

Rectifier Diode

W0797WC040 to W0797WC150

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

(Rating Report 87NR3 Issue 1)

This data reflects the old part number for this product which is: SW02-15CXC400. 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:
 Device no longer available for grade 02 (200V V_{RRM}/V_{DRM})
 No reverse recovery information available

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.

Ordering Particulars			
W0797	WC	◆◆	0
Fixed Type Code	Fixed Outline Code	Voltage code $V_{DRM}/100$ 04-15	Fixed Code
Typical Order Code: W0797WC060, 14mm clamp height, 600V V_{RRM}			

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QUALITY EVALUATION LABORATORY

Rating Report: 87NR3

Date: 25th March, 1987

Pages: 10

Diode Type SW02-15CXC400

Written by: *M.W. Junlop*

Checked: *M.W.*

Approved: *[Signature]*

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

This report supersedes Rating Report No. 79NR11.

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 $T_{HS} = 55^{\circ}C, 100^{\circ}C$:	800A, 614A
Single side cooled $T_{HS} = 100^{\circ}C$:	380A
I_F (rms) max.)	:	1420A
) Double side cooled $T_{HS} = 25^{\circ}C$		
I_F max.)	:	1240A
I_{FSM} : t = 10ms half sinewave; T_J (initial) = 190°C;		
$V_{RM} = 0.6 V_{RRM}(\text{Max})$:	7500A
I_{FSM} ; t = 10ms half sinewave; T_J (initial) = 190°C; $V_{RM} \leq 10V$:	8250A
I^2t : t = 10ms; T_J (initial) = 190°C; $V_{RM} = 0.6 V_{RRM}(\text{Max})$:	$0.281 \times 10^6 A^2 SECS$
I^2t : t = 10ms; T_J (initial) = 190°C; $V_{RM} \leq 10V$:	$0.34 \times 10^6 A^2 SECS$
I^2t : t = 3ms; T_J (initial) = 190°C; $V_{RM} \leq 10V$:	$0.245 \times 10^6 A^2 SECS$
T_{HS} Operating range	:	-40 to +190°C
T_{stg} ; Non-operating	:	-40 to +200°C

Characteristics

(Maximum values unless stated otherwise)

V_O : $T_J = 190^\circ\text{C}$: 0.8V
r_s : $T_J = 190^\circ\text{C}$: 0.548mohms
V_{FM} : $I_{FM} = 1930\text{A}$ $T_{VJ} = 190^\circ\text{C}$: 1.86V
R_{th} (J-HS) Double side cooled	: 0.09°C/W
Single side cooled	: 0.18°C/W
I_{RRM} : $T_J = 190^\circ\text{C}$ $V_{RM} = V_{RRM}(\text{Max})$: 15mA
Q_{rr} : $I_{TM} = 1000$ $dI/dt = 10\text{A/uS}$. Defined by chord through $V_{RM} = 50\text{V}$ $T_{VJ} = 190^\circ\text{C}$: 500uC Typical 50% I_{RM}
Mounting Force	: 330-550Kgf
Outline drawing	: 100A241
Jedec Outline No.	: D0200AA

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Changes to Rating Report No. 79NR11

