Rectifier Diode
W0944WC040 to W0944WC150

The data sheet on the subsequent pages of this document is a scanned copy of existing data for this product.
(Rating Report 90NR27 Issue 2)

This data reflects the old part number for this product which is: SW02-15CXC470. 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
Device no longer available for grade 02 (200V V_{RRM})

Please use the following link to view an up to date outline drawing for this device
Outline W1

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			
W0944	WC	♦♦	0
Fixed Type Code	Fixed Outline Code	Voltage code V_{RRM}/100 04-15	Fixed Code
Typical Order Code: W0944WC100, 14.4mm clamp height, 1000V V_{RRM}			

QUALITY EVALUATION LABORATORY

Rating Report: 90NR27 Issue 2 Date: 12th May, 1992

Origin: Q.E.L. Pages: 10

Diode Type SW02-15CXC470

Written by: M. Baker Checked: M.B. Approved: [signature]

This diode consists of a diffused 24 mm silicon slice mounted in a cold weld capsule housing.

This report supersedes Report 90NR27 Issue 1.

Ratings

Voltage Grades		: 02-15
V_{RSM}		: 300-1600V
V_{RRM}		: 200-1500V
$I_{F(AV)}$	: Single Phase; 50 Hz, 180° half sinewave;	
	Double side cooled T_{HS} = 55°C, 100°C	: 945A; 717A
	Single side cooled T_{HS} = 100°C	: 430A
I_F (rms) max.)	) Double side cooled T_{HS} = 25°C	: 1694A
I_F max.)		: 1430A
I_{FSM}	: t = 10ms half sinewave; T_J (initial) = 190°C; V_{RM} = 0.6 V_{RRM}(Max)	: 9000A
I_{FSM}	; t = 10ms half sinewave; T_J (initial = 190 °C; $V_{RM} \leq$ 10V	: 10,000A
I^2t	: t = 10ms; T_J (initial) = 190 °C; V_{RM} = 0.6 V_{RRM}(Max)	: .405 x $10^6 A^2$SECS
I^2t	: t = 10ms; T_J (initial) = 190 °C; $V_{RM} \leq$ 10V	: .5 x $10^6 A^2$SECS
I^2t	: t = 3ms; T_J (initial) = 190 °C; $V_{RM} \leq$ 10V	: .36 x $10^6 A^2$SECS
T_{HS} Operating range		: -40 to +190°C
T_{stg}; Non-operating		: -40 to +200°C

Characteristics

(Maximum values unless stated otherwise)

V_O : T_J = 190°C	:	0.79V
r_s : T_J = 190°C	:	0.342mohms
COLD		
A : T_J = 25°C	:	0.933861601
B : T_J = 25°C	:	-1.98094636E-2
C : T_J = 25°C	:	2.35239372E-4
D : T_J = 25°C	:	5.52084713E-3
HOT		
A : (Constant)	:	0.717850746
B : (B x ln i)	:	-1.13820768E-2
C : (C x i)	:	2.83402379E-4
D : (D x $\sqrt{i}$	:	6.10133431E-3
V_{FM} : I_{FM} = 1930A T_{VJ} = 190°C	:	1.45V
$R_{th(J-HS)}$ double side cooled	:	0.09 K/W
Anode side cooled	:	0.186 K/W
Cathode side cooled	:	0.174 K/W
I_{RRM} : T_J = 190°C V_{RM} = $V_{RRM(Max)}$	:	15mA
Q_{RA} : I_{TM} = T_{VJ} =	:	
: V_{RM} = T_{VJ} =	:	
Mounting Force	:	330-550 Kg.f
Outline Drawing	:	100A241
JEDEC Outline No.	:	DO-200AA

CONTENTS

Changes to Report 90NR27

Page 1 $I_{F(AV)}$, $I_{F(rms)}$ and I_F max.

