

# 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.

<b>Ordering Particulars</b>			
W8405	Z#	◆◆	0
Fixed Type Code	ZC – 37mm Clamp height capsule ZD – 26mm Clamp height capsule	Voltage code V <sub>RRM</sub> /100 02-14	Fixed Code
Typical Order Code: W8405ZD140, 26mm clamp height capsule, 1400V V <sub>RRM</sub>			

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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: *BPOA*

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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. )	:	15025A
) Double side cooled $T_{HS} = 25^{\circ}C$		
$I_F$ max. )	:	12920A
$I_{FSM}$ : t = 10ms half sinewave; $T_J$ (initial) = 190°C;		
$V_{RM} = 0.6 V_{RRM} (Max)$	:	72 KA
$I_{FSM}$ ; t = 10ms half sinewave; $T_J$ (initial) = 190 °C; $V_{RM} \leq 10V$	:	79.2 KA
$I^2t$ : t = 10ms; $T_J$ (initial) = 190 °C; $V_{RM} = 0.6 V_{RRM} (Max)$	:	$25.92 \times 10^6 A^2 SECS$
$I^2t$ : t = 10ms; $T_J$ (initial) = 190 °C; $V_{RM} \leq 10V$	:	$31.4 \times 10^6 A^2 SECS$
$I^2t$ : t = 3ms; $T_J$ (initial) = 190 °C; $V_{RM} \leq 10V$	:	$22.5 \times 10^6 A^2 SECS$
$T_{HS}$ Operating range	:	-55°C to +190°C
$T_{stg}$ ; Non-operating	:	-55°C to +200°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	: $T_J \leq 25^\circ\text{C}$	:	5.007122E-2
C	: $T_J \leq 25^\circ\text{C}$	:	3.662236E-5
D	: $T_J = 25^\circ\text{C}$	:	-1.731167E-3
HOT			
A	: (Constant)	:	0.2798311
B	: (B x ln i)	:	5.544857E-2
C	: (C x i)	:	3.989276E-5
D	: (D x $\sqrt{i}$ )	:	-1.369681E-3
$V_{FM}$	: $I_{FM} = 6800A$ $T_{VJ} = 190^\circ\text{C}$	:	0.93V
$R_{th}$	(J-HS) double side cooled	:	0.011 K/W
	single side cooled	:	0.022 K/W
$I_{RRM}$	: $T_J = 190^\circ\text{C}$ $V_{RM} = V_{RRM}(\text{Max})$	:	100mA
$Q_{RA}$	: $I_{TM} =$ $T_{VJ} =$	:	
	: $V_{RM} =$ $T_{VJ} =$	:	
Mounting Force		:	2700-4700 Kg.f
Outline Drawing		:	100A293
JEDEC Outline No.		:	

