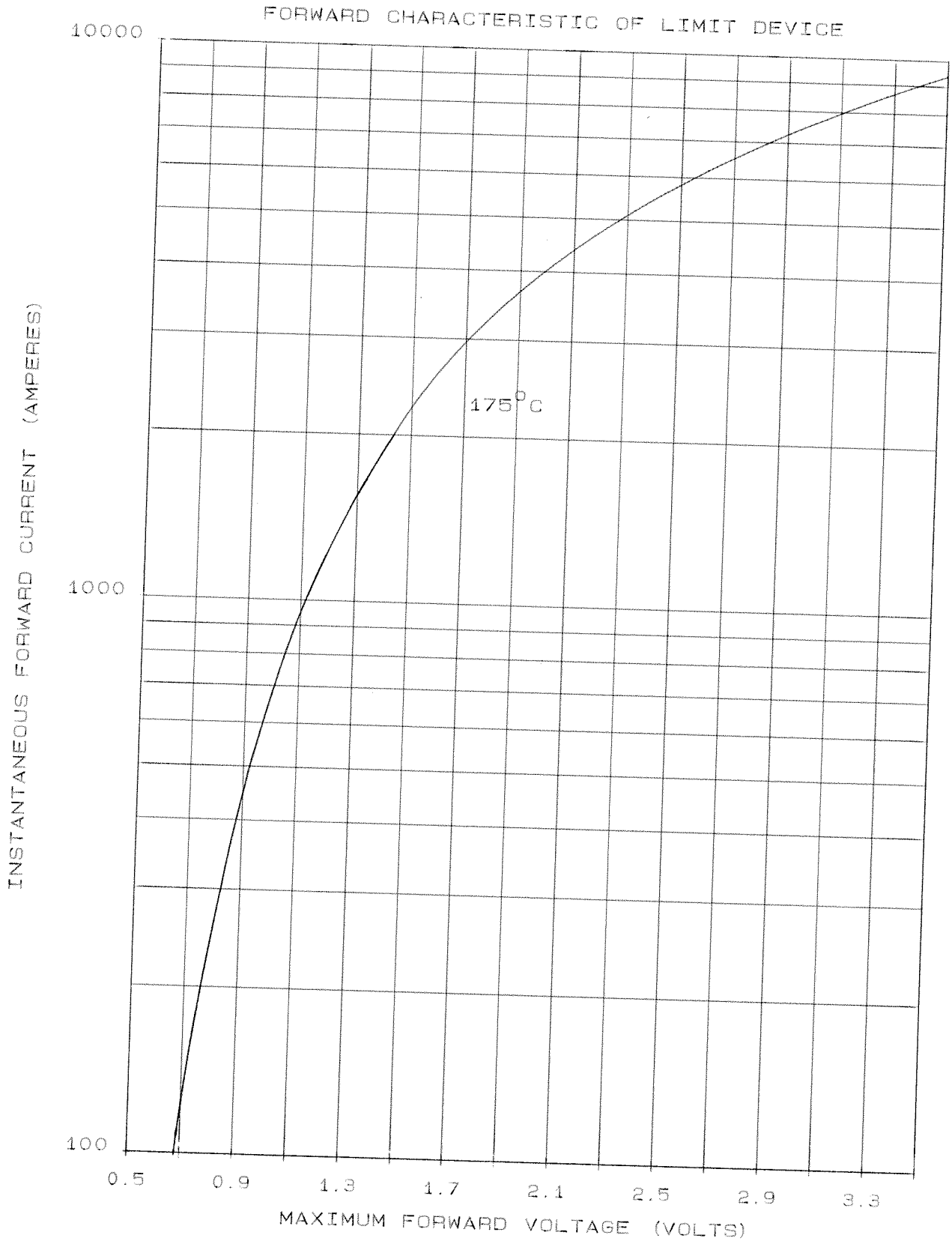


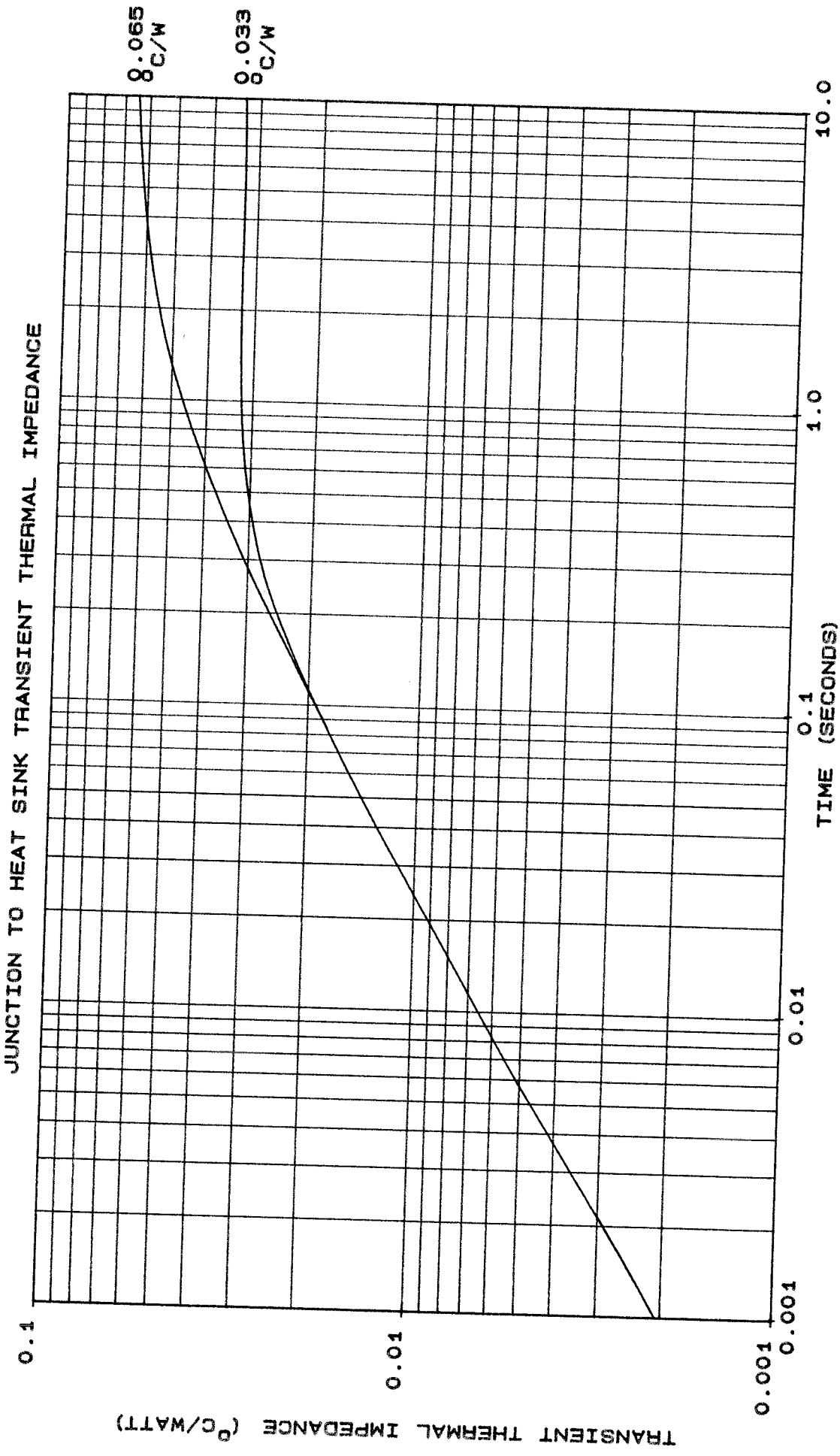


SINGLE SIDE COOLED

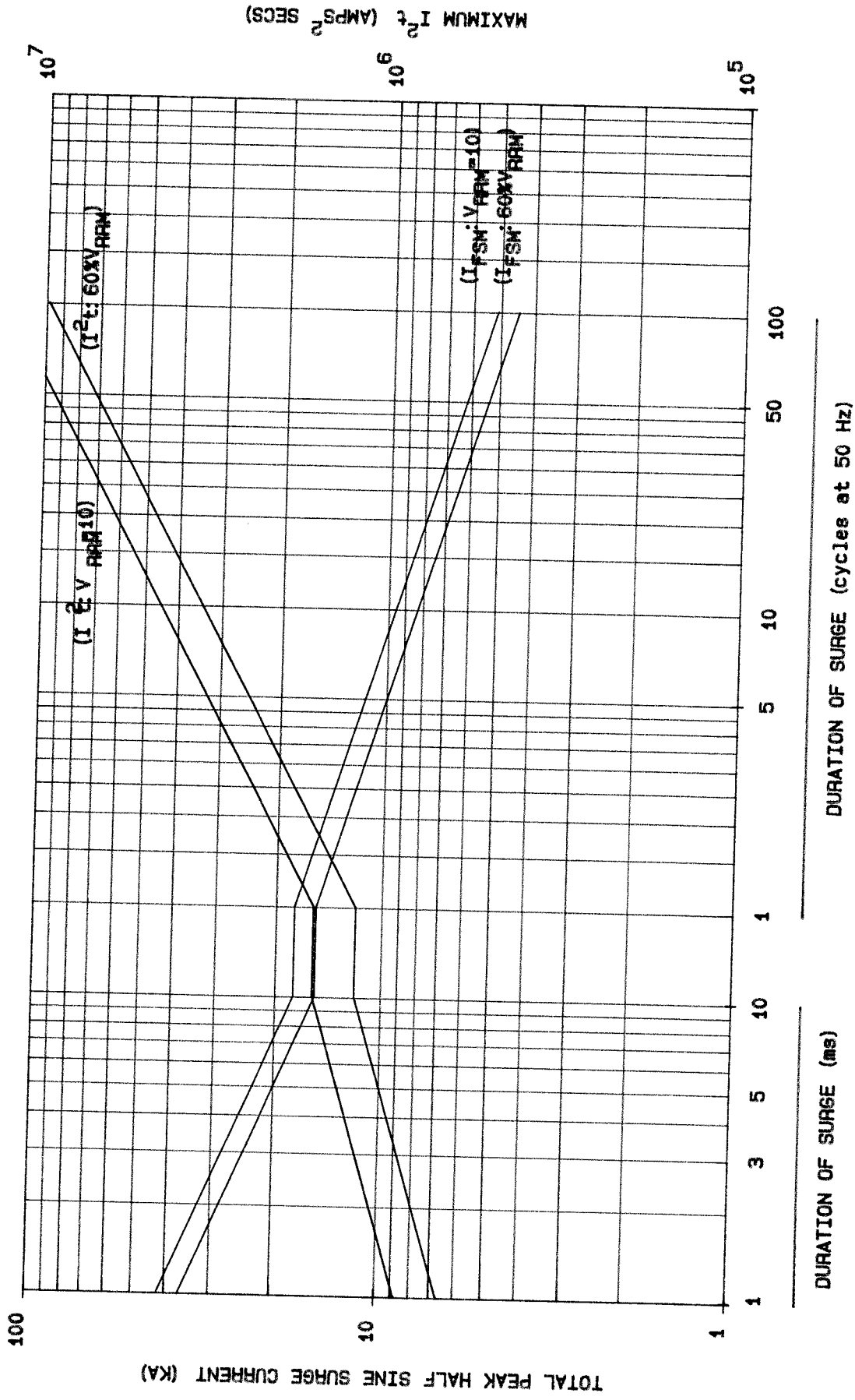





FORWARD CHARACTERISTIC OF LIMIT DEVICE
10000
1000
100
175°C
INSTANTANEOUS FORWARD CURRENT (AMPERES)
0.5
0.9
1.3
1.7
2.1
2.5
2.9
3.3
MAXIMUM FORWARD VOLTAGE (VOLTS)


JUNCTION TO HEAT SINK TRANSIENT THERMAL IMPEDANCE
0.065 °C/W
0.033 °C/W
TRANSIENT THERMAL IMPEDANCE (°C/WATT)
0.1
0.01
0.001
0.001
0.01
0.1
1.0
10.0
TIME (SECONDS)

MAXIMUM NON REPETITIVE SURGE CURRENT AT INITIAL JUNCTION TEMPERATURE 175°C



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

INTERNATIONAL OUTLINE No. DO-200AB

WEIGHT. 340 GRAMS.

