Rectifier Diode
Types W5439V#020 to W5439V#140

The data sheet on the subsequent pages of this document is a scanned copy of existing data for this product.
(Rating Report 90NR23 Issue 1)

This data reflects the old part number for this product which is: SW02-14CXC22C.
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 VC outline drawing (W6) in datasheet
No reverse recovery information available

The following links will direct you to the appropriate outline drawings
Outline W6 – 33mm clamp height capsule
Outline W43 – 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

W5439	V#	♦♦	**0**
Fixed Type Code	VC – 37mm clamp height capsule VD – 26mm clamp height capsule	Voltage code V_{RRM}/100 02-14	Fixed Code

Typical Order Code: W5439VC140, 33mm clamp height capsule, 1400V V_{RRM}

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QUALITY EVALUATION LABORATORY

Rating Report: 90NR23

Date: 17th October, 1990

Pages: 10

Diode TypeSW02-14CXC22C

Written by: M. Baker Checked: M Baker Approved:

This diode consists of a diffused 63 mm diameter silicon slice mounted in a cold weld capsule housing.

This report supersedes Rating Report No. 89NR3.

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°C, 100°C	: 5440A, 4190A
Single side cooled T_{HS} = 100°C	: 2600A
I_F (rms) max.)) Double side cooled T_{HS} = 25°C	: 9700A
I_F max.)	: 8470A
I_{FSM} : t = 10ms half sinewave; T_J (initial) = 190 °C; V_{RM} = 0.6 V_{RRM}(Max)	: 52000A
I_{FSM} ; t = 10ms half sinewave; T_J (initial = 190°C; $V_{RM} \leqslant$ 10V	: 57000A
I^2t : t = 10ms; T_J (initial) = 190 °C; V_{RM} = 0.6 V_{RRM}(Max)	: 13.5 x $10^6 A^2$SECS
I^2t : t = 10ms; T_J (initial) = 190 °C; $V_{RM} \leqslant$ 10V	: 16.2 x $10^6 A^2$SECS
I^2t : t = 3ms; T_J (initial) = 190 °C; $V_{RM} \leqslant$ 10V	: 12.6 x $10^6 A^2$SECS
T_{HS} Operating range	: -55 to +190°C
T_{stg}; Non-operating	: -55 to +200°C

Characteristics

(Maximum values unless stated otherwise)

V_O : T_J = 190°C	:	0.65V
r_s : T_J = 190°C	:	0.067 mohms
COLD		
A : T_J = 25°C	:	
B : T_J = 25°C	:	
C : T_J = 25°C	:	
D : T_J = 25°C	:	
HOT		
A : (Constant)	:	0.6525006
B : (B x ln i)	:	-1.430053E-3
C : (C x i)	:	6.549698E-5
D : (D x $\sqrt{i}$	:	2.360472E-4
V_{FM} : I_{FM} =6800A T_{VJ} = 190°C	:	1.11V
R_{th}(J-HS) double side cooled	:	0.016 K/W
single side cooled	:	0.032 K/W
I_{RRM} : T_J = 190°C V_{RM} = $V_{RRM(Max)}$	:	60 mA
Q_{RA} : I_{TM} = T_{VJ} =	:	
: V_{RM} = T_{VJ} =	:	
Mounting Force	:	2700-3400 Kg.f
Outline Drawing	:	100A270
JEDEC Outline No.	:	DO-200AD