Page 2 V_o, r_s, Hot A B C D co-efficients

New cold A B C D co-efficients

Page 3 This list

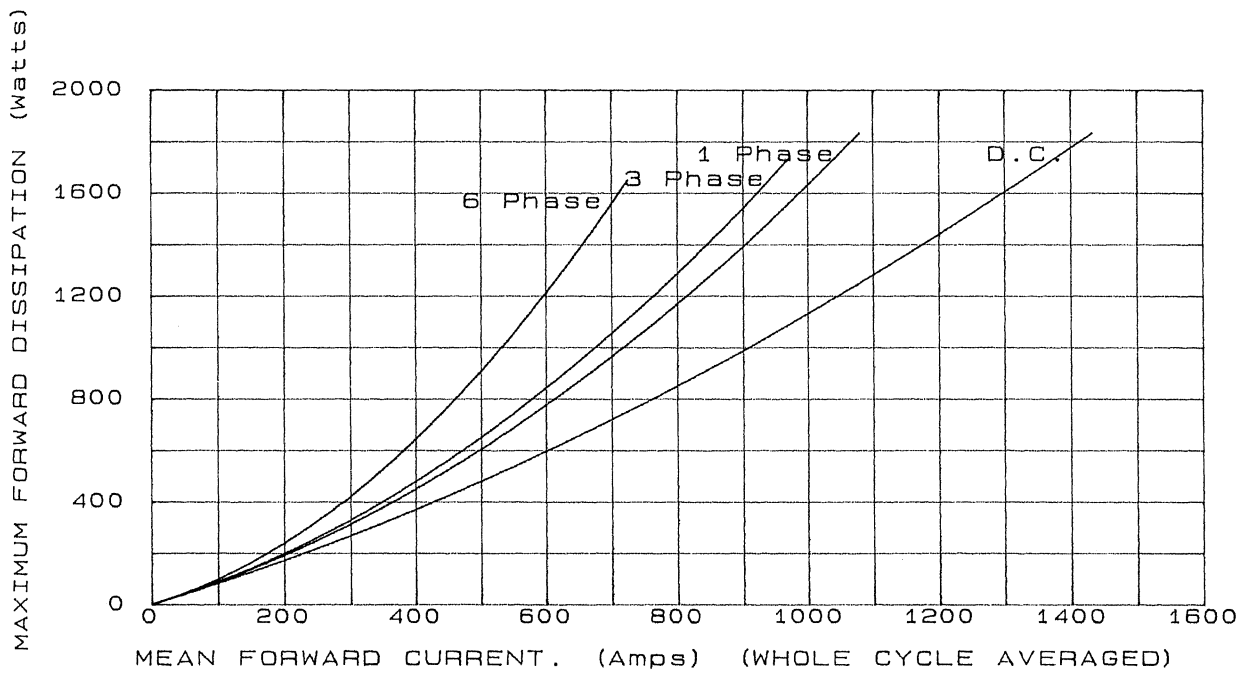
Page 5-8 Re-drawn

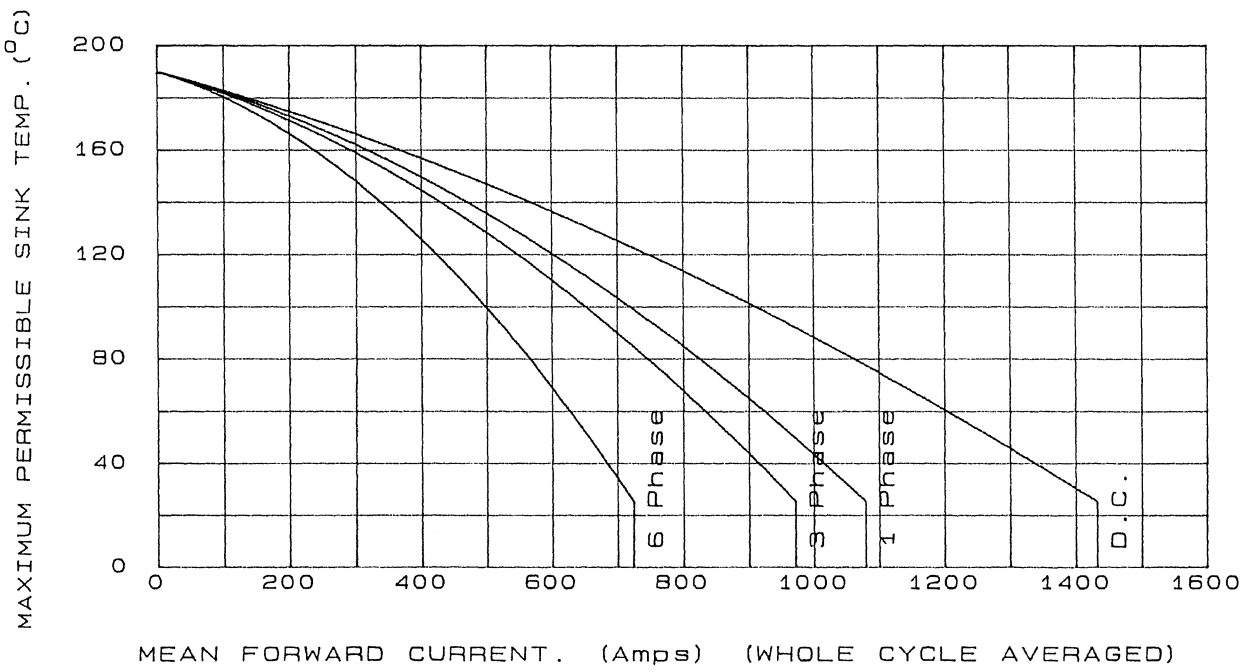
Voltage Ratings

