

Rectifier Diode

Types W8405Z#020 to W8405Z#140

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

(Rating Report 90NR18 Issue 1)

This data reflects the old part number for this product which is: SW02-14CXC32C. 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:
Only ZC outline drawing (W7) in datasheet
Reverse recovery information not available

The following links will direct you to the appropriate outline drawings

[Outline W7](#) – 37mm Clamp height capsule

[Outline W42](#) – 26mm Clamp height capsule

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

W8405	Z#	◆◆	0
Fixed Type Code	ZC – 37mm Clamp height capsule ZD – 26mm Clamp height capsule	Voltage code $V_{RRM}/100$ 02-14	Fixed Code
Typical Order Code: W8405ZD140, 26mm clamp height capsule, 1400V 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: 90NR18

Date: 18th October, 1990

Pages: 10

Diode Type SW02-14CXC32C

Written by: M. Baker

Checked: *MB*

Approved: *BRC/A*

The CXC32C range of diodes are based on a 76 mm diameter, all diffused silicon slice housed in a cold weld capsule.

Ratings

Voltage Grades	: 02-14
V_{RSM}	: 300-1500V
V_{RRM}	: 200-1400V
$I_{F(AV)}$: Single Phase; 50 Hz, 180° half sinewave;	
Double side cooled $T_{HS} = 55^{\circ}C, 100^{\circ}C$	: 8410A; 6430A
Single side cooled $T_{HS} = 100^{\circ}C$	: 3935A
I_F (rms) max.)	
Double side cooled $T_{HS} = 25^{\circ}C$	: 15025A
I_F max.)	
	: 12920A
I_{FSM} : $t = 10ms$ half sinewave; T_J (initial) = $190^{\circ}C$;	
$V_{RM} = 0.6 V_{RRM}(Max)$	: 72 KA
I_{FSM} ; $t = 10ms$ half sinewave; T_J (initial) = $190^{\circ}C$; $V_{RM} \leq 10V$	: 79.2 KA
I^2t : $t = 10ms$; T_J (initial) = $190^{\circ}C$; $V_{RM} = 0.6 V_{RRM}(Max)$	: $25.92 \times 10^6 A^2 SECS$
I^2t : $t = 10ms$; T_J (initial) = $190^{\circ}C$; $V_{RM} \leq 10V$	: $31.4 \times 10^6 A^2 SECS$
I^2t : $t = 3ms$; T_J (initial) = $190^{\circ}C$; $V_{RM} \leq 10V$	: $22.5 \times 10^6 A^2 SECS$
T_{HS} Operating range	: $-55^{\circ}C$ to $+190^{\circ}C$
T_{stg} ; Non-operating	: $-55^{\circ}C$ to $+200^{\circ}C$

Characteristics

(Maximum values unless stated otherwise)

$V_O : T_J = 190^\circ\text{C}$	:	0.67V
$r_s : T_J = 190^\circ\text{C}$	:	0.038 mohms
COLD		
A : $T_J = 25^\circ\text{C}$	:	0.5426215
B : $T_J = 25^\circ\text{C}$	:	5.007122E-2
C : $T_J = 25^\circ\text{C}$	:	3.662236E-5
D : $T_J = 25^\circ\text{C}$	:	-1.731167E-3
HOT		
A : (Constant)	:	0.2798311
B : $(B \times \ln i)$	:	5.544857E-2
C : $(C \times i)$	:	3.989276E-5
D : $(D \times \sqrt{i})$	:	-1.369681E-3
$V_{FM} : I_{FM} = 6800A T_{VJ} = 190^\circ\text{C}$	:	0.93V
$R_{th} (J\text{-HS})$ double side cooled	:	0.011 K/W
single side cooled	:	0.022 K/W
$I_{RRM} : T_J = 190^\circ\text{C} \quad V_{RM} = V_{RRM(\text{Max})}$	:	100mA
$Q_{RA} : I_{TM} = \quad T_{VJ} =$	:	
$\quad : V_{RM} = \quad T_{VJ} =$	:	
Mounting Force	:	2700-4700 Kg.f
Outline Drawing	:	100A293
JEDEC Outline No.	:	

