

Rectifier Diode

Types W7675Z#020 to W7675Z#140

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

(Rating Report 90NR21 Issue 1)

This data reflects the old part number for this product which is: SW02-14CXC30C. 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 (W22) in datasheet
No reverse recovery information 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

W7675	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: W7675ZC140, 37mm 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: 90NR21

Date: 17th October, 1990

Pages: 10

Diode Type SW02-14CXC30C

Written by: M. Baker

Checked: *BA*

Approved: *[Signature]*

This diode consists of a diffused 76 mm diameter silicon slice mounted in a cold weld capsule housing.

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 $T_{HS} = 55^{\circ}C, 100^{\circ}C$	: 7680A, 5990A
Single side cooled $T_{HS} = 100^{\circ}C$	: 3700A
I_F (rms) max.)	: 13670A
) Double side cooled $T_{HS} = 25^{\circ}C$	
I_F max.)	: 12000A
I_{FSM} : $t = 10ms$ half sinewave; T_J (initial) = $190^{\circ}C$;	
$V_{RM} = 0.6 V_{RRM}^{(Max)}$	: 68000A
I_{FSM} ; $t = 10ms$ half sinewave; T_J (initial) = $190^{\circ}C$; $V_{RM} \leq 10V$	: 75000A
I^2t : $t = 10ms$; T_J (initial) = $190^{\circ}C$; $V_{RM} = 0.6 V_{RRM}^{(Max)}$	: $23.1 \times 10^6 A^2 SECS$
I^2t : $t = 10ms$; T_J (initial) = $190^{\circ}C$; $V_{RM} \leq 10V$	: $28.1 \times 10^6 A^2 SECS$
I^2t : $t = 3ms$; T_J (initial) = $190^{\circ}C$; $V_{RM} \leq 10V$	: $21.1 \times 10^6 A^2 SECS$
T_{HS} Operating range	: -55 to $+190^{\circ}C$
T_{stg} ; Non-operating	: -55 to $+200^{\circ}C$

Characteristics

(Maximum values unless stated otherwise)

V_O :	$T_J = 190^{\circ}\text{C}$	:	0.65V	
r_s :	$T_J = 190^{\circ}\text{C}$	:	0.05 mohms	
COLD				
A :	$T_J = 25^{\circ}\text{C}$	:	0.5083424	
B :	$T_J = 25^{\circ}\text{C}$	:	5.439872E-2	
C :	$T_J = 25^{\circ}\text{C}$	:	3.222693E-5	
D :	$T_J = 25^{\circ}\text{C}$	:	-1.477781E-3	
HOT				
A :	(Constant)	:	0.4569419	
B :	(B x ln i)	:	3.803878E-2	
C :	(C x i)	:	5.579064E-5	
D :	(D x $\sqrt{i}$)	:	-2.168298E-3	
V_{FM} :	$I_{FM} = 6800A$	$T_{VJ} = 190^{\circ}\text{C}$	:	0.99V
R_{th} (J-HS) double side cooled			:	0.011 K/W
single side cooled			:	0.022 K/W
I_{RRM} :	$T_J = 190^{\circ}\text{C}$	$V_{RM} = V_{RRM(Max)}$	:	100 mA
Q_{RA} :	$I_{TM} =$	$T_{VJ} =$	:	
	$V_{RM} =$	$T_{VJ} =$	:	
Mounting Force			:	2700-4700 Kg.f
Outline Drawing			:	100A293
JEDEC Outline No.			:	-