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
15	1500	1600

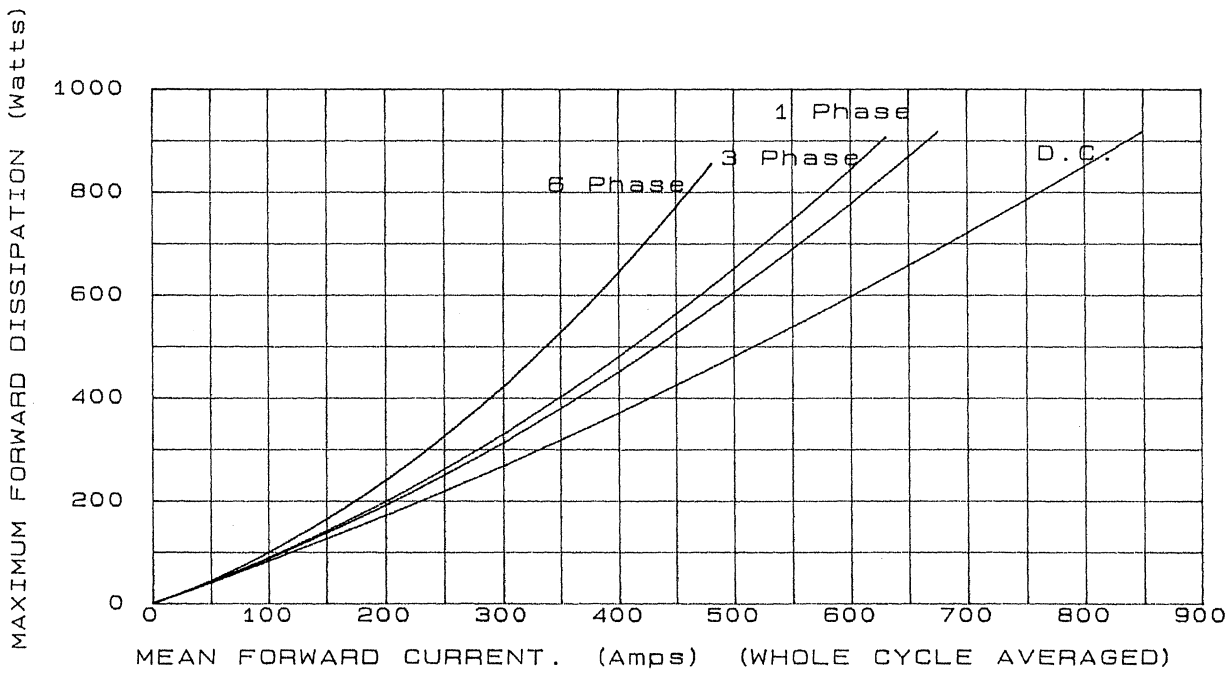
This Report is applicable to higher or lower voltage grades when supply has been agreed by Sales/Production.