CONTENTS

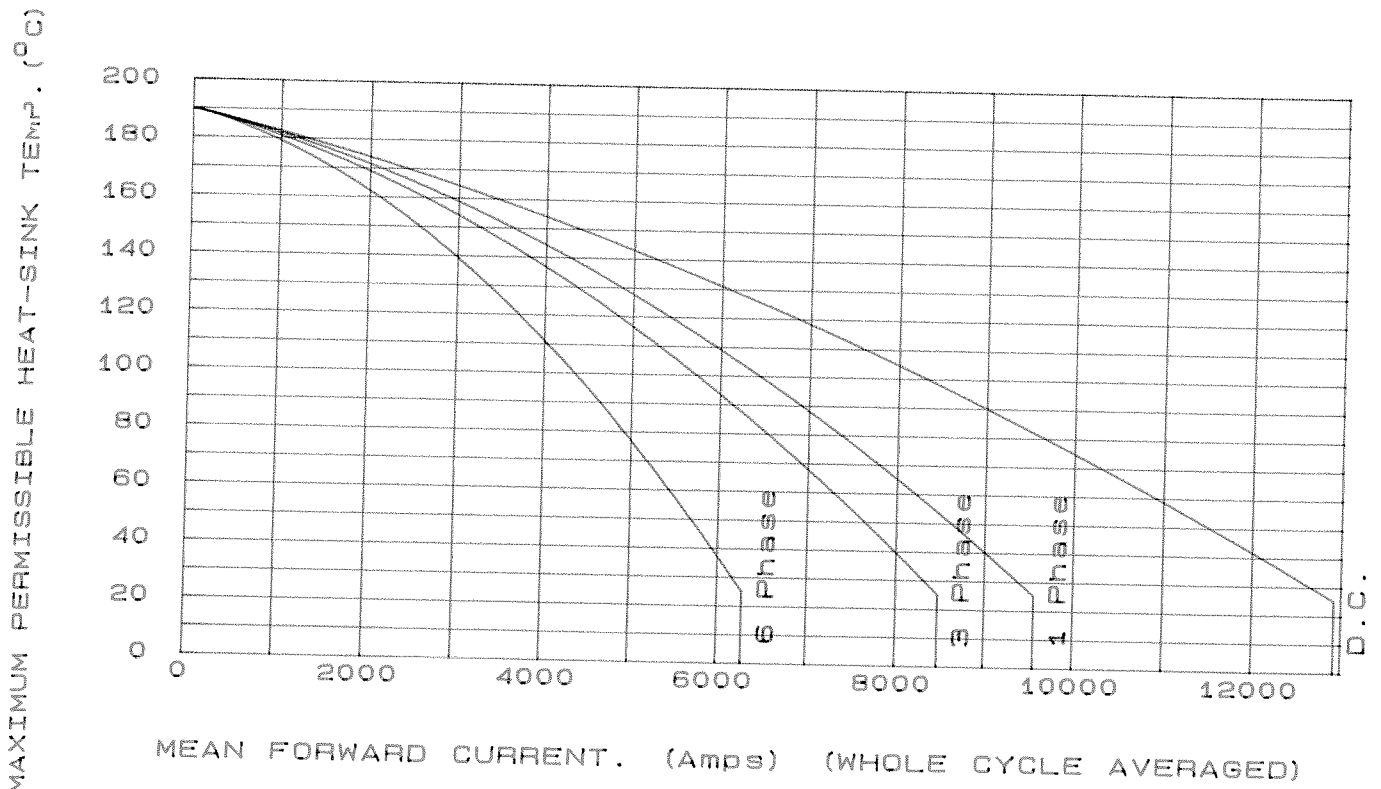
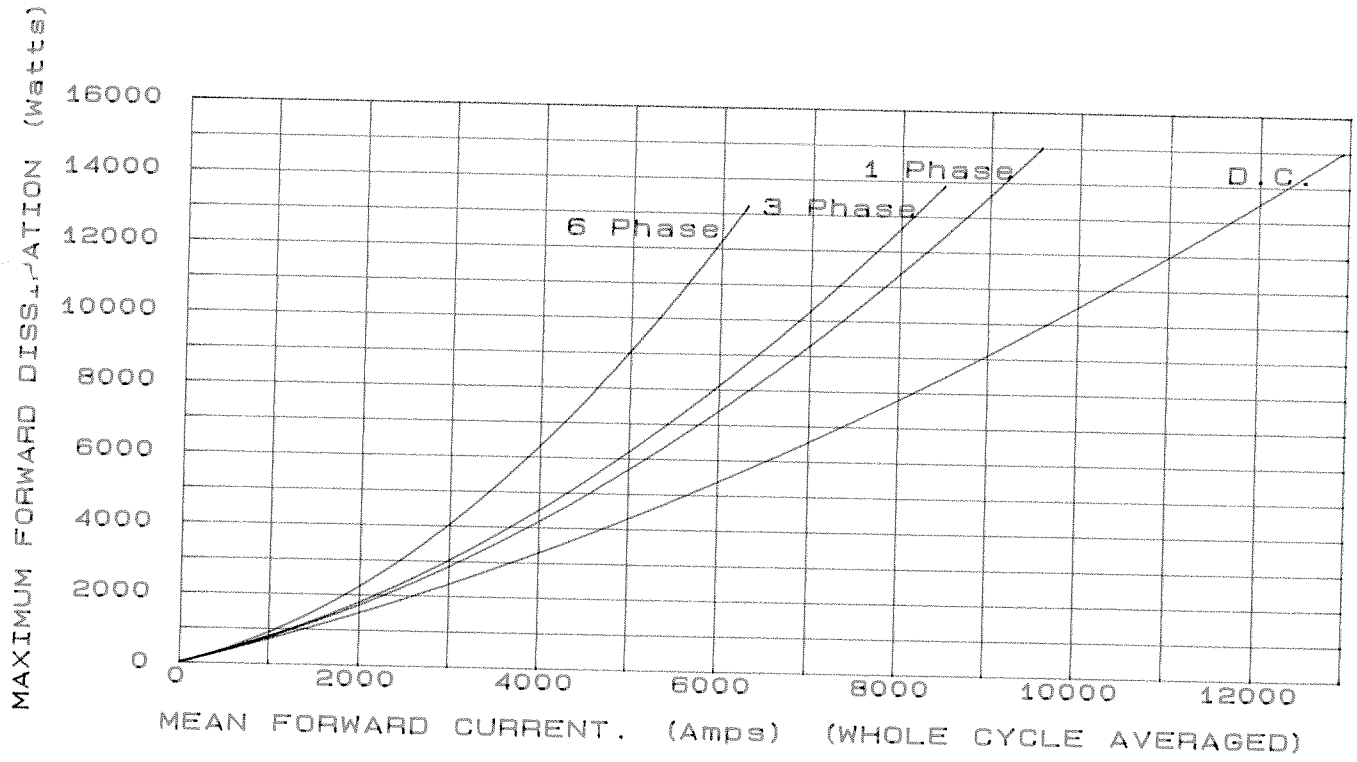
	<u>Page</u>
Ratings	1
Characteristics	2
Contents	3
Voltage Ratings	4
Dissipation and Heatsink Temperature vs Mean Current	5 & 6
Limit Forward Voltage Characteristic	7
Transient Thermal Impedance Characteristic	8
Surge Current and I^2t vs Duration of Surge	9
Outline Drawing	10