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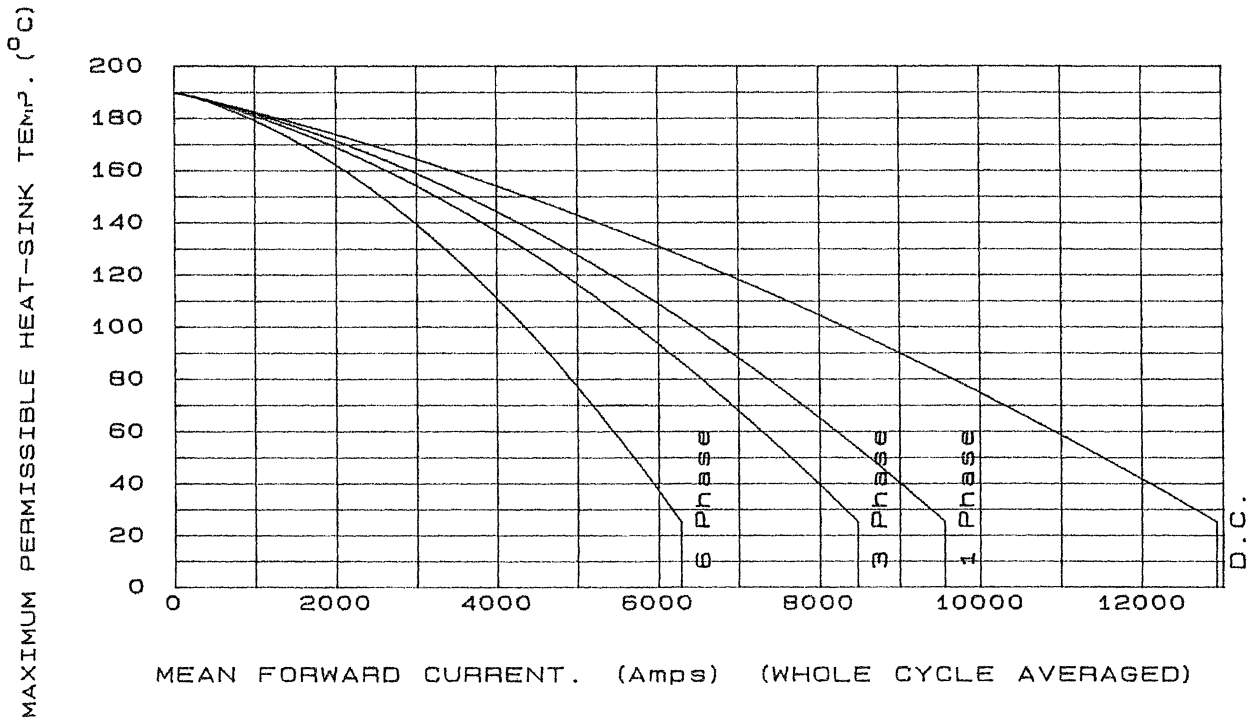
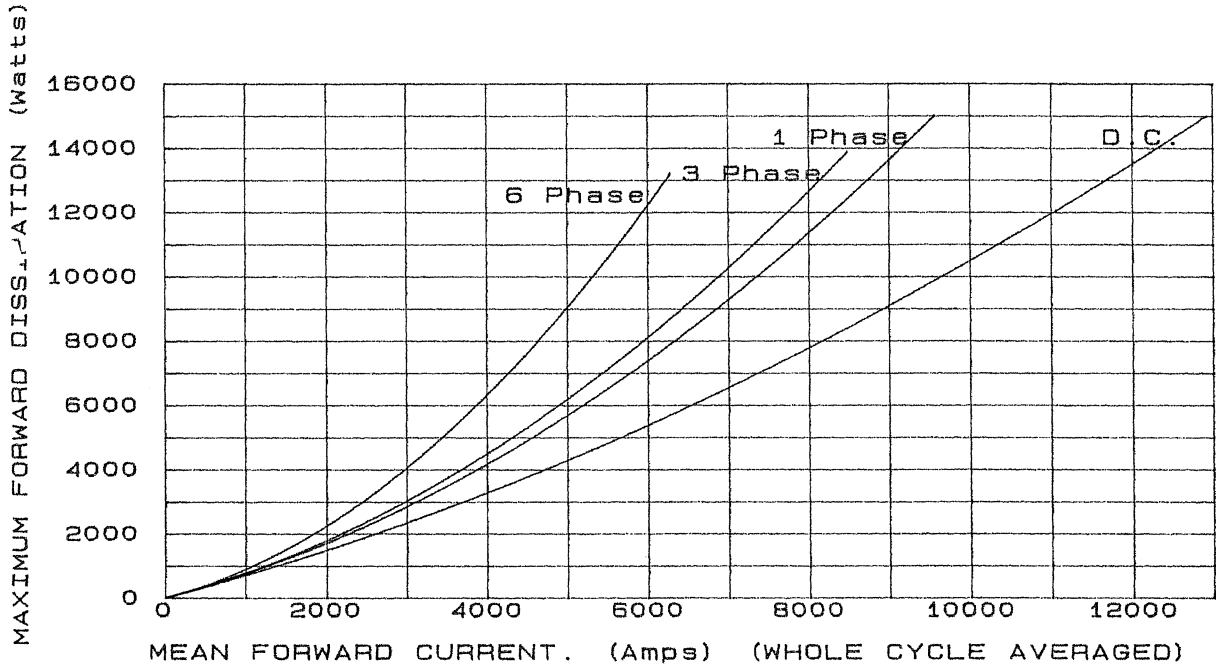
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Voltage Ratings