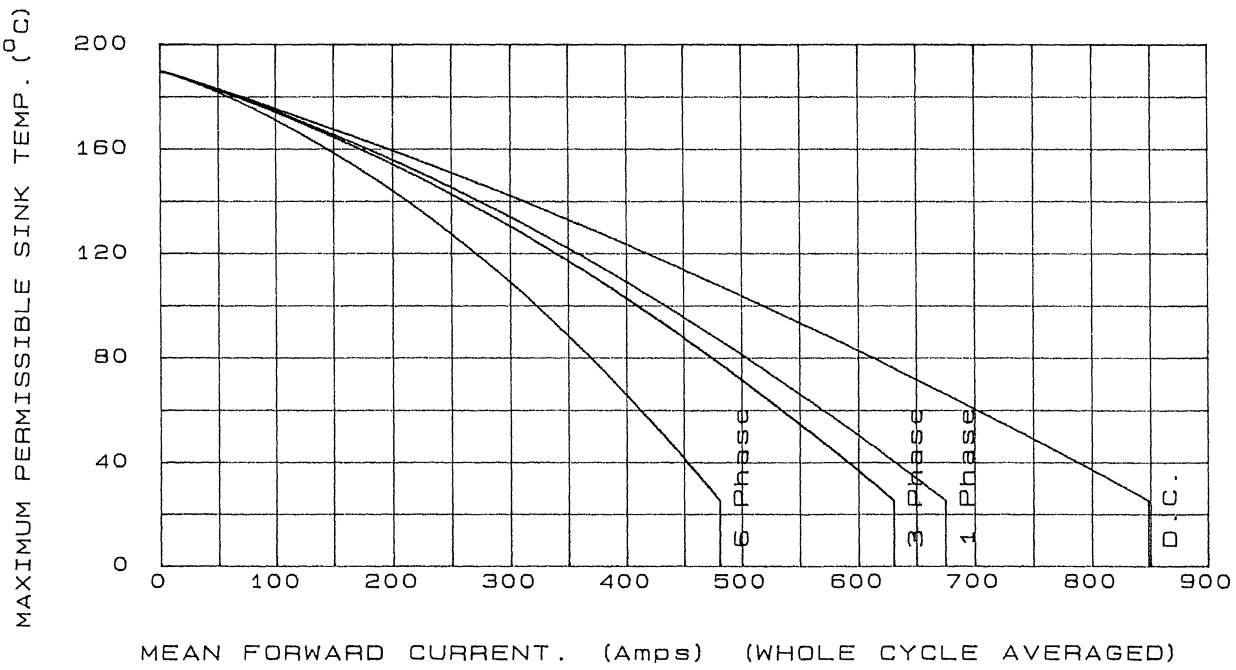
DOUBLE SIDE COOLED





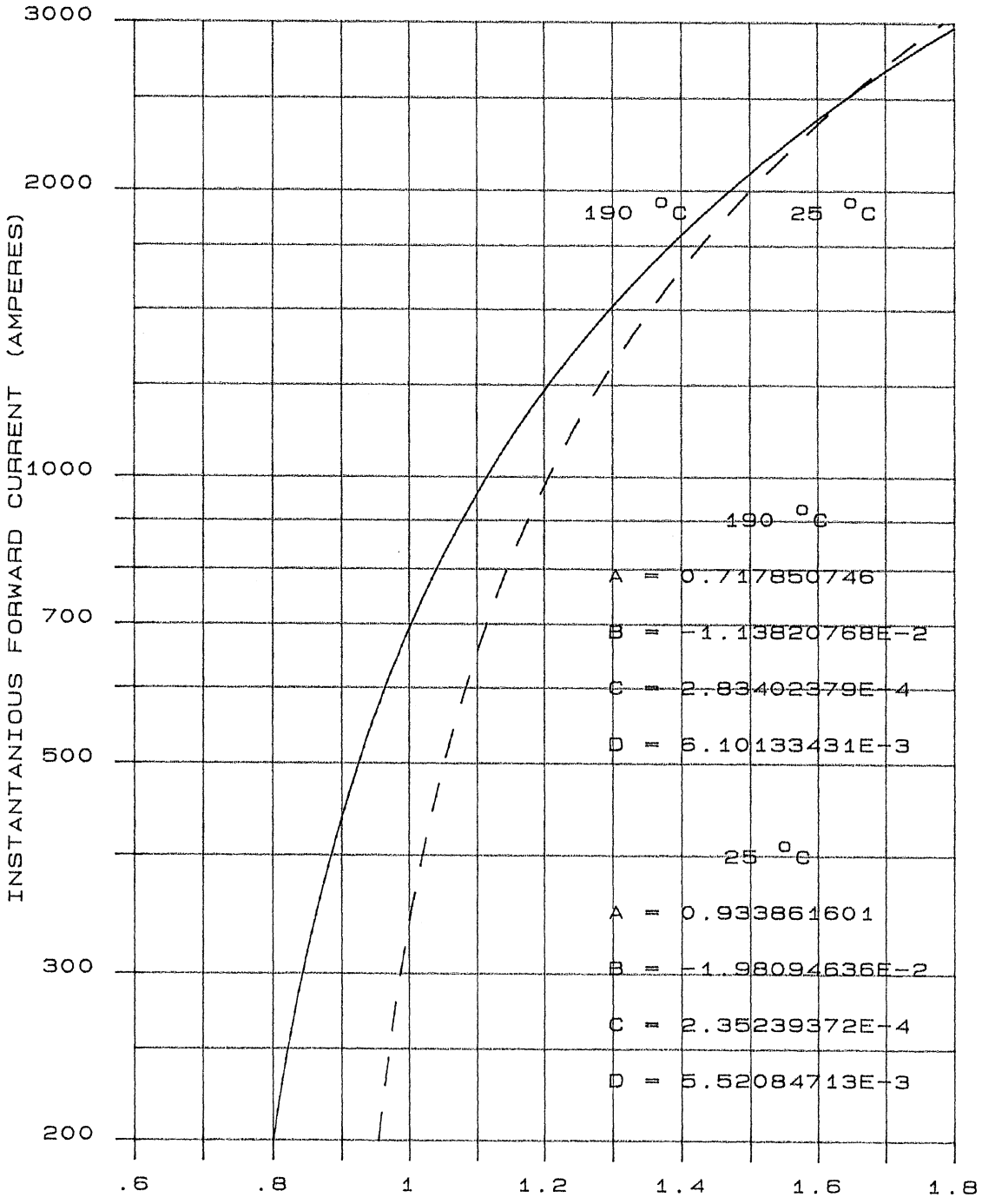
SINGLE SIDE COOLED

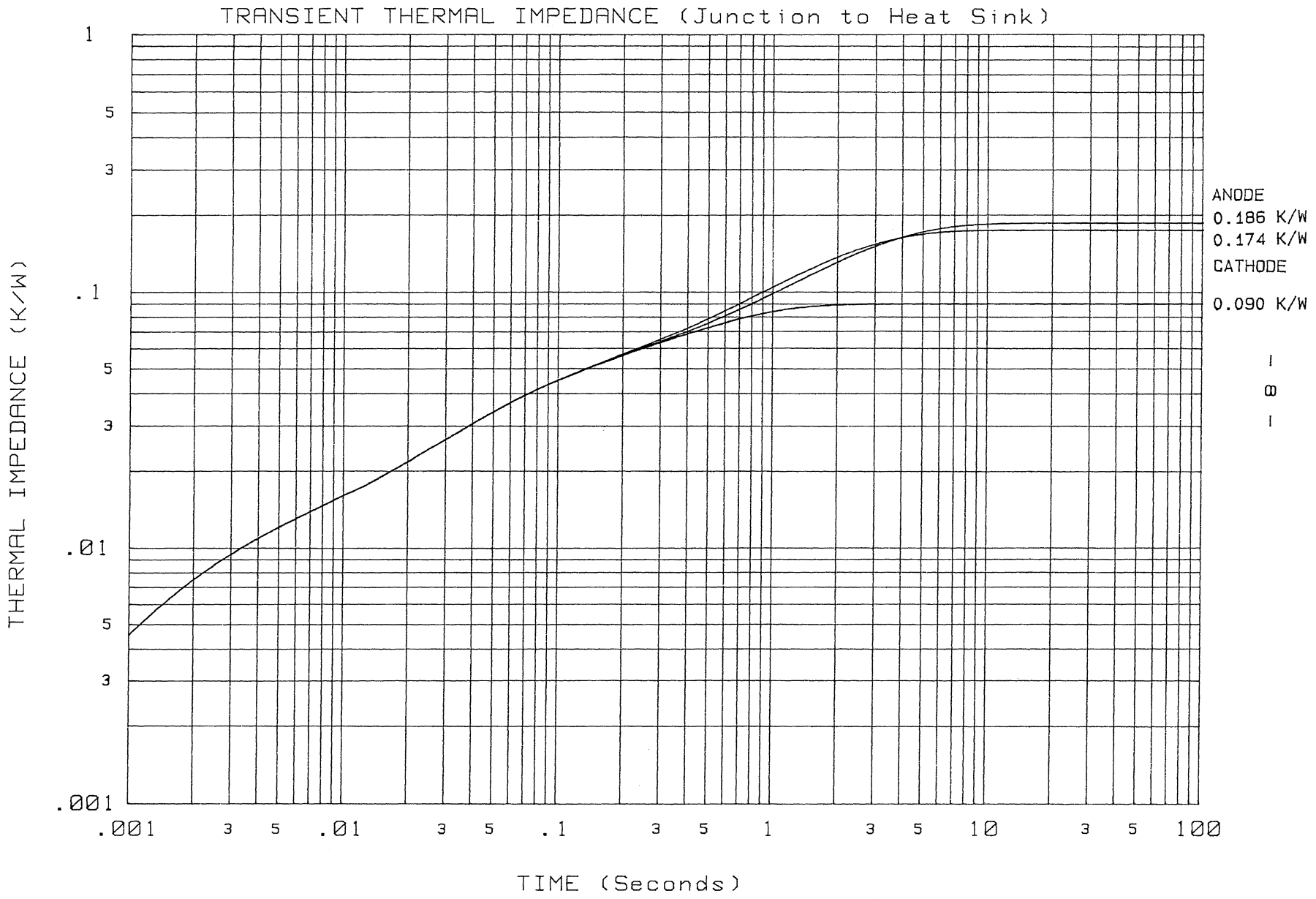