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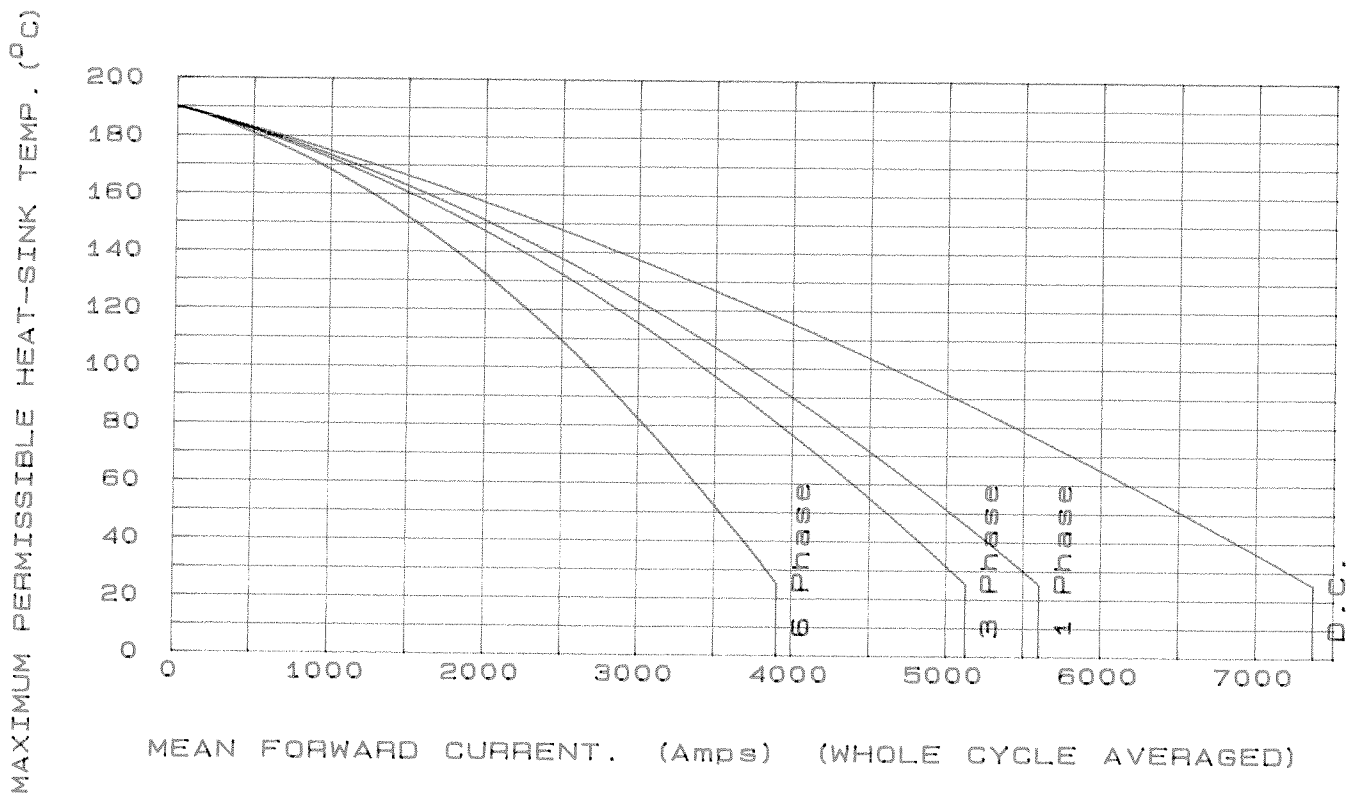
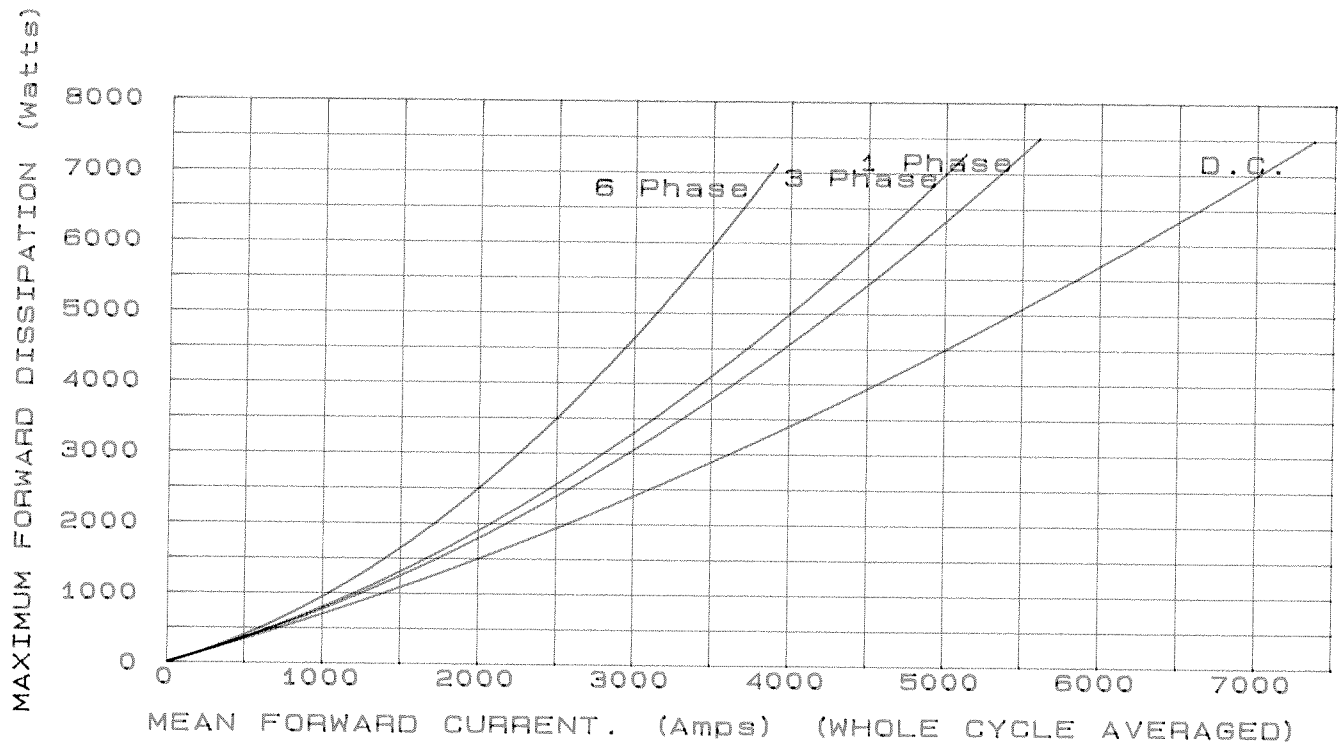
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Voltage Ratings