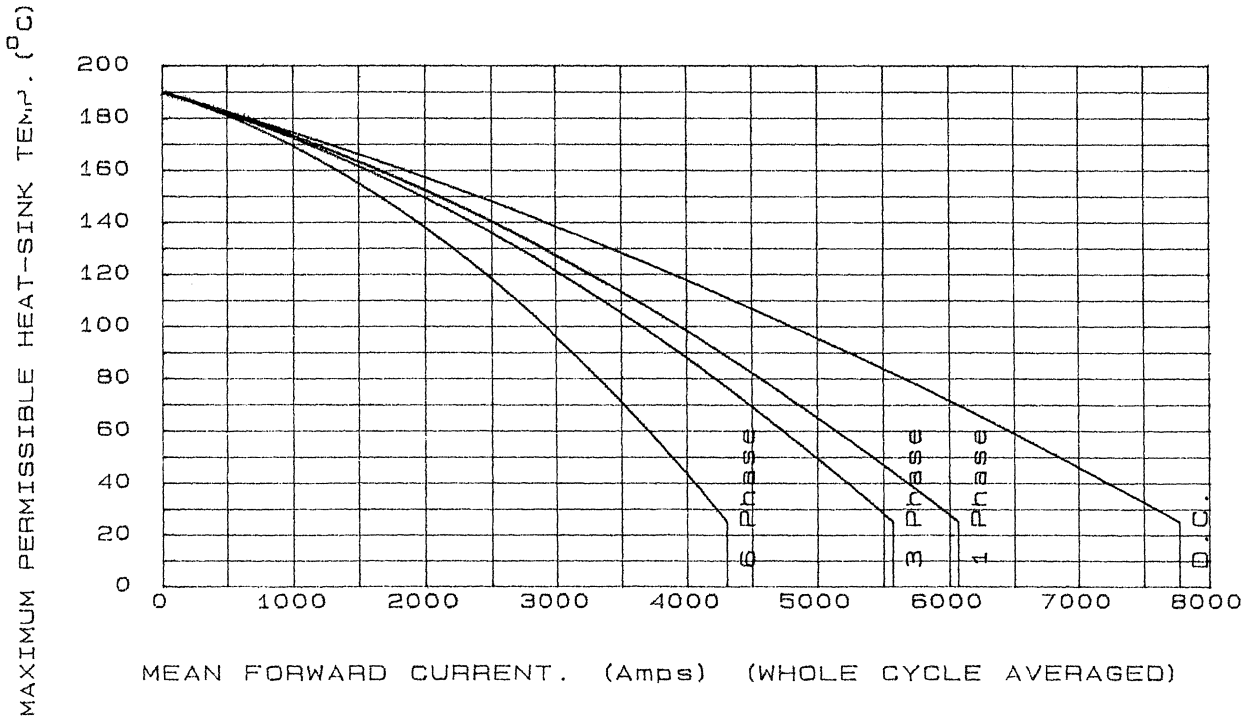
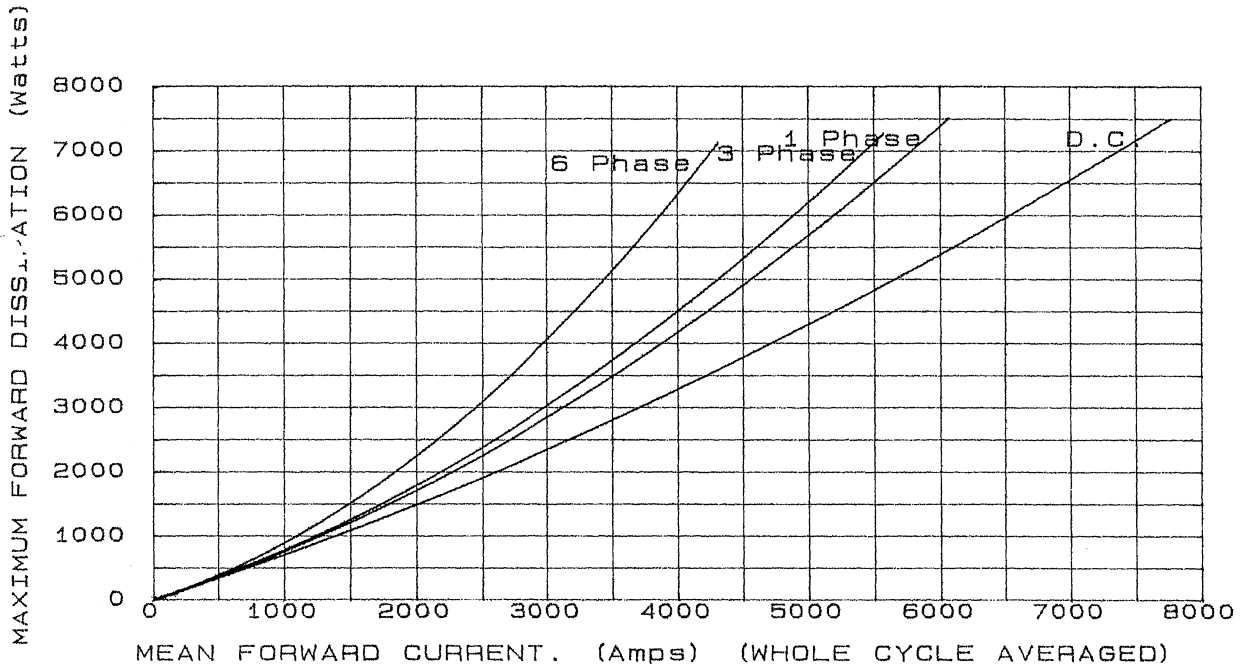
Voltage Class	$V_{RRM}$ V	$V_{RSM}$ V
02	200	300
04	400	500
06	600	700
08	800	900
10	1000	1100
12	1200	1300
14	1400	1500