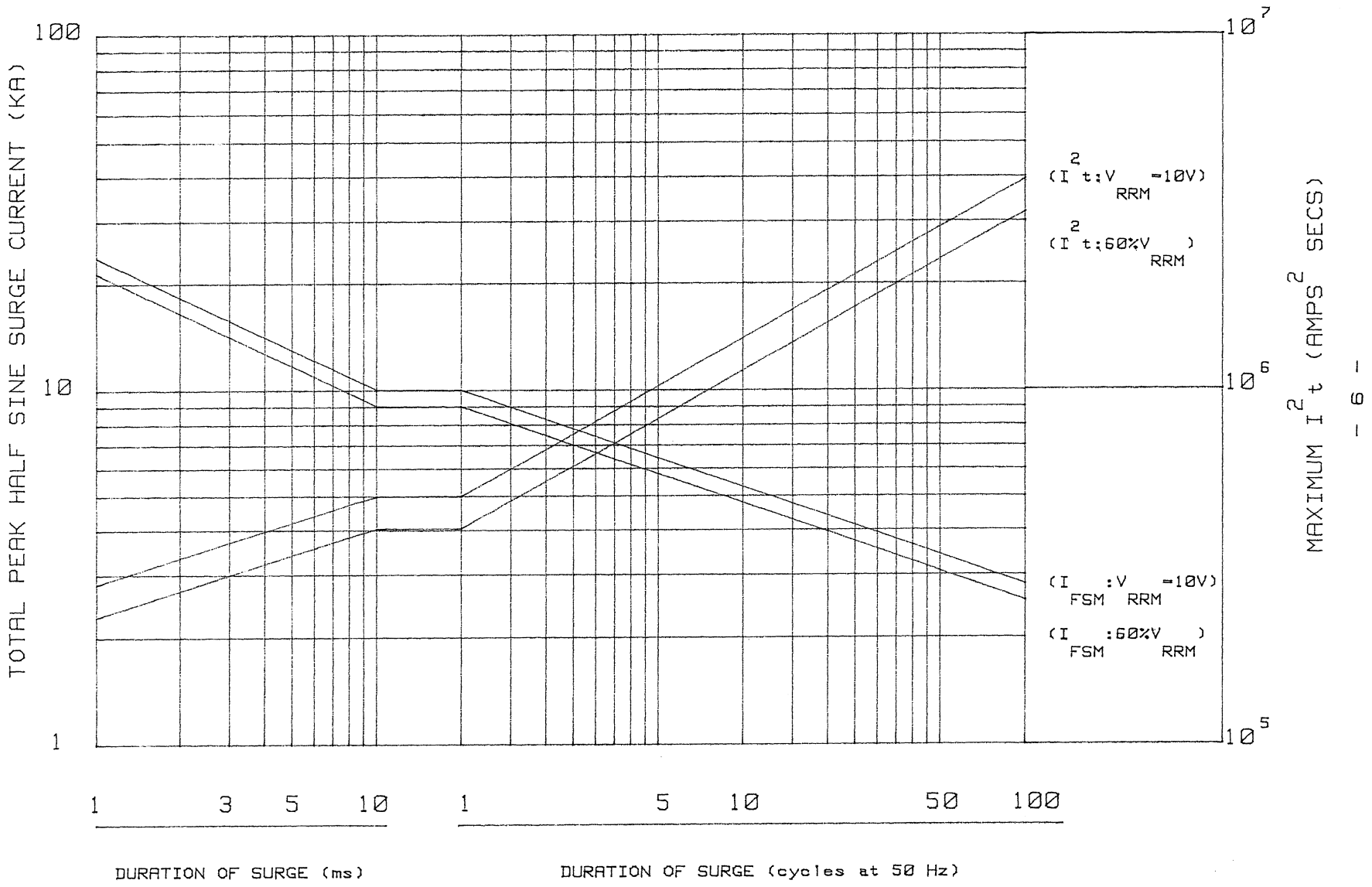
FORWARD CHARACTERISTIC

OF LIMIT DEVICE




TRANSIENT THERMAL IMPEDANCE (Junction to Heat Sink)
THERMAL IMPEDANCE (K/W)
1
5
3
.1
5
3
.01
5
3
.001
.001
3
5
.01
3
5
.1
3
5
1
3
5
10
3
5
100
TIME (Seconds)
ANODE
0.186 K/W
0.174 K/W
CATHODE
0.090 K/W