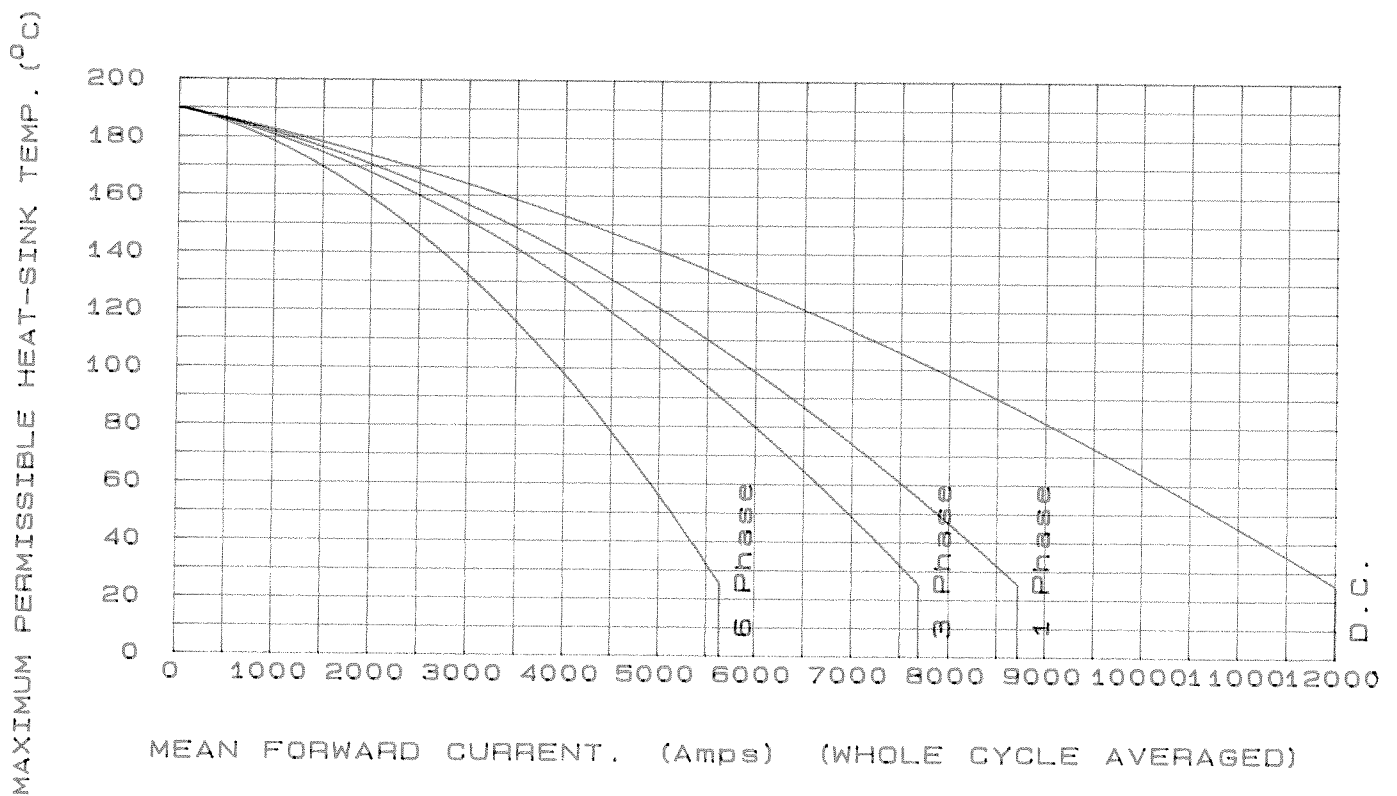
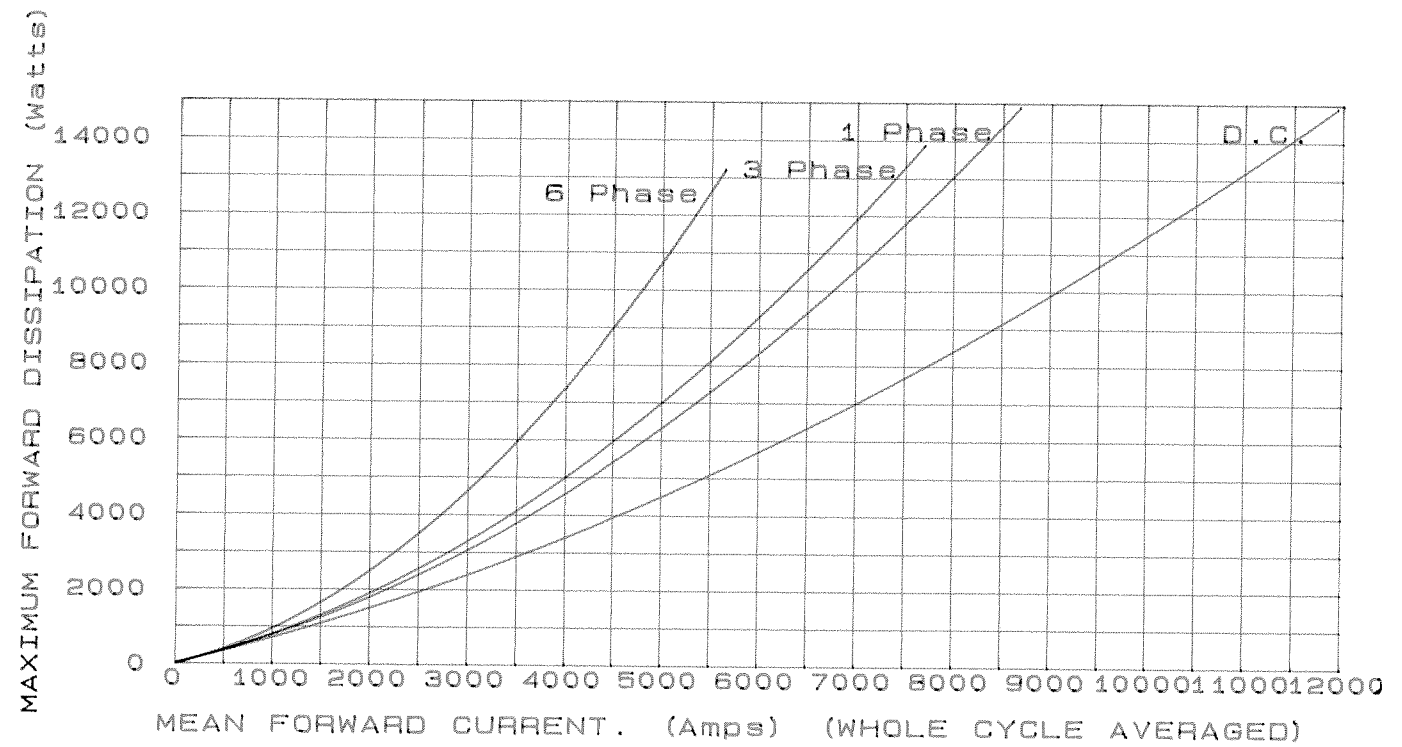
Voltage Class	V_{RRM} V	V_{RSM} V
2	200	300
4	400	500
6	600	700
8	800	900
10	1000	1100
12	1200	1300
14	1400	1500