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

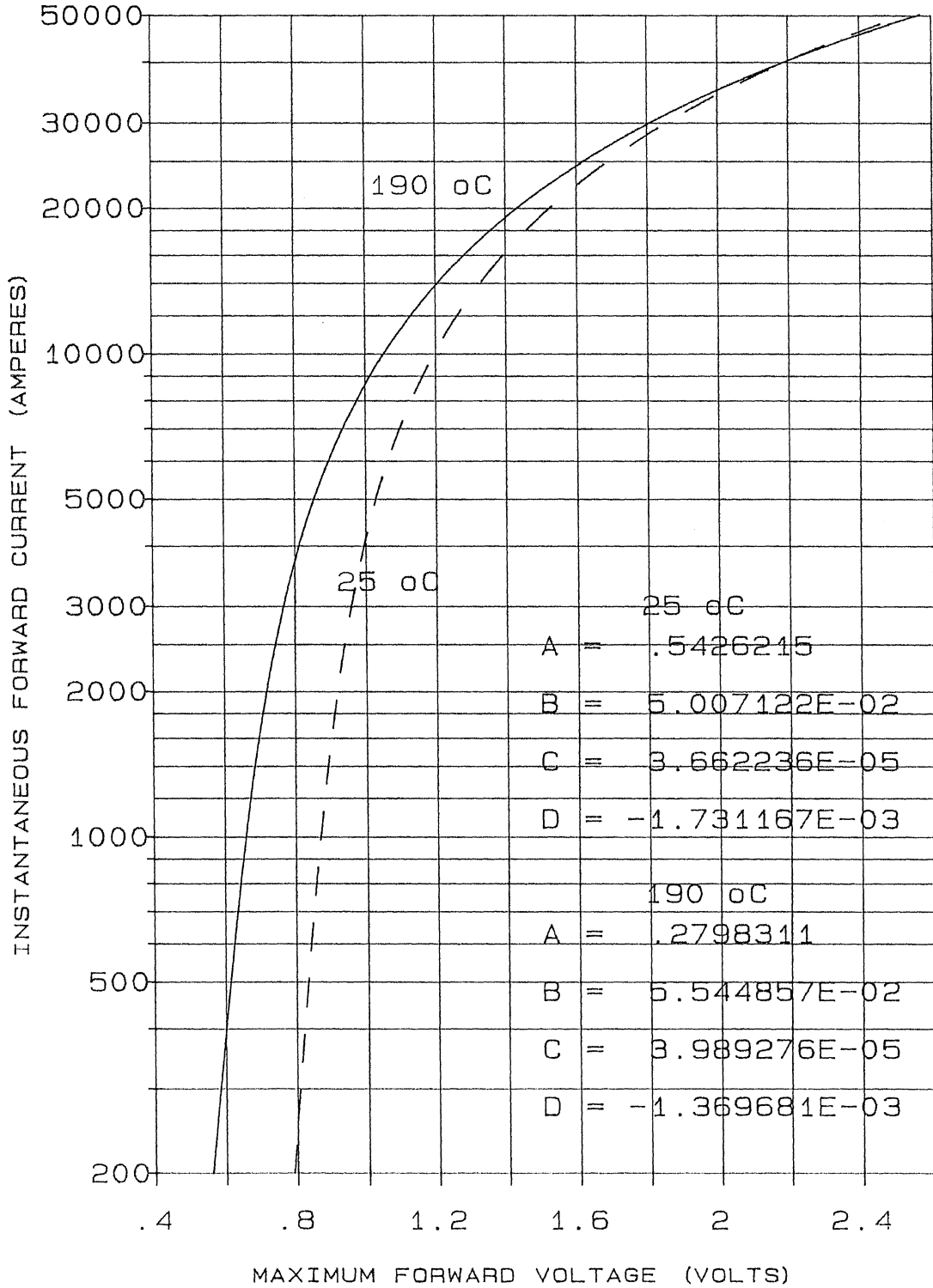
DOUBLE SIDE COOLED



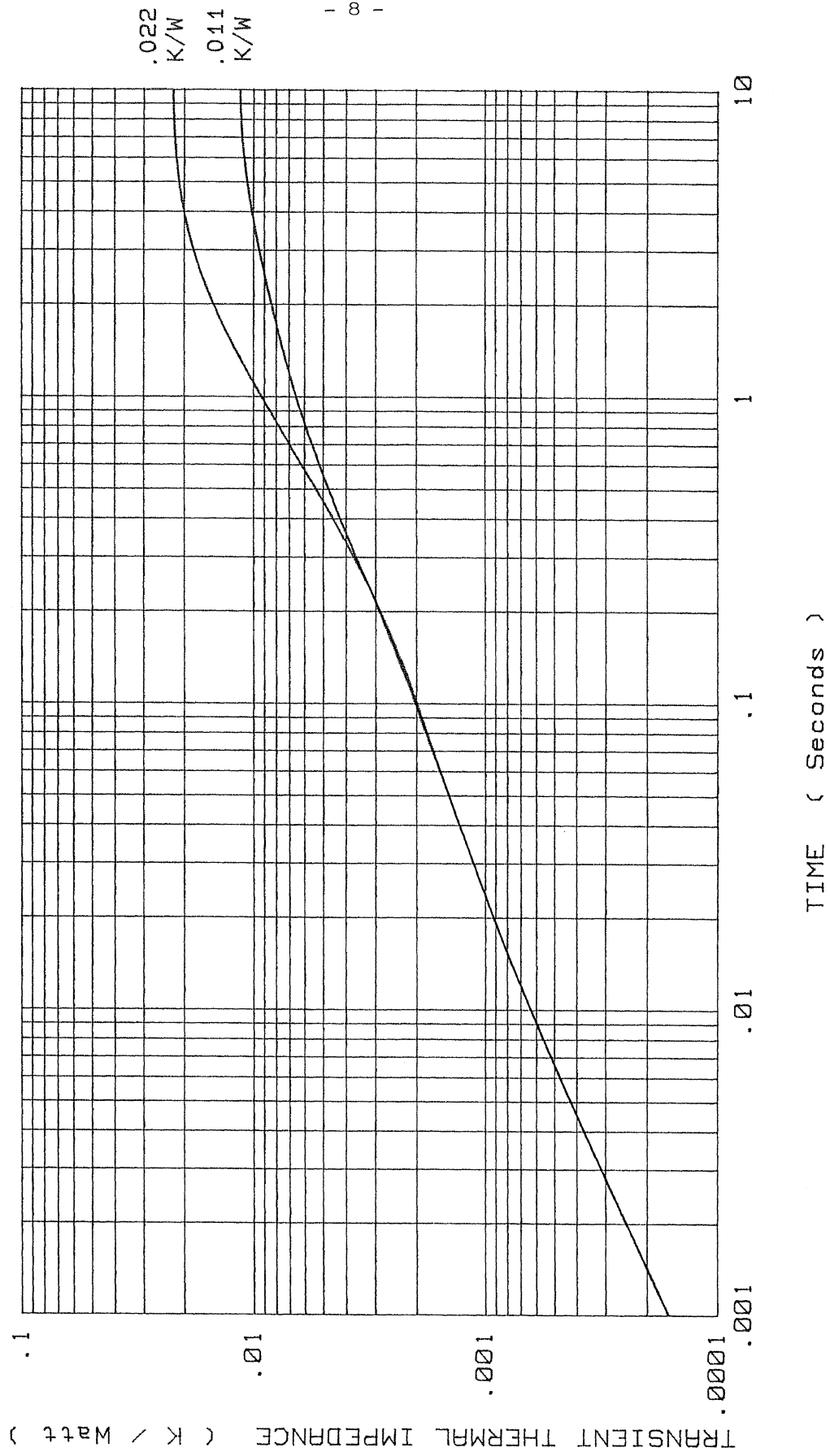