CONTENTS

Changes to Rating Report No. 89NR3

P1 : Voltage grade V_{RSM} and V_{RRM}

P2 : ABCD co-efficients

P4 : Voltage Class, V_{RSM} and V_{RRM}

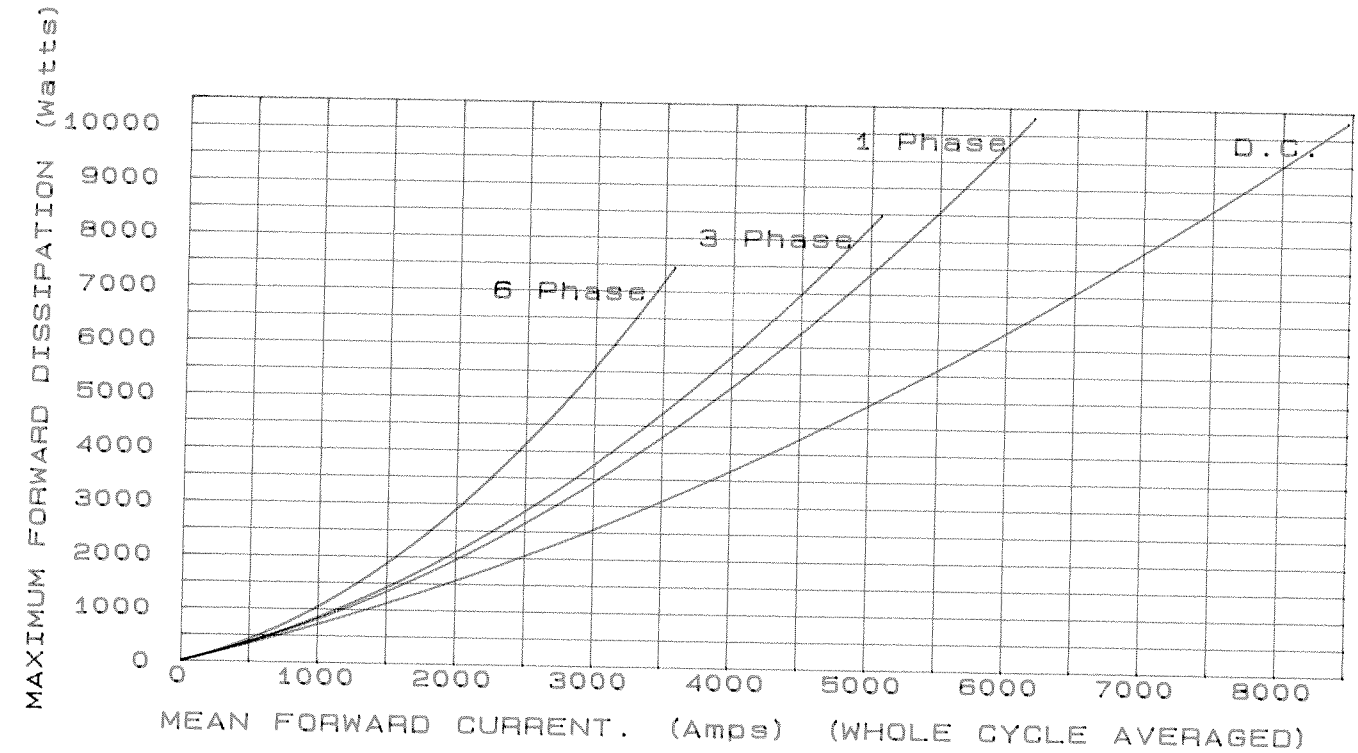
P5-9 : Re-drawn

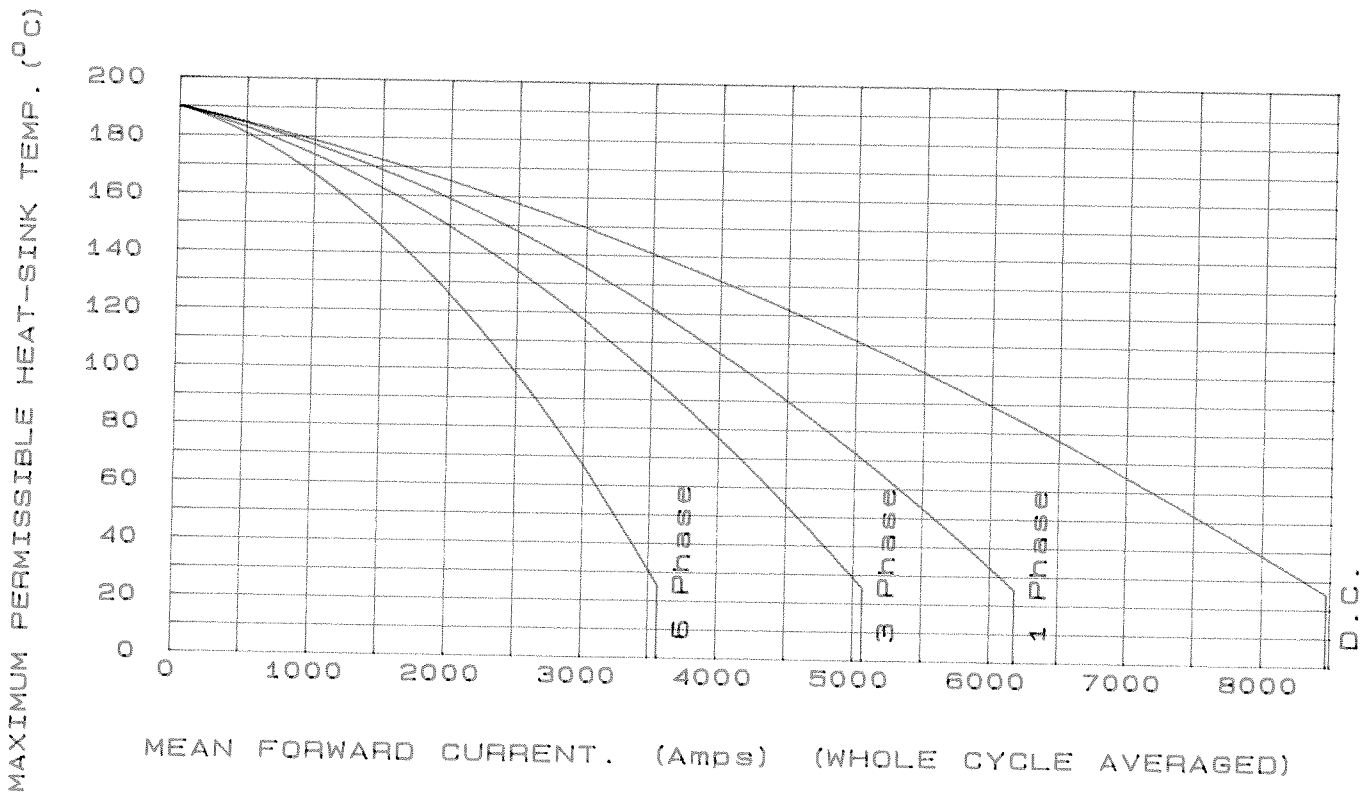