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

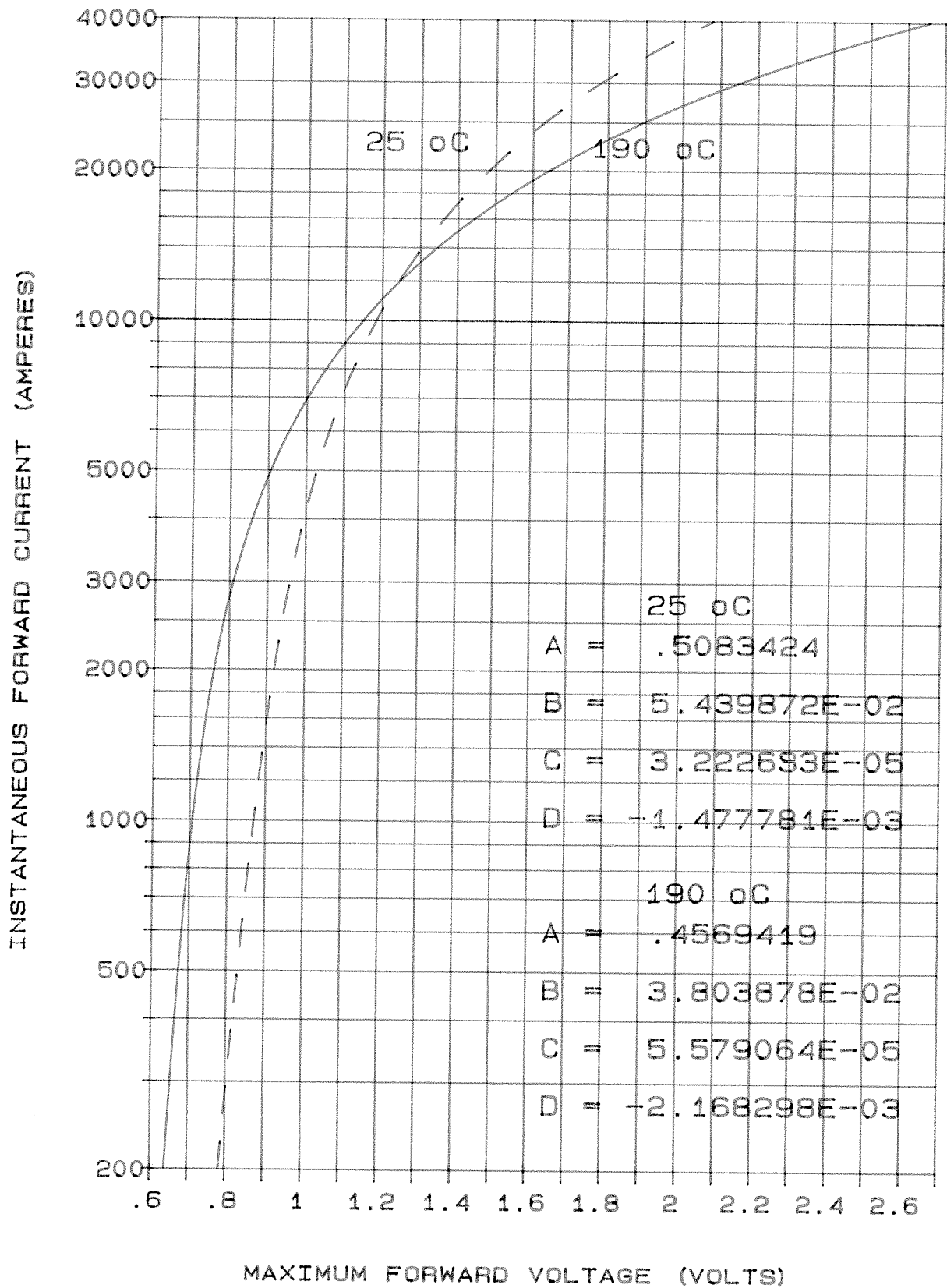
SINGLE SIDE COOLED



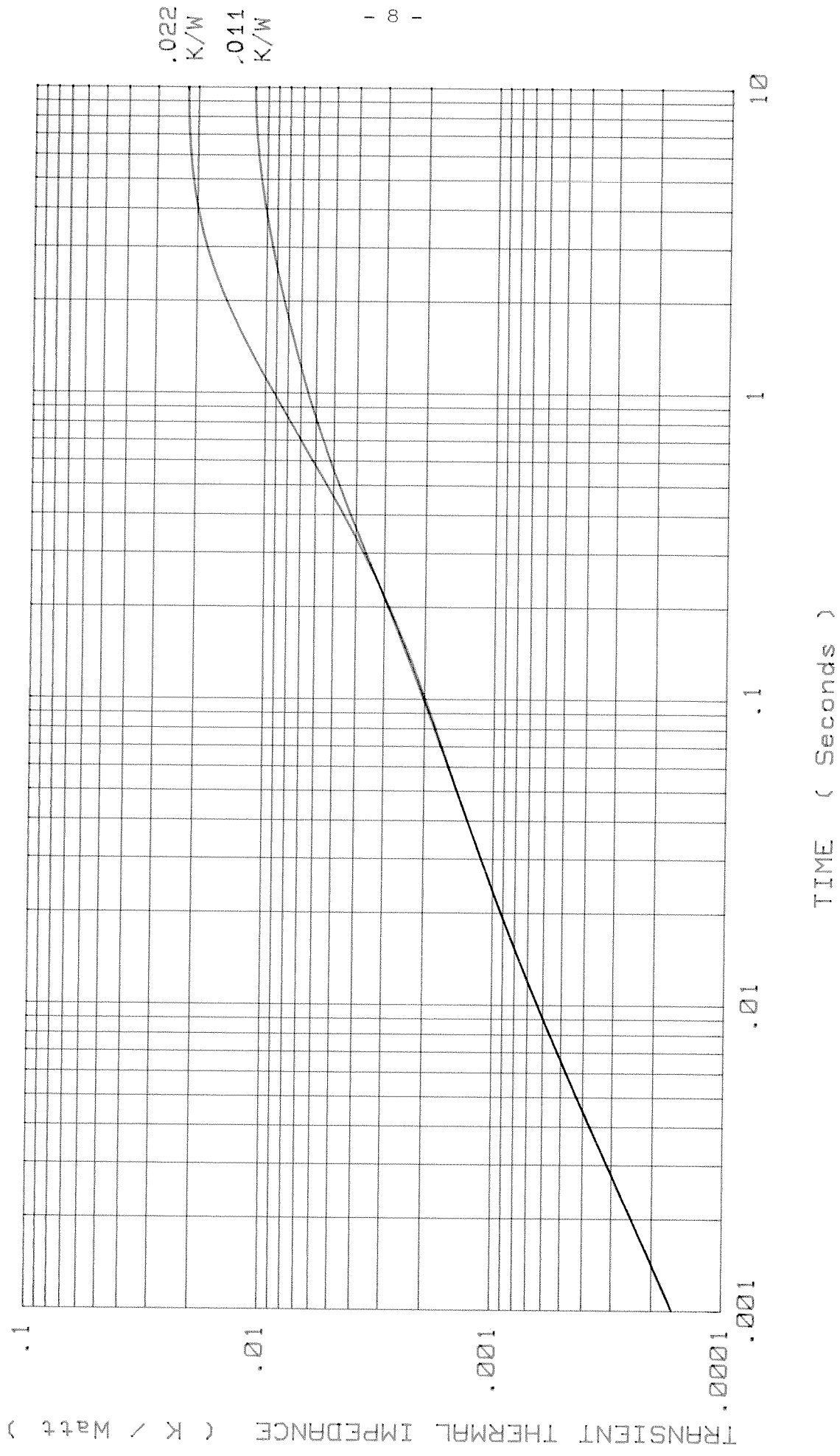
DOUBLE SIDE COOLED