SINGLE SIDE COOLED



FORWARD CHARACTERISTIC OF LIMIT DEVICE

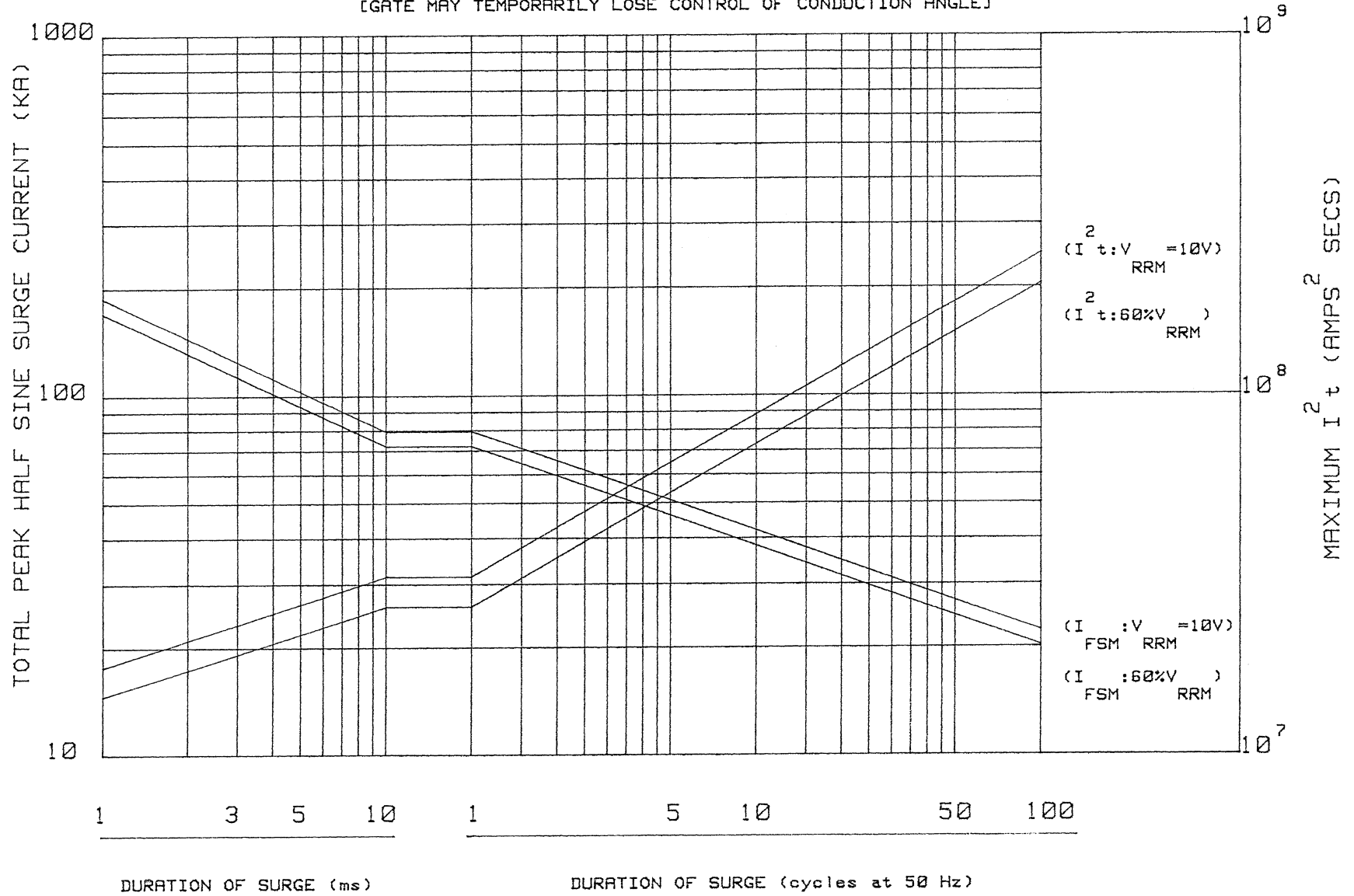


JUNCTION TO SINK TRANSIENT THERMAL IMPEDANCE



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

[GATE MAY TEMPORARILY LOSE CONTROL OF CONDUCTION ANGLE]



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INTERNATIONAL OUTLINE No.