Voltage Ratings

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

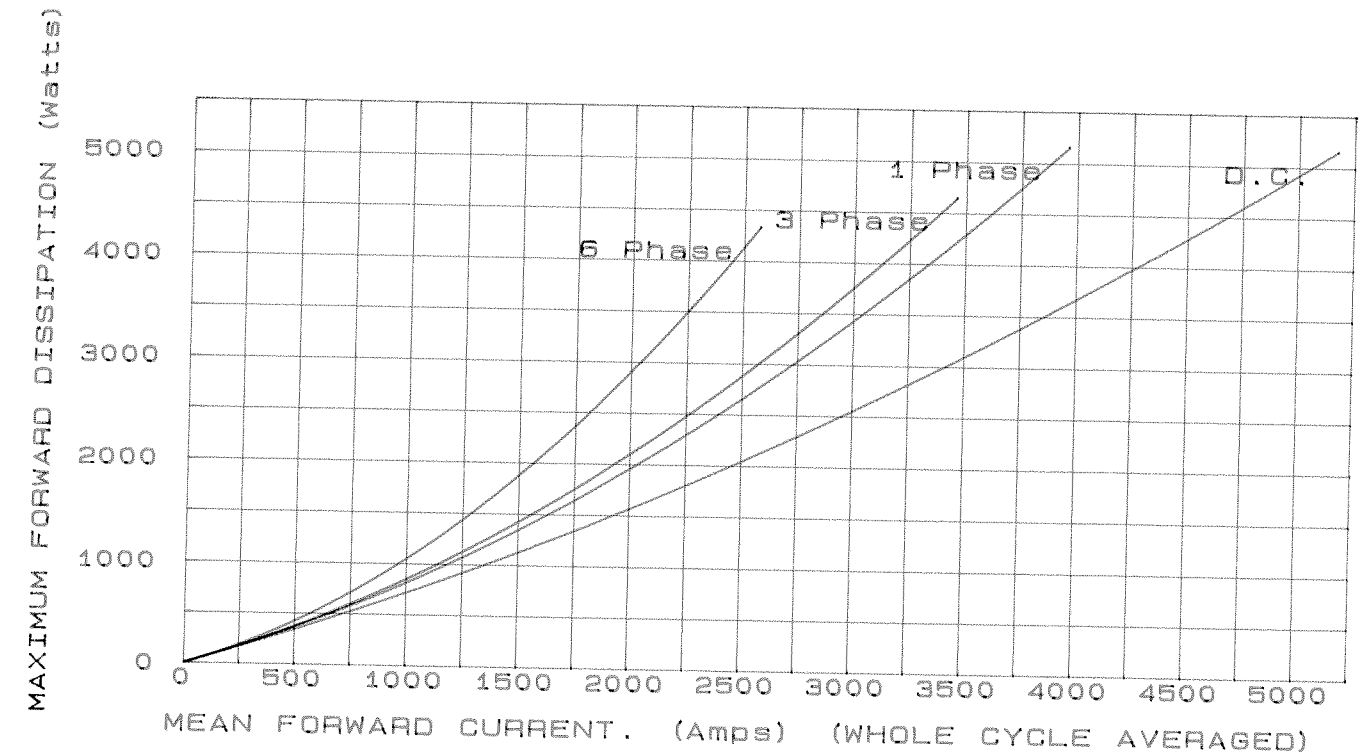
This Report is applicable to higher or lower voltage grades when supply has been agreed by Sales/Production.