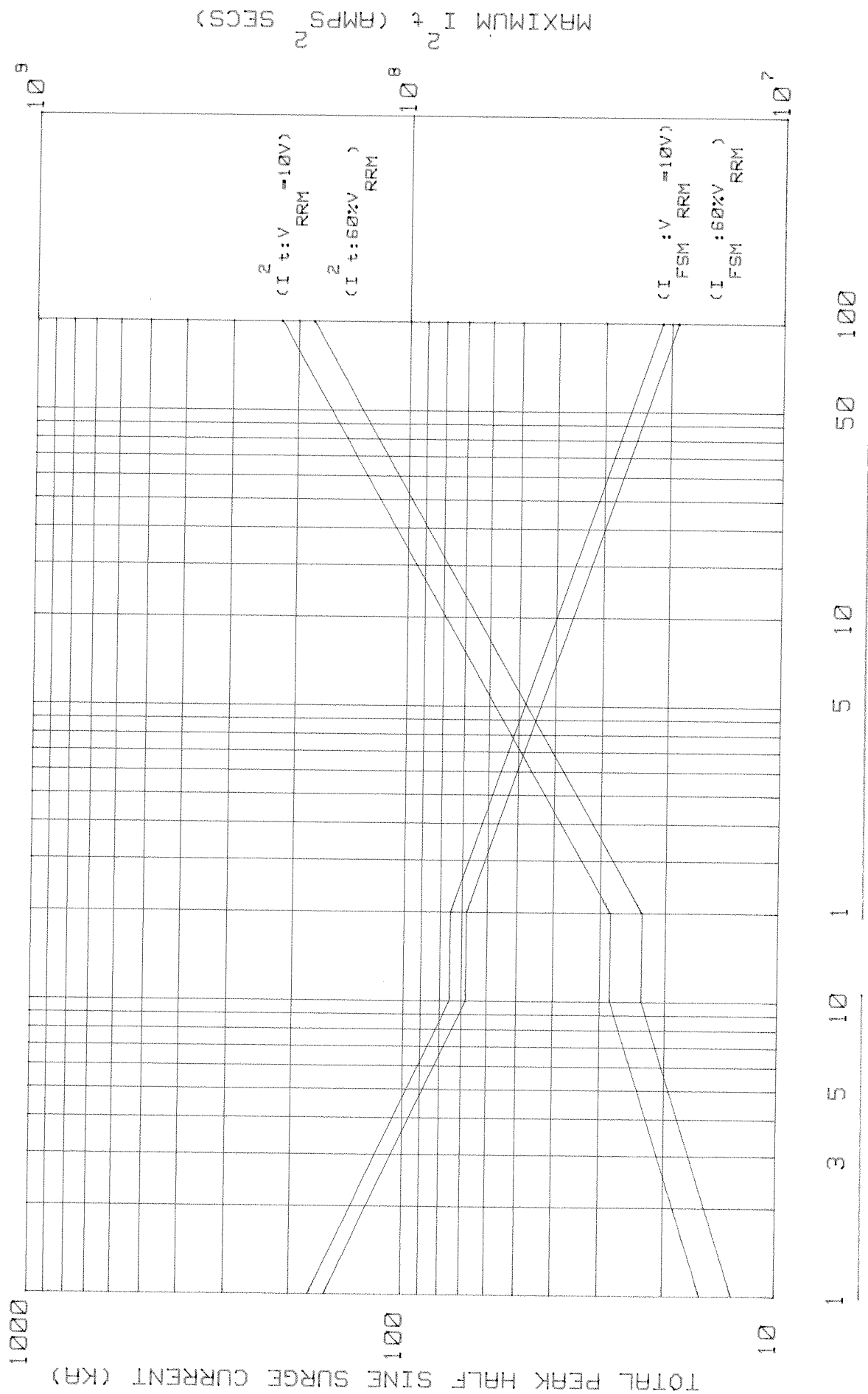
FORWARD CHARACTERISTIC OF LIMIT DEVICE



JUNCTION TO SINK TRANSIENT THERMAL IMPEDANCE



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



DURATION OF SURGE (ms)

DURATION OF SURGE (cycles at 50 Hz)

INTERNATIONAL OUTLINE No.

G.A. DWG No. 159B100H601

WEIGHT. 1.7kg

- 10 -

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 ± 1000 kgf. (37 ± 10 kN)