Voltage Ratings

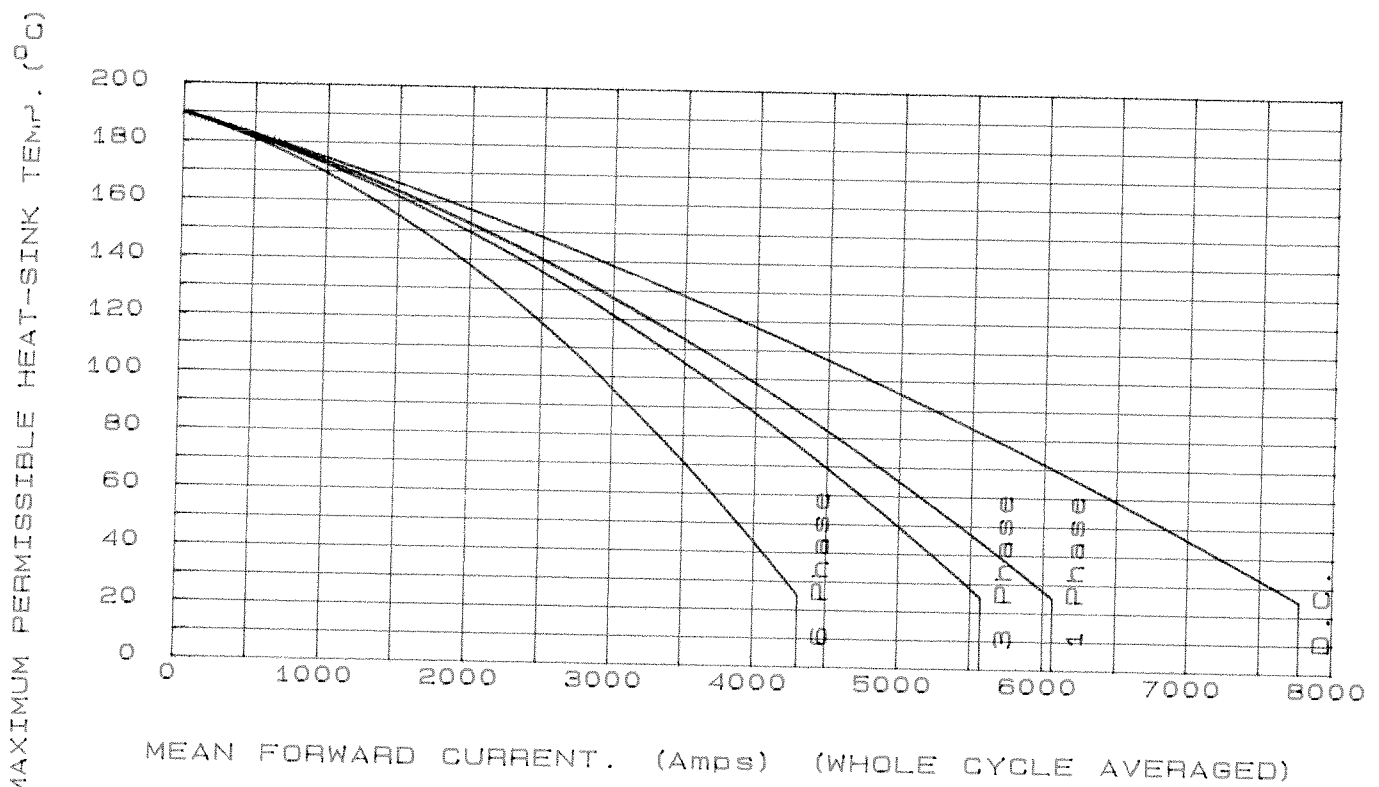
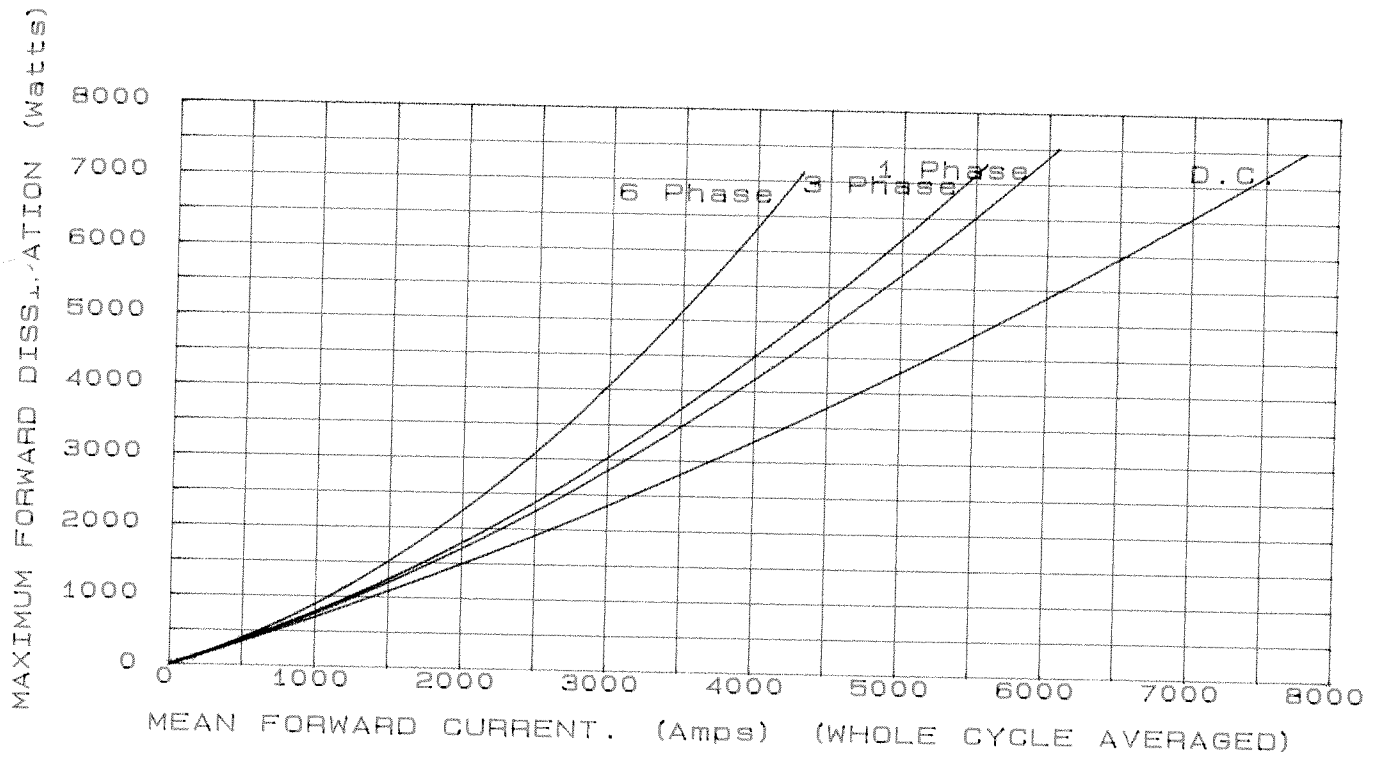
Voltage Class	V_{RRM} V	V_{RSM} V
02	200	300
04	400	500
06	600	700
08	800	900
10	1000	1100
12	1200	1300
14	1400	1500