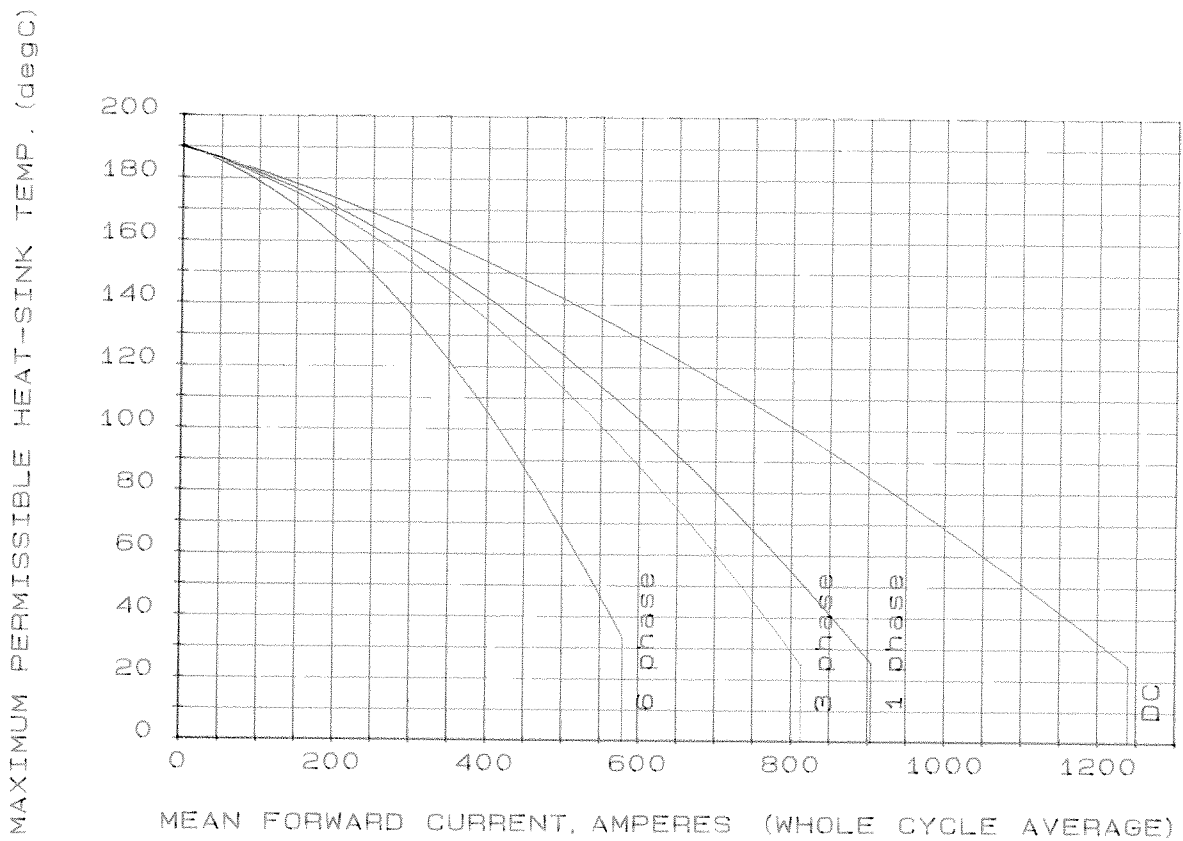
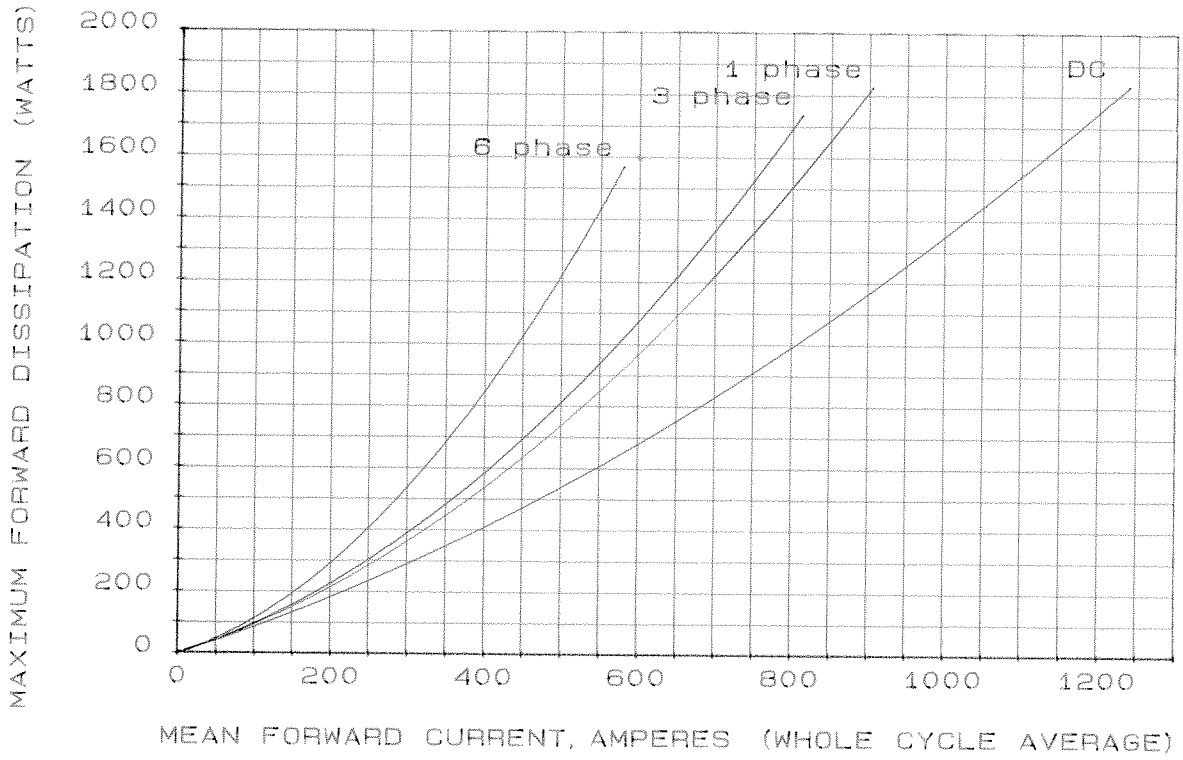
- P1 : V_{RWM} omitted
- T_{HS} (MIN) reduced to -40°C
- P2 : JEDEC outline No. added
- P4 : V_{RWM} omitted
- P5-8 : Redrawn