TYPE NUMBER

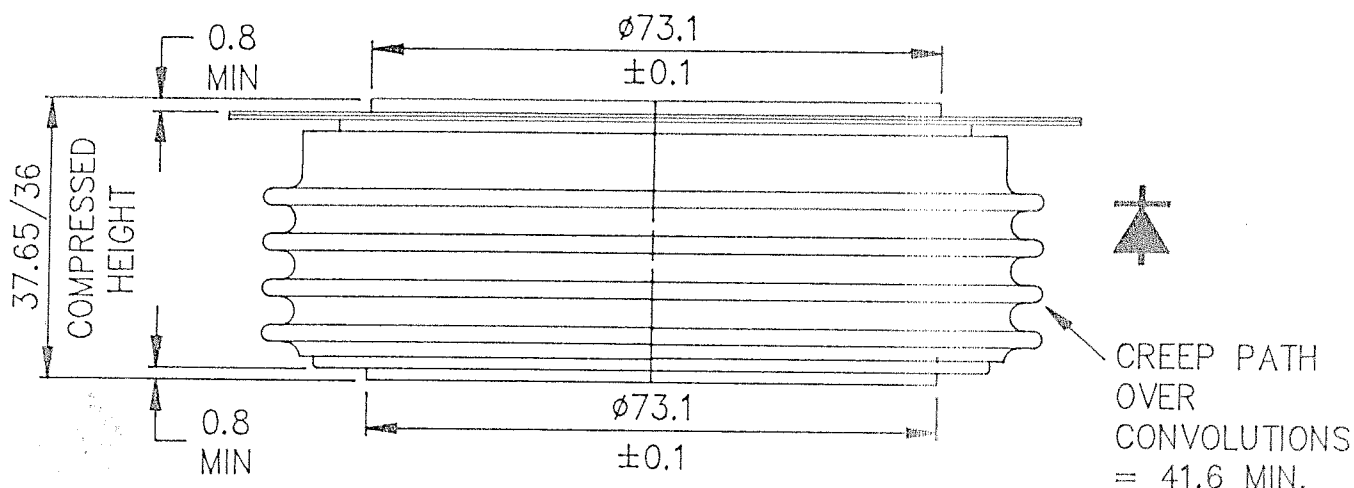
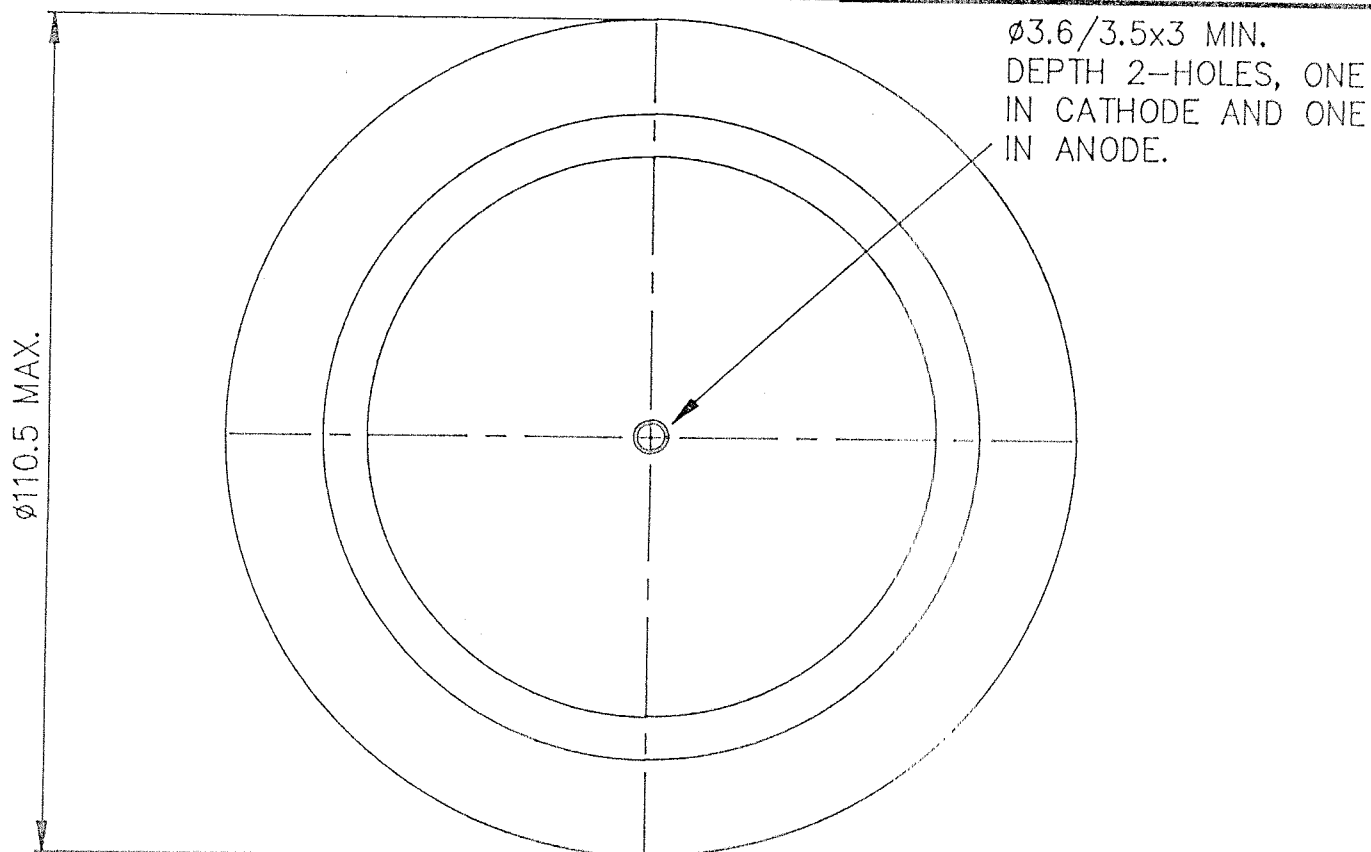
CXC15C

CXC20C

CXC21C

CXC30C

CXC32C



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SCALE 1/1 ISS REVISIONS

4 13-09-90
REDRAWN ON
CAD HDN

THIRD ANGLE PROJECTION.

DWG. COMPLIES WITH BS 308.
DIMNS. IN MILLIMETRES.

DWG No.

100A293



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