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

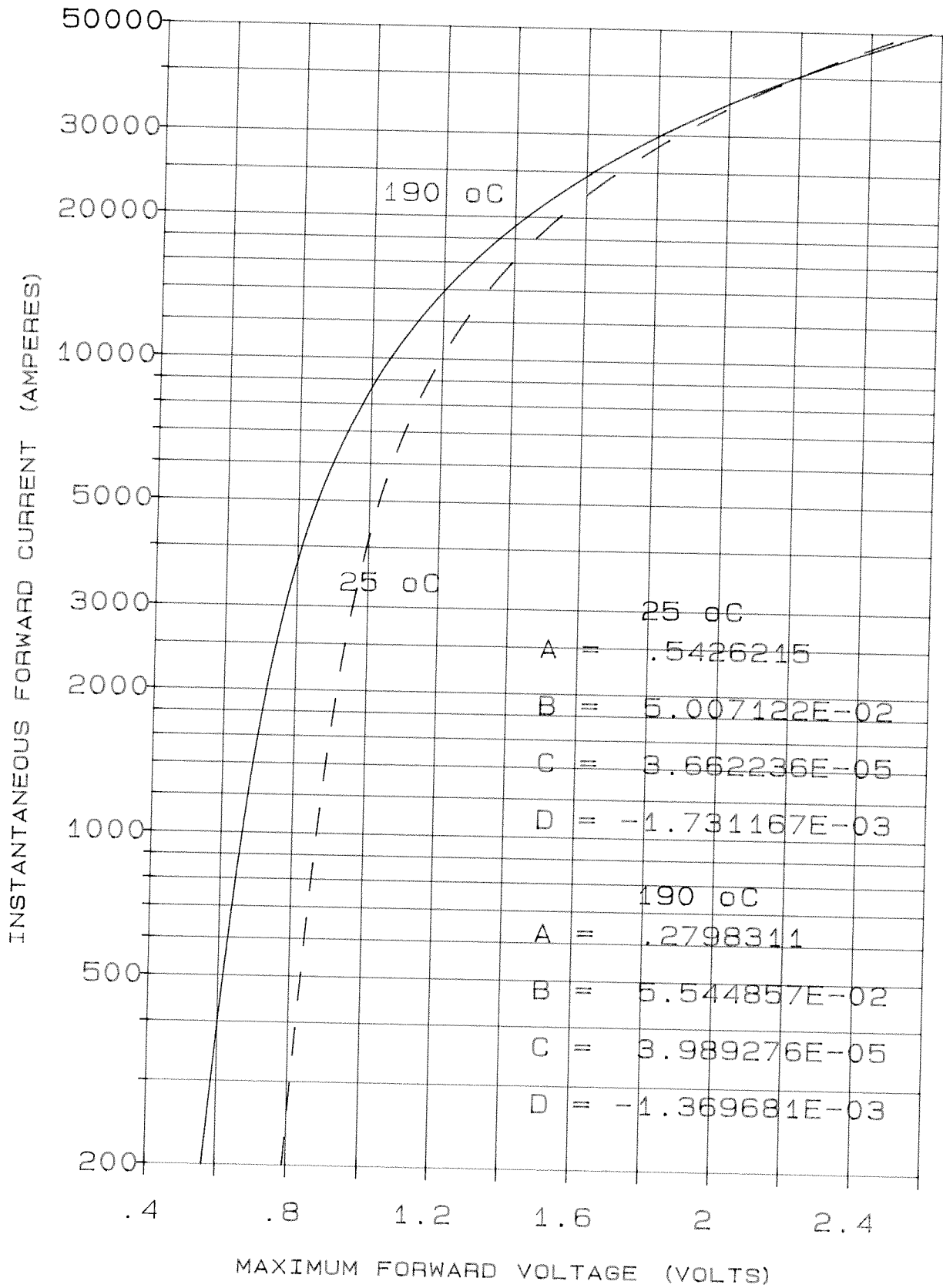
DOUBLE SIDE COOLED



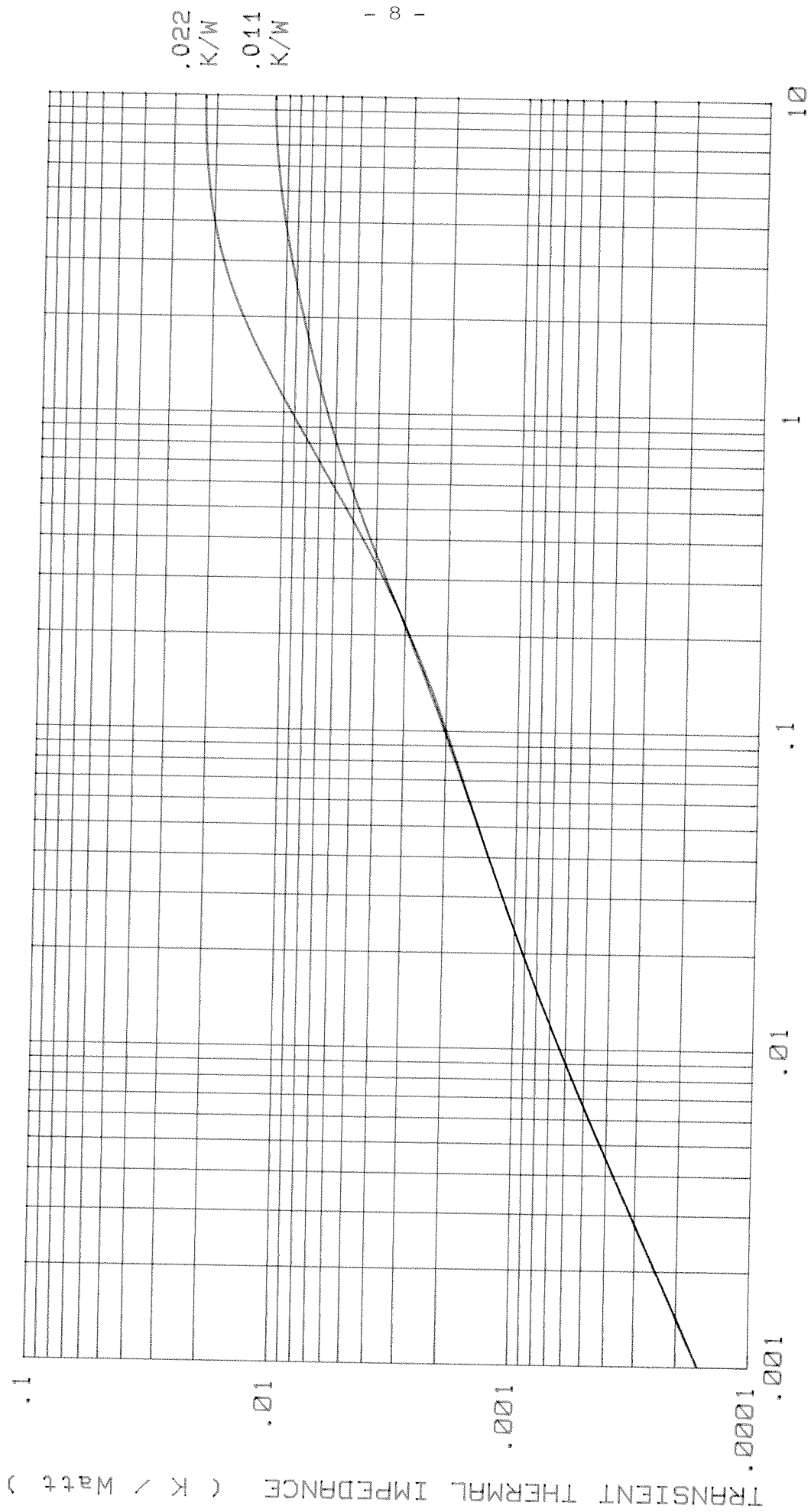
SINGLE SIDE COOLED



FORWARD CHARACTERISTIC OF LIMIT DEVICE