Voltage Ratings

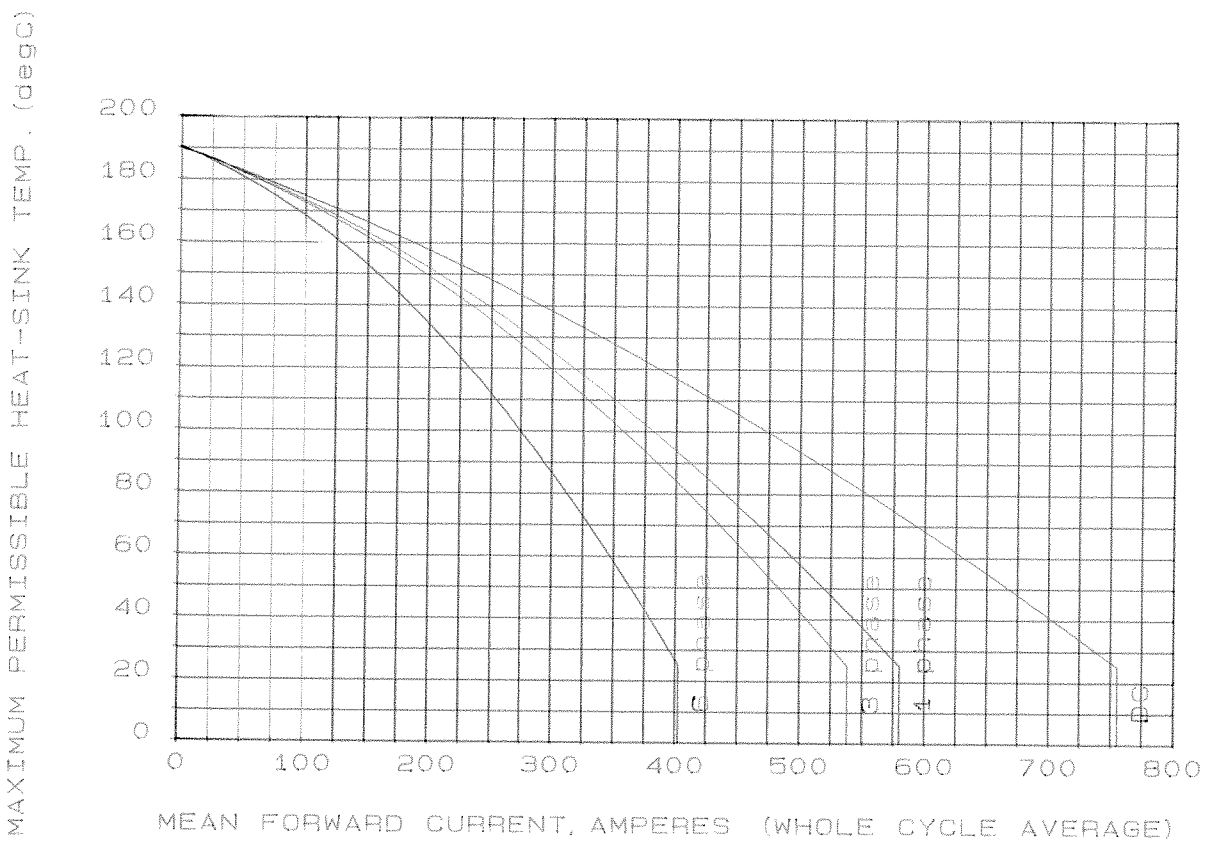
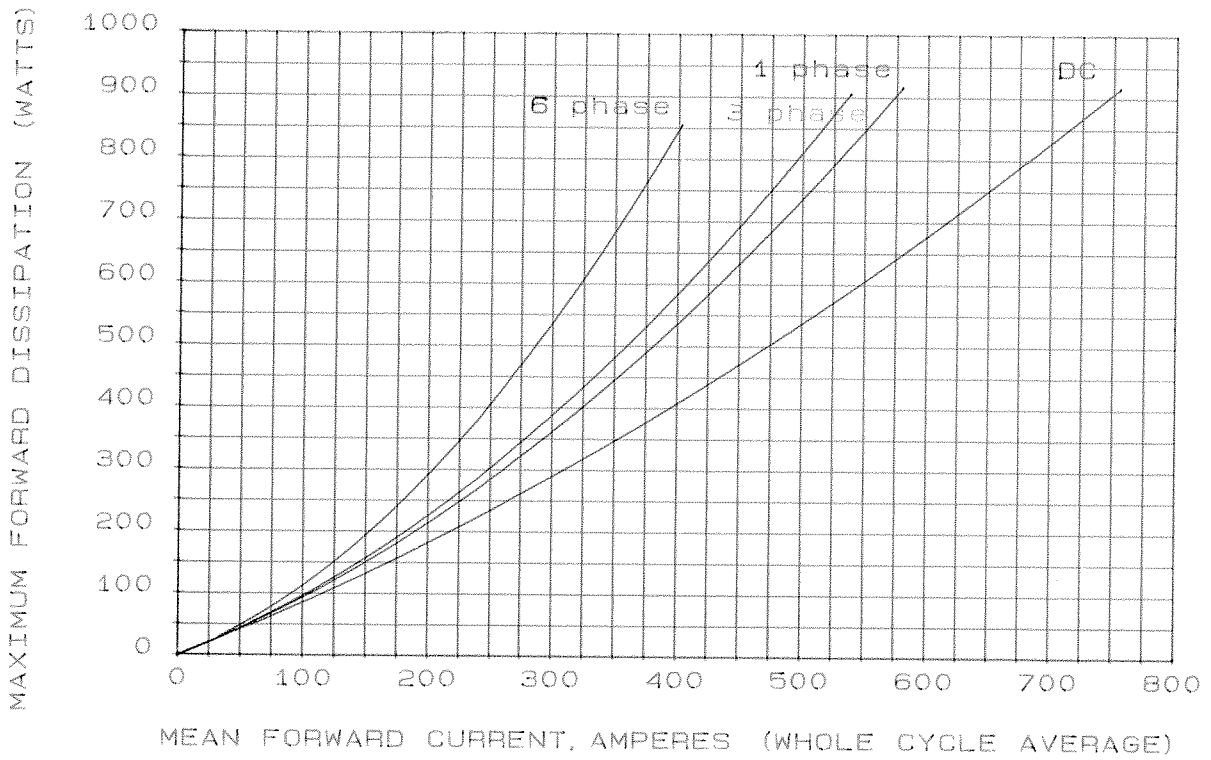
Voltage Class SW	V_{RRM}	V_{RSM} V
02	200	300
04	400	500
06	600	700
08	800	900
10	1000	1100
12	1200	1300
14	1400	1500
15	1500	1600