G.A. DWG No. 159B100H601

- 10 -

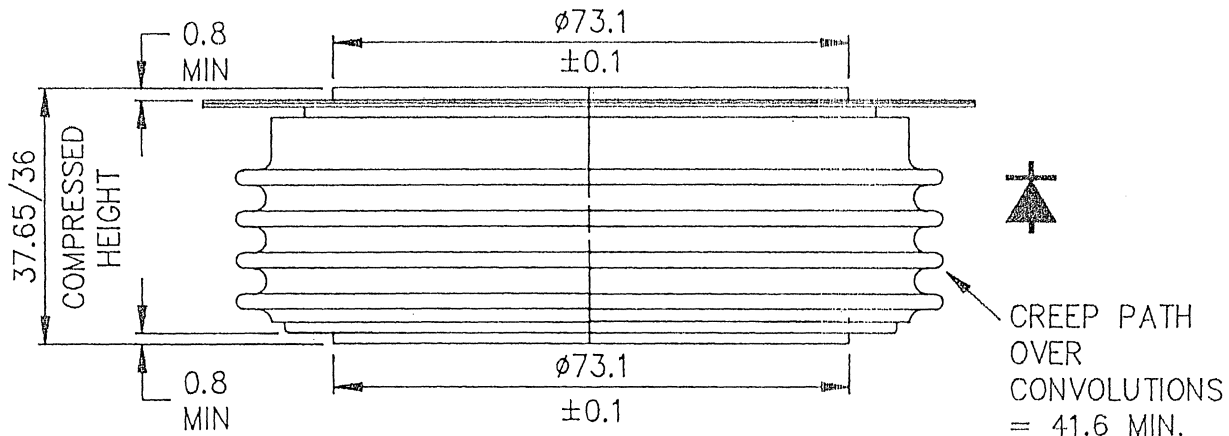
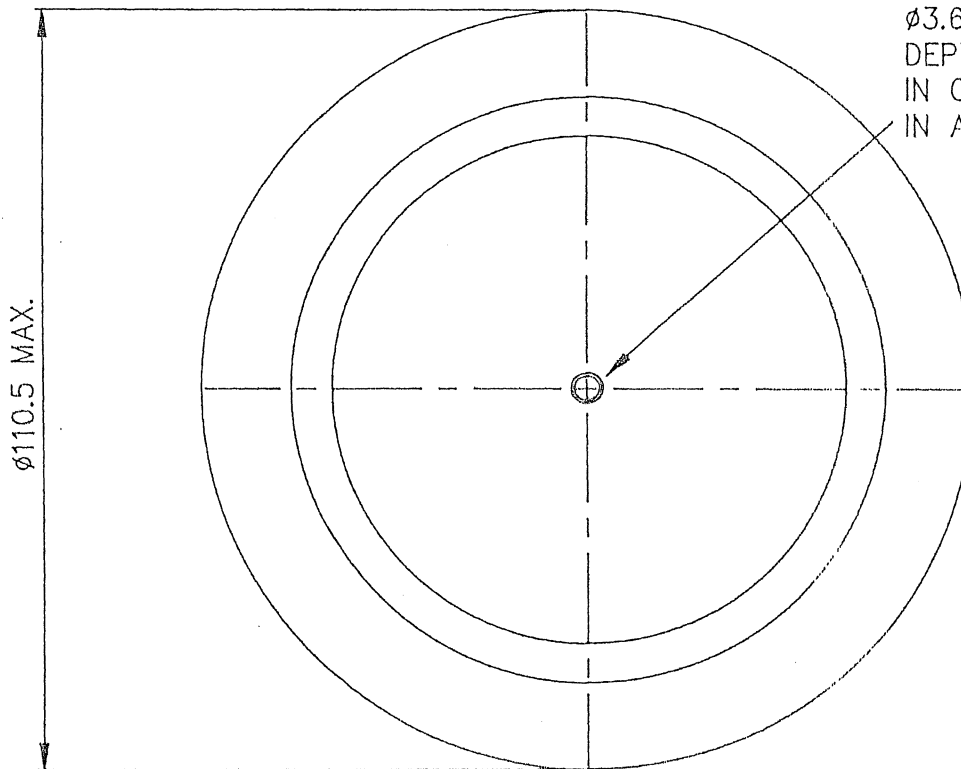
WEIGHT. 1.7kg

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±1000kgf. (37±10kN)

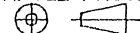
TYPE NUMBER

- CXC15C
- CXC20C
- CXC21C
- CXC30C
- CXC32C



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

THIRD ANGLE PROJECTION.




DWG. COMPLIES WITH BS 308.

DIMNS. IN MILLIMETRES.