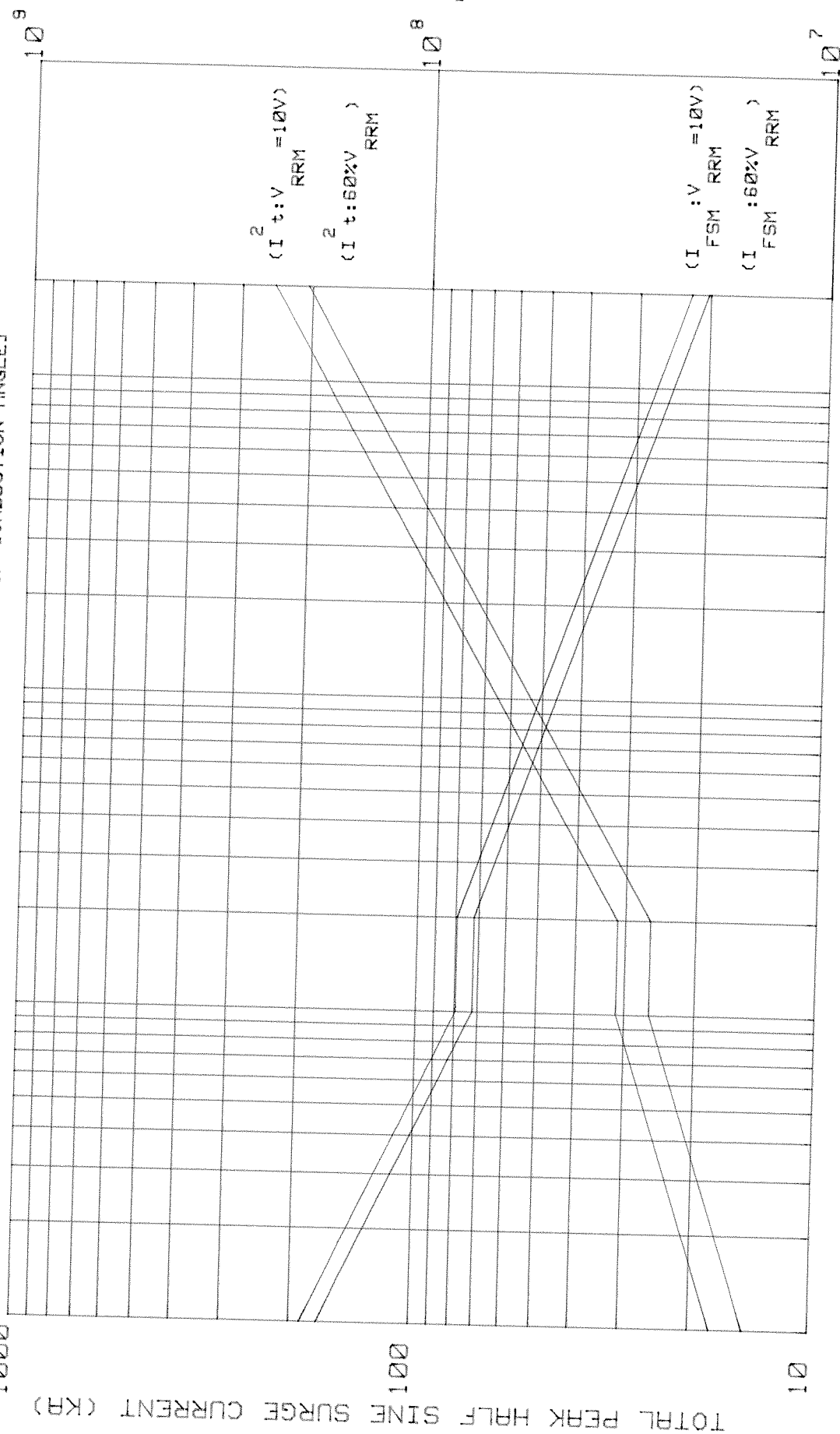


JUNCTION TO SINK TRANSIENT THERMAL IMPEDANCE



MAXIMUM NON REPETITIVE SURGE CURRENT AT INITIAL JUNCTION TEMPERATURE 190 ° C

[GATE MAY TEMPORARILY LOSE CONTROL OF CONDUCTION ANGLE]



DURATION OF SURGE (cycles at 50 Hz)

DURATION OF SURGE (ms)

INTERNATIONAL OUTLINE No.

G.A. DWG No. 159B100H601

- 10 -

WEIGHT. 1.7kg

FINISH. NICKEL PLATE

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 = $3700 \pm 1000 \text{ kgf.}$ ($37 \pm 10 \text{ kN}$)