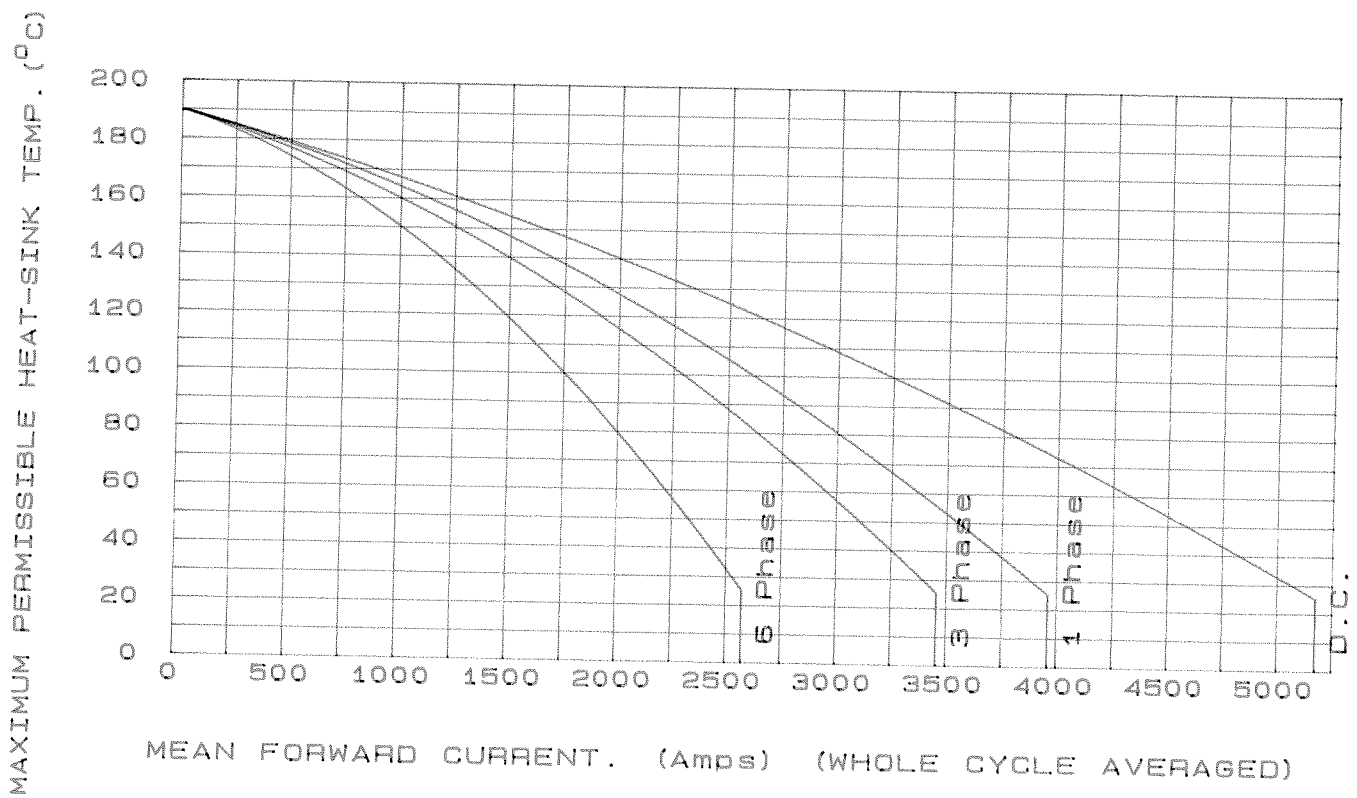
DOUBLE SIDE COOLED

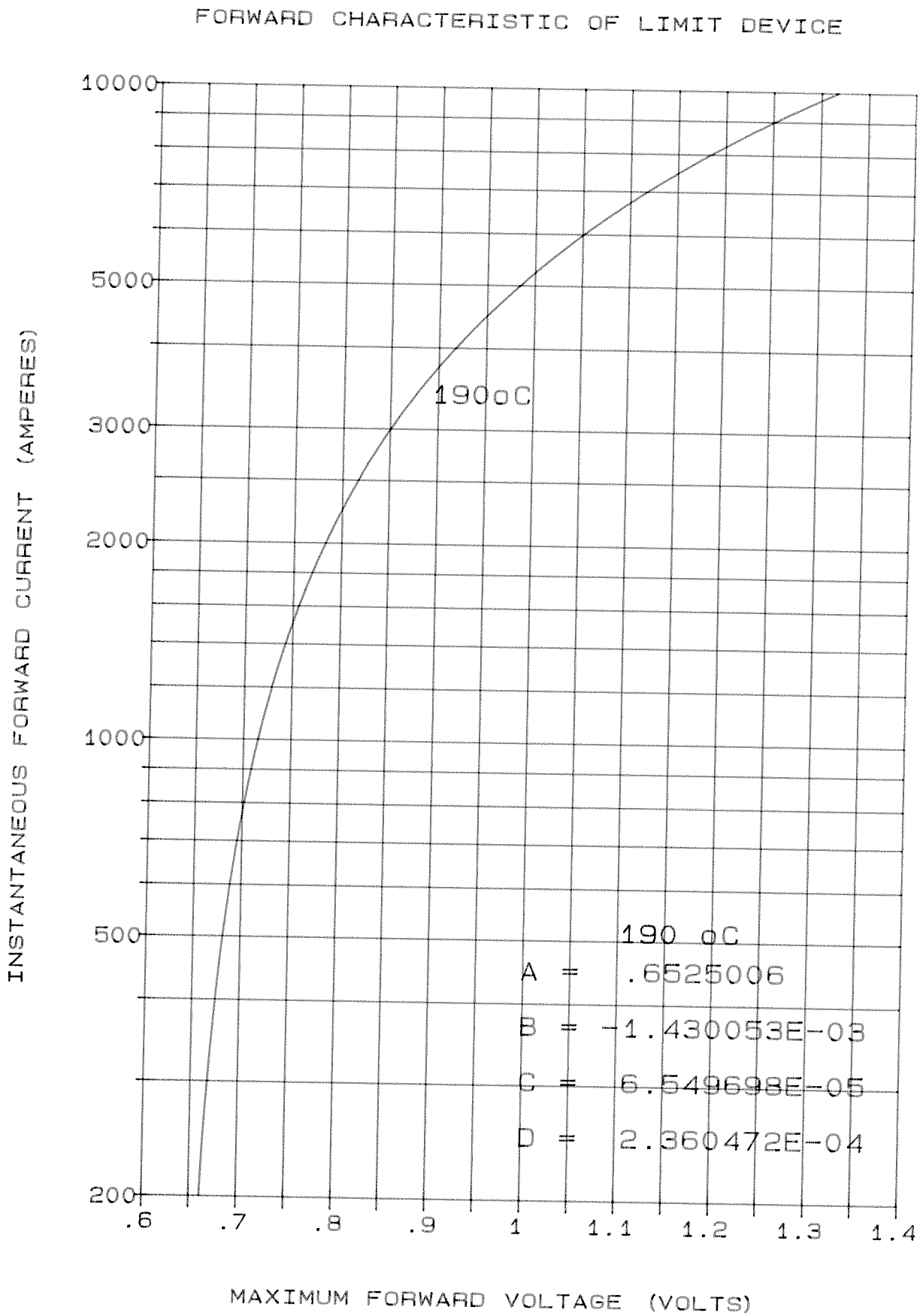


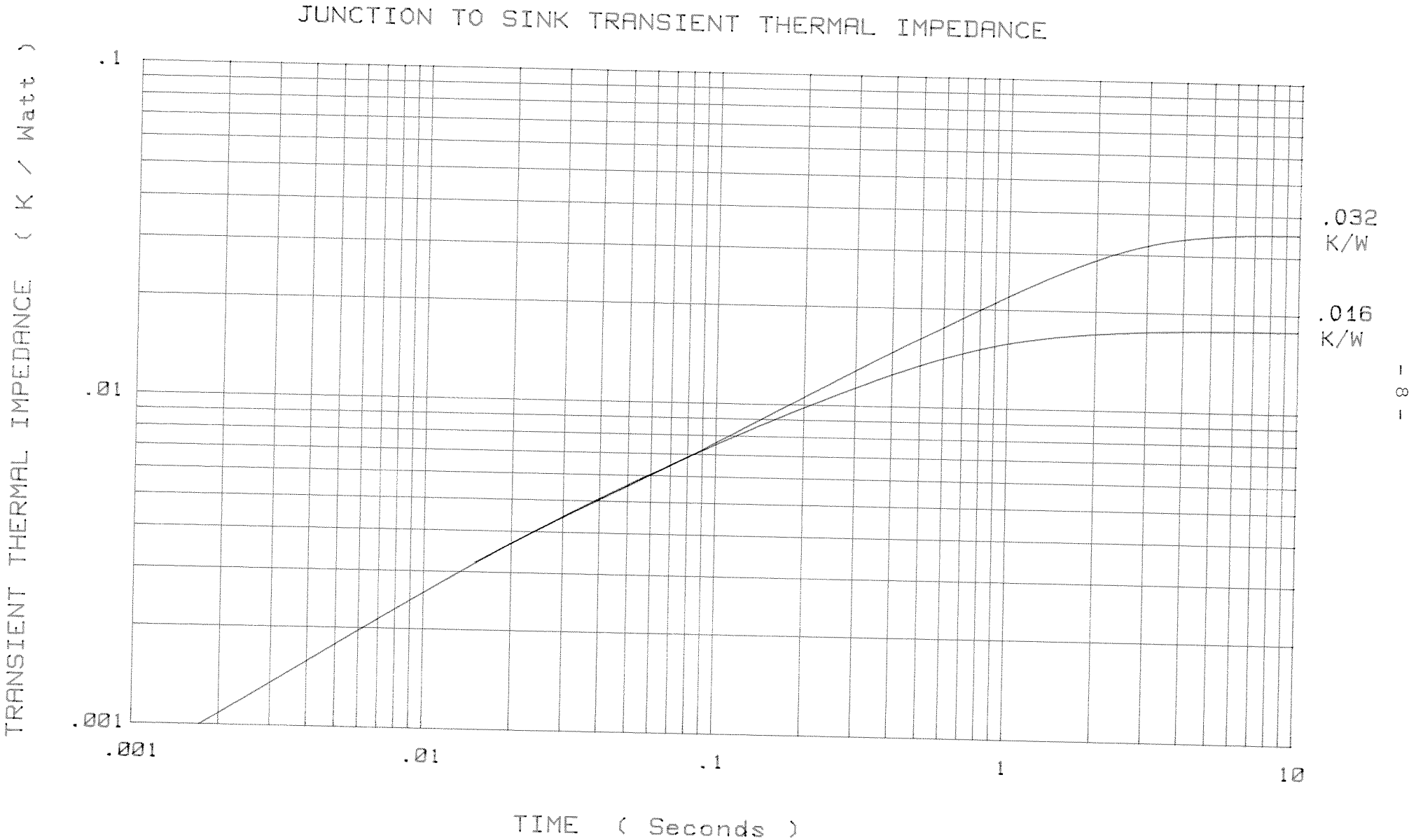