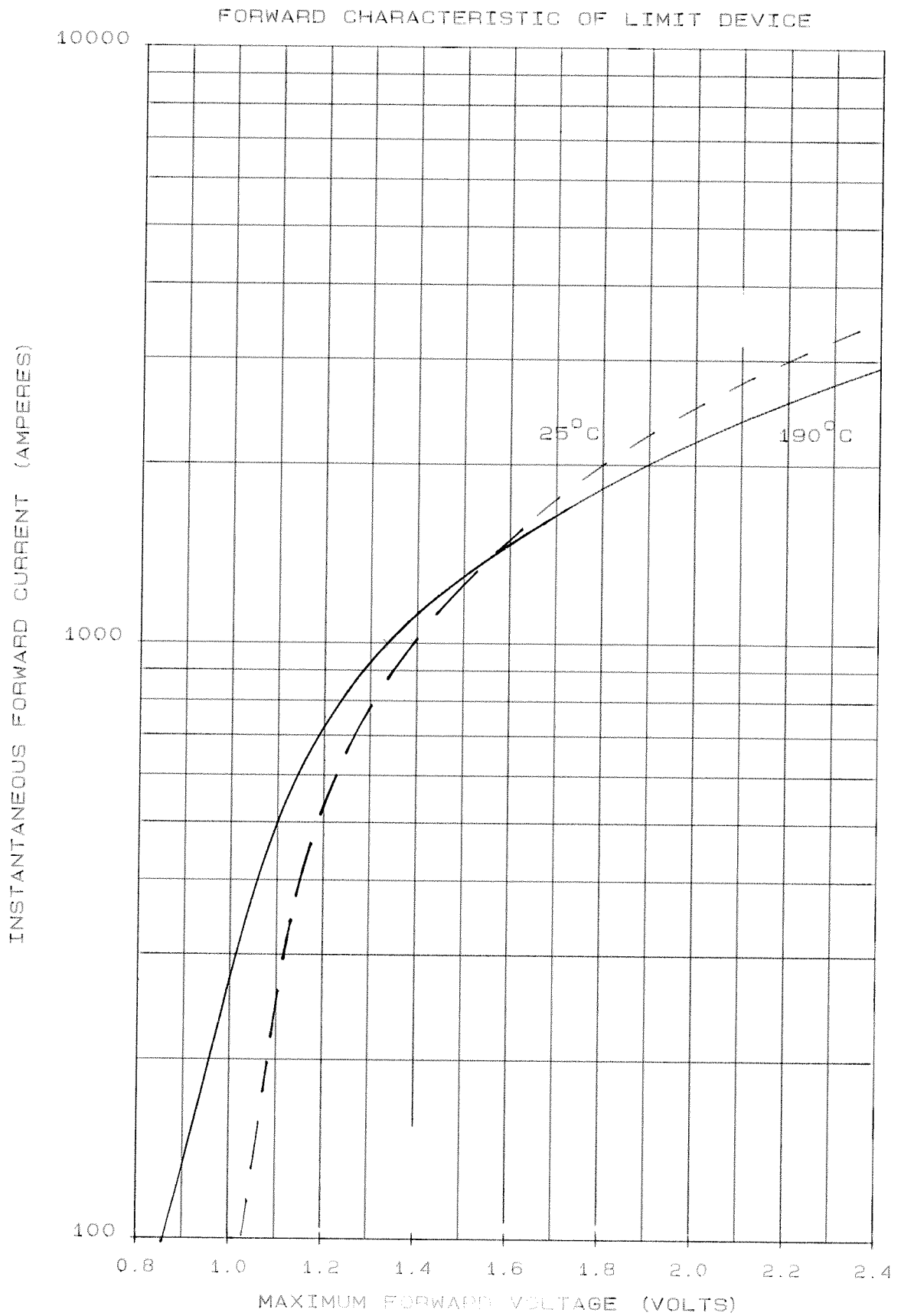
This report is applicable to higher or lower voltage grades when supply has been agreed by Sales/Production.

DOUBLE SIDE COOLED