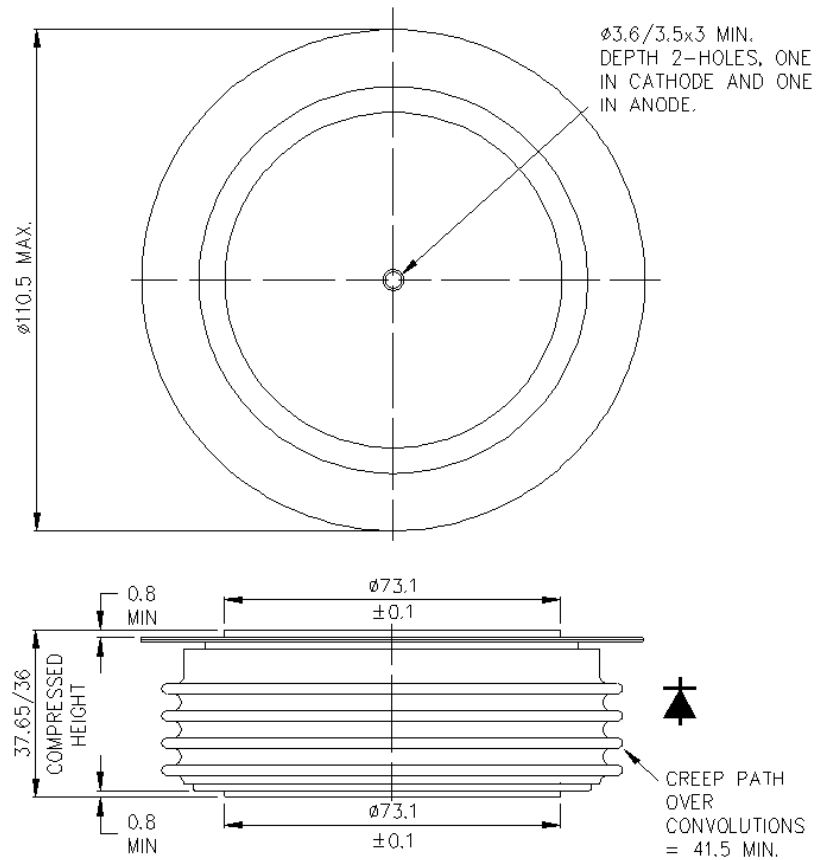
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100A293

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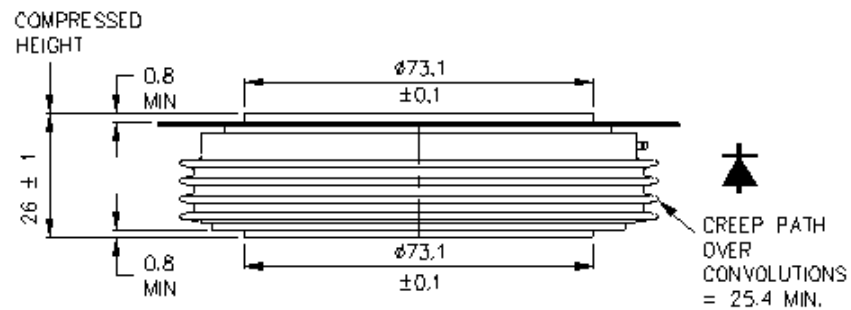
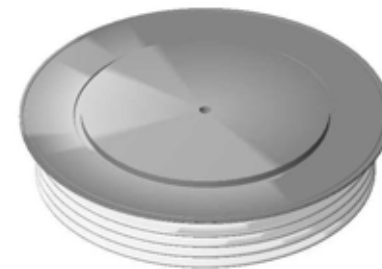
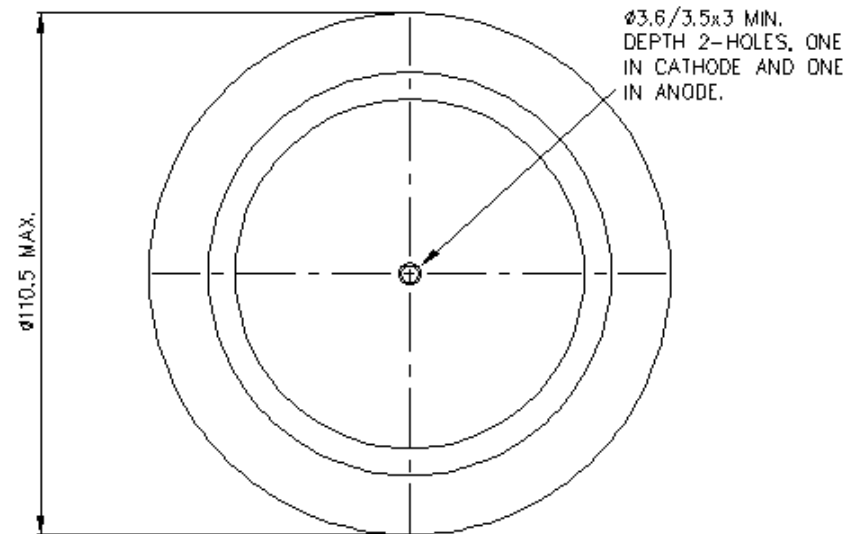
**Drawing Number – W7**  
**Outline Number – 100A293**

**WESTCODE**  
An IXYS Company



**Weight 1700g**

Drawing Number – W42  
Outline Number – 100A310



Weight 1200g