SINGLE SIDE COOLED

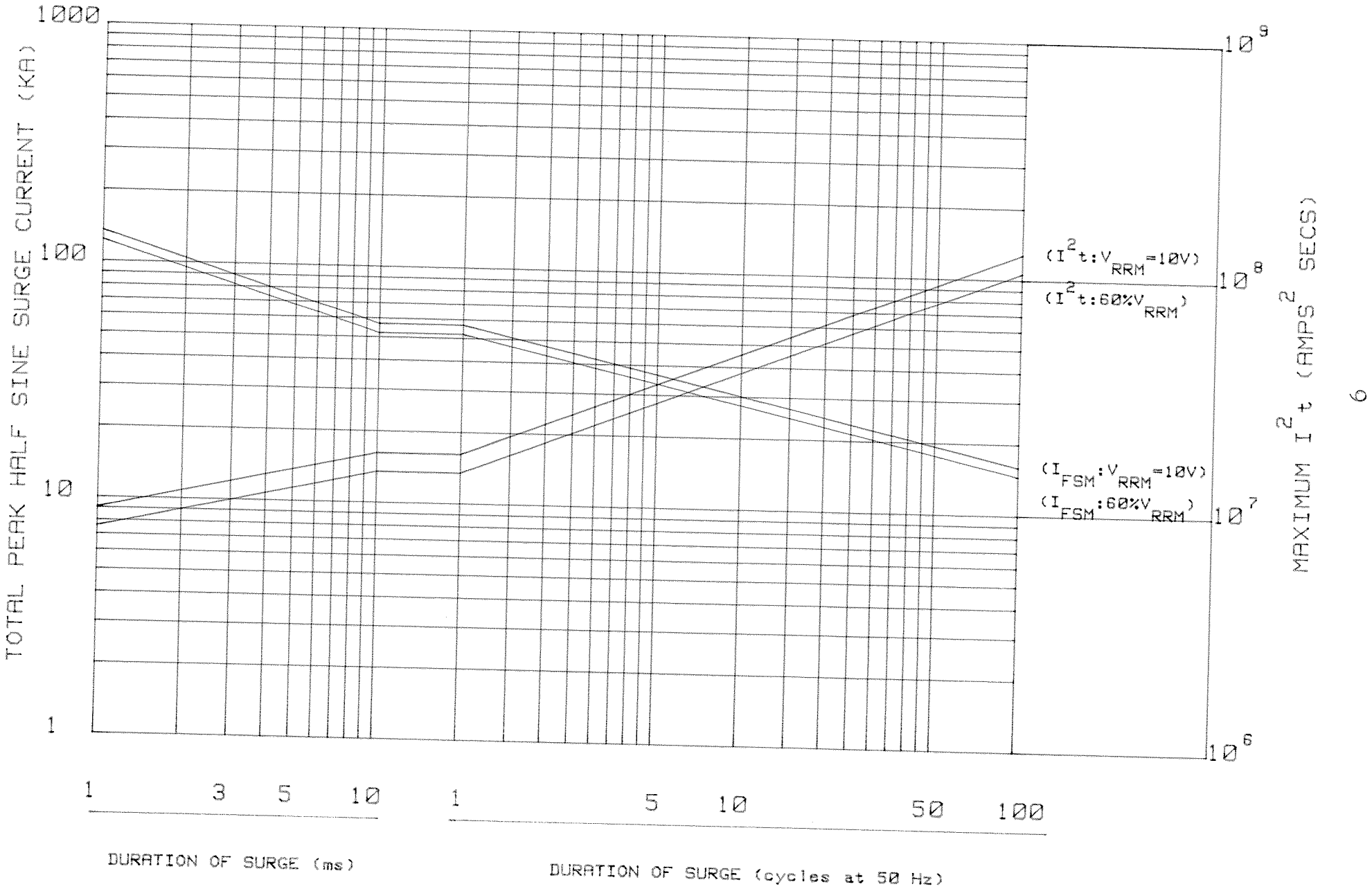





FORWARD CHARACTERISTIC OF LIMIT DEVICE
INSTANTANEOUS FORWARD CURRENT (AMPERES)
10000
5000
3000
2000
1000
500
200
.6
.7
.8
.9
1
1.1
1.2
1.3
1.4
190oC
190 oC
A = .6525006
B = -1.430053E-03
C = 6.549698E-05
D = 2.360472E-04
MAXIMUM FORWARD VOLTAGE (VOLTS)


JUNCTION TO SINK TRANSIENT THERMAL IMPEDANCE
TRANSIENT THERMAL IMPEDANCE (K / Watt)
.1
.01
.001
.001
.01
.1
1
10
TIME (Seconds)
.032
K/W
.016
K/W