TYPE NUMBER

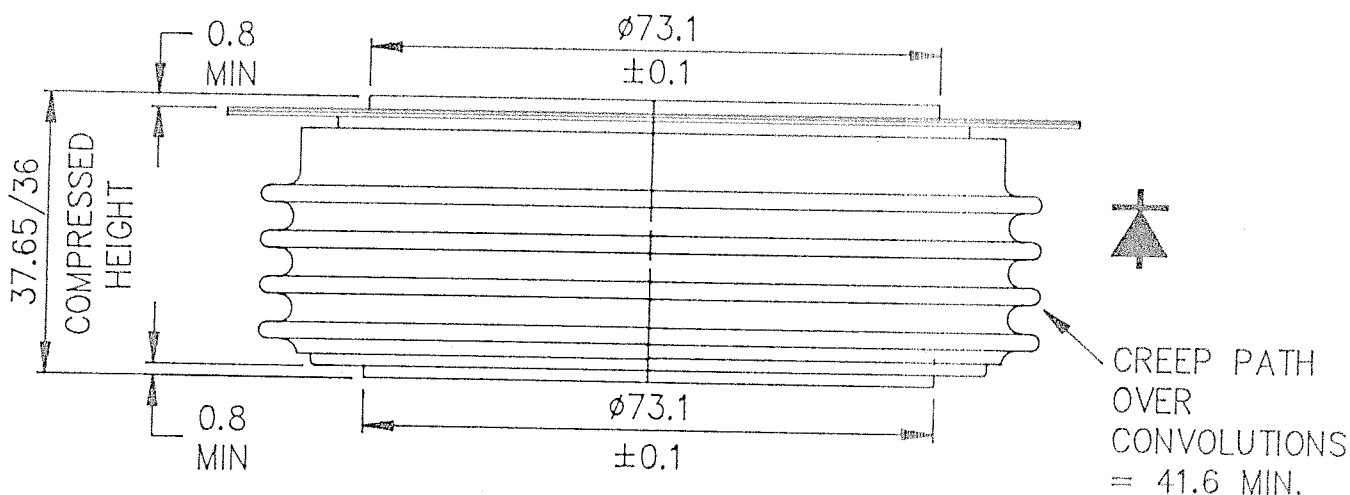
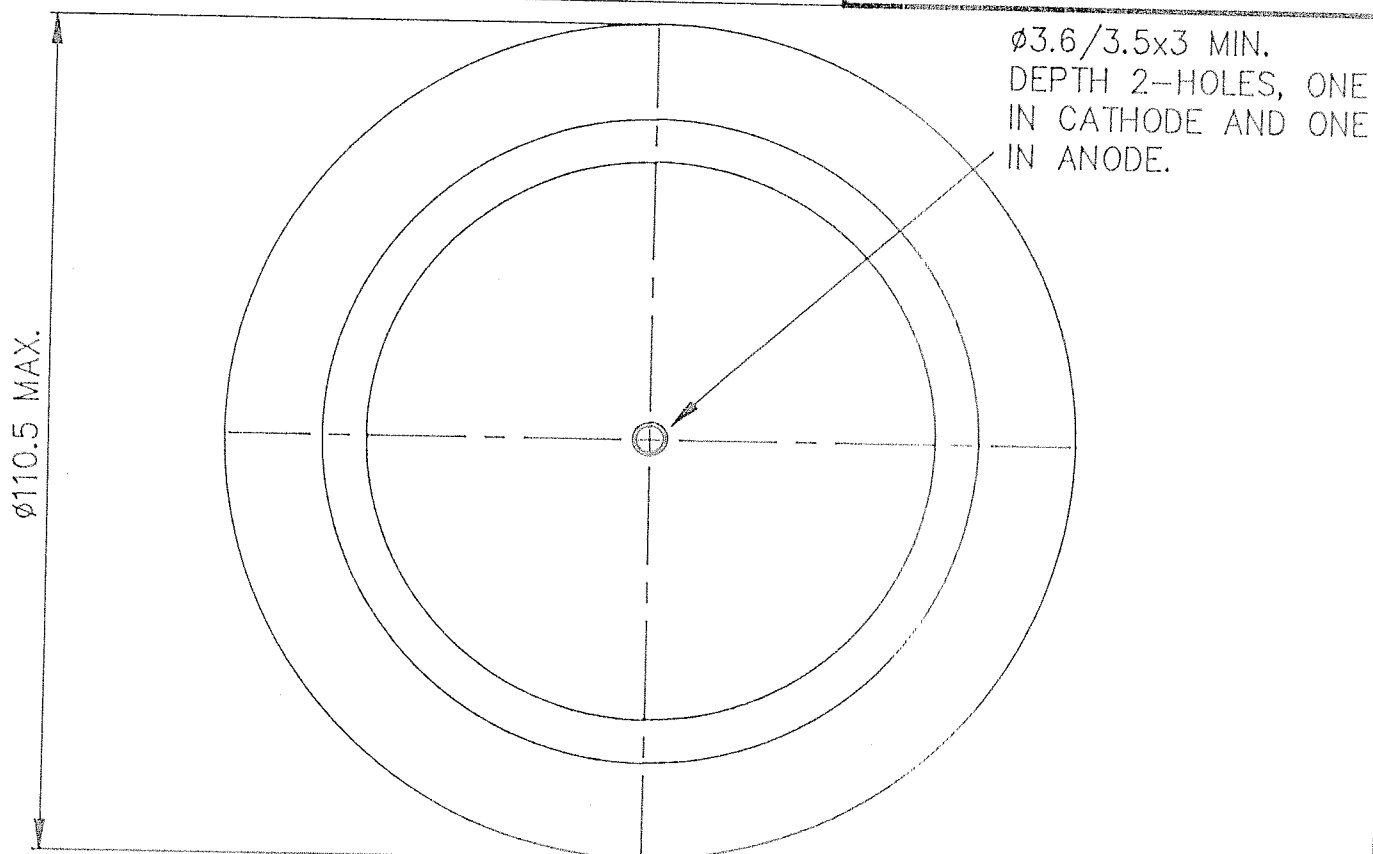
CXC15C

CXC20C

CXC21C

CXC30C

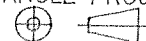
CXC32C



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SCALE	ISS	REVISIONS
1/1	4	13-09-90
DRAWN	HDN	CAD

THIRD ANGLE PROJECTION.



DWG. COMPLIES WITH BS 308.

DIMNS. IN MILLIMETRES.

DWG No.

100A293



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