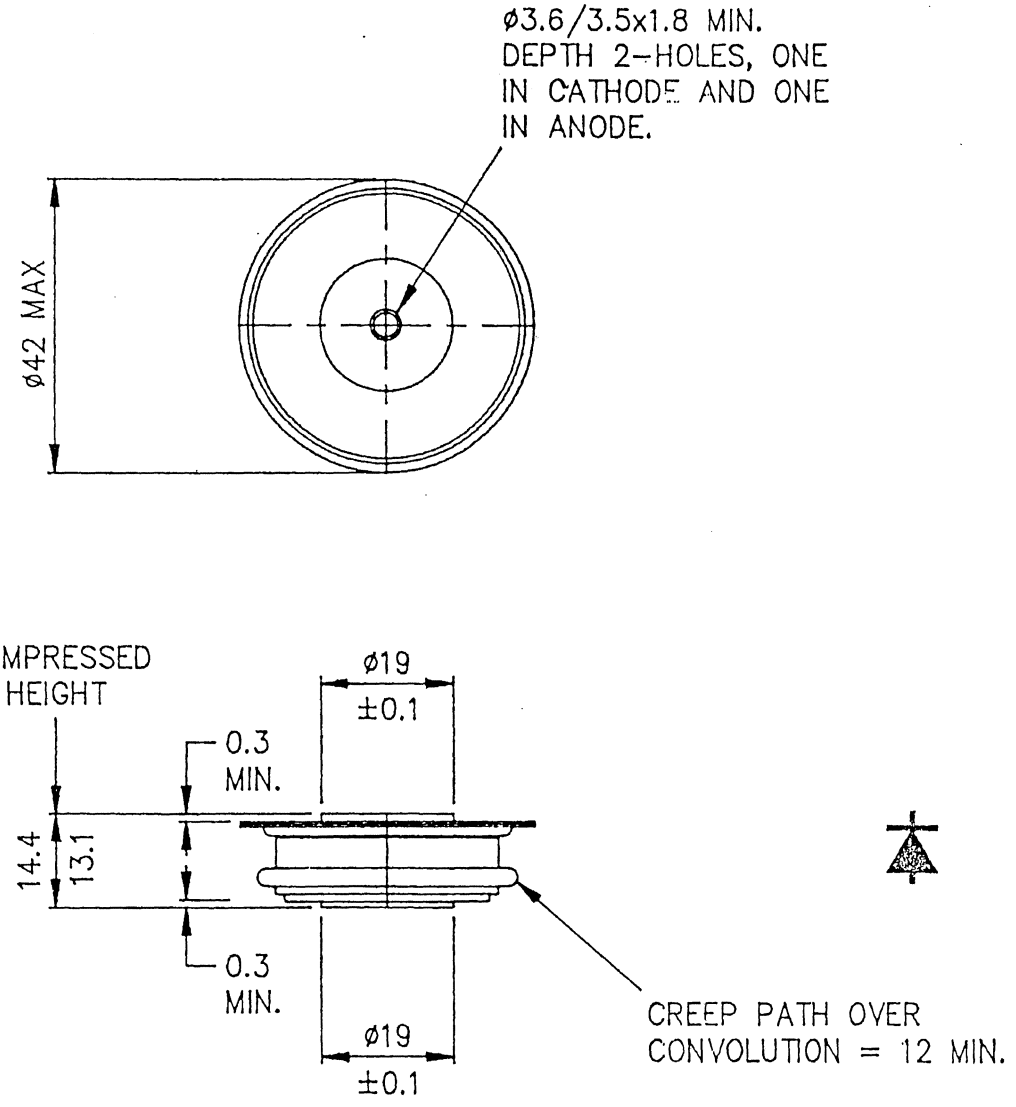
MAXIMUM NON REPETITIVE SURGE CURRENT AT INITIAL JUNCTION TEMPERATURE 190 ^{0} C



INTERNATIONAL OUTLINE No. DO-200AA
G.A. DWG No. 159B100H100-H110.
WEIGHT. 70 GRAMS
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 = 330-550kgf.

TYPE NUMBER	
CXC300	CXC134
CXC320	CXC144
CXC380	CXC170
CXC400	CXC174
CXC470	



ISS	REVISIONS
10	10-09-90 REDRAWN ON CAD HDN

THIRD ANGLE PROJECTION.
DWG. COMPLIES WITH BS 308.