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

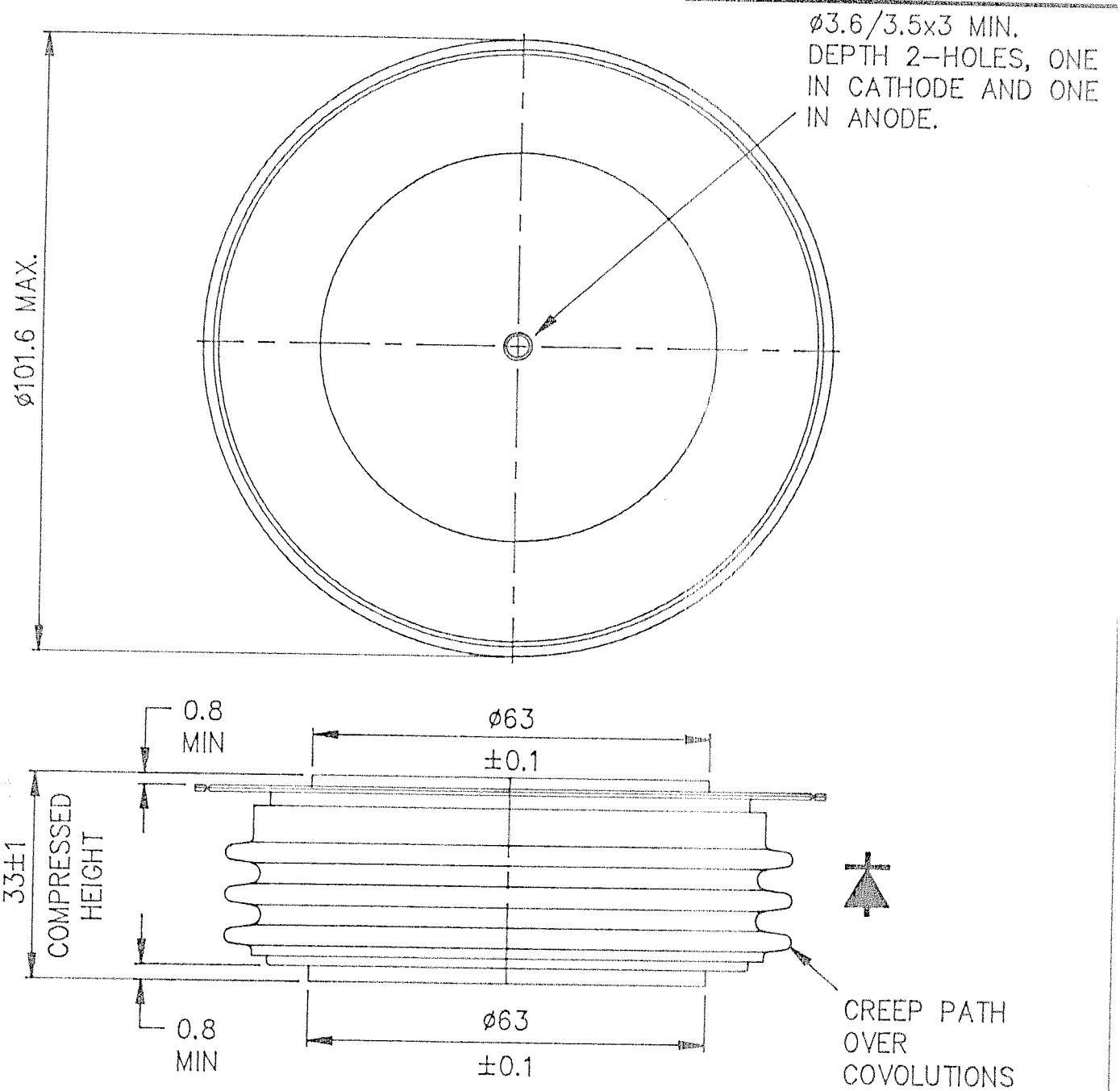


INTERNATIONAL OUTLINE No. DO-200AD
G.A. DWG No. 159B100H401-H410
WEIGHT. 1kg
FINISH. ET TO BS1872

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 = 2700-3400kgf.

TYPE NUMBE

CXC13C
CXC16C
CXC22C
CXC27C



ISS	REVISIONS	
2	11-09-90	REDRAWN ON CAD HDN

THIRD ANGLE PROJECTION.
DWG. COMPLIES WITH BS 308.
DIMNS. IN MILLIMETRES.
DWG No. 100A270

SCALE 1/1
DRAWN HDN

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