FINISH. ET TO BS 1872

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

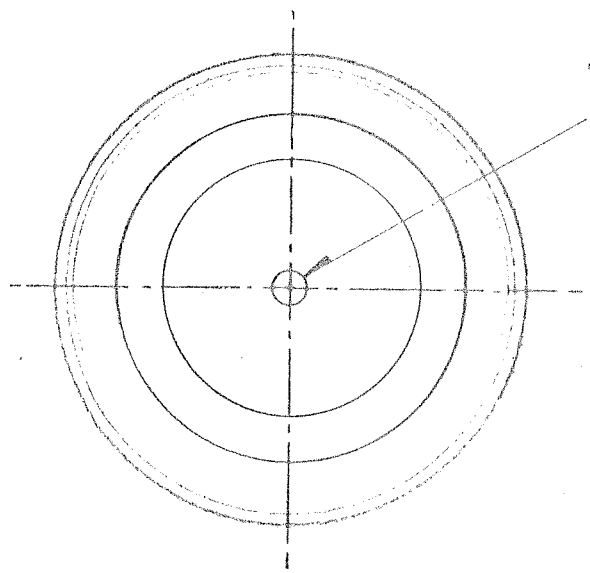
DEVICE MOUNTING: CLAMPING FORCE: 1000 - 2000 kgf.

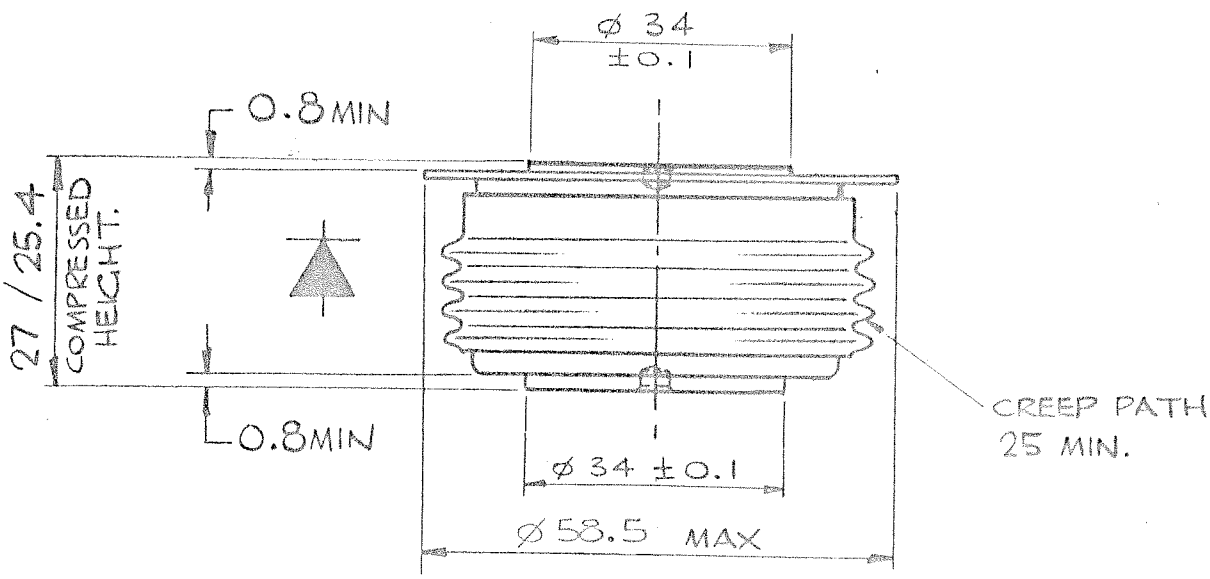
CLAMPING FORCE TO BE APPLIED ON ℄ OF LOCATION HOLES & BE EVENLY DISTRIBUTED OVER AREA OF CONTACT. FLATNESS TOL ON SURFACES TO WHICH DEVICE IS CLAMPED TO BE 0.04 WIDE.

G.A. DRG. No. 159B100H204

TYPE NUMBER

CXC 935
CXC 805
CXC 585
CXC 505
CXC 515
CXC 371
CXC 220
CXC 221
CXC 474
CXC 521
CXC 721





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 300-1800 kgf.
4	2.10.78 TYPE NUMBERS ADDED.