DIMNS. IN MILLIMETRES.
DWG No. 100A241

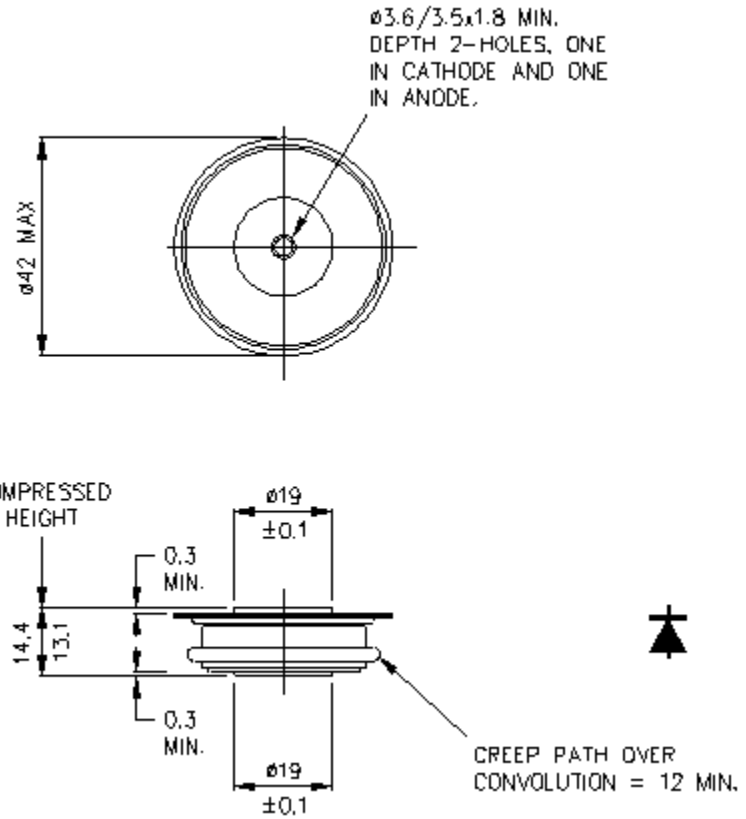
SCALE 1/1 DRAWN HDN

WESTCODE SEMICONDUCTORS LTD.,
P.O. BOX 57, CHIPPENHAM, WILTSHIRE, SN15 1JL, ENGLAND.
TEL. 0249 654141, TELEX 44751 WESCDE G. TELEFAX 0249 659148.

Drawing Number – W1

Outline Number – 100A241

WESTCODE
An IXYS Company



Weight 70g

Westcode Customer Services email: wsl.sales@westcode.com **Telephone: +44 (0)1249 444524 Fax: +44 (0)1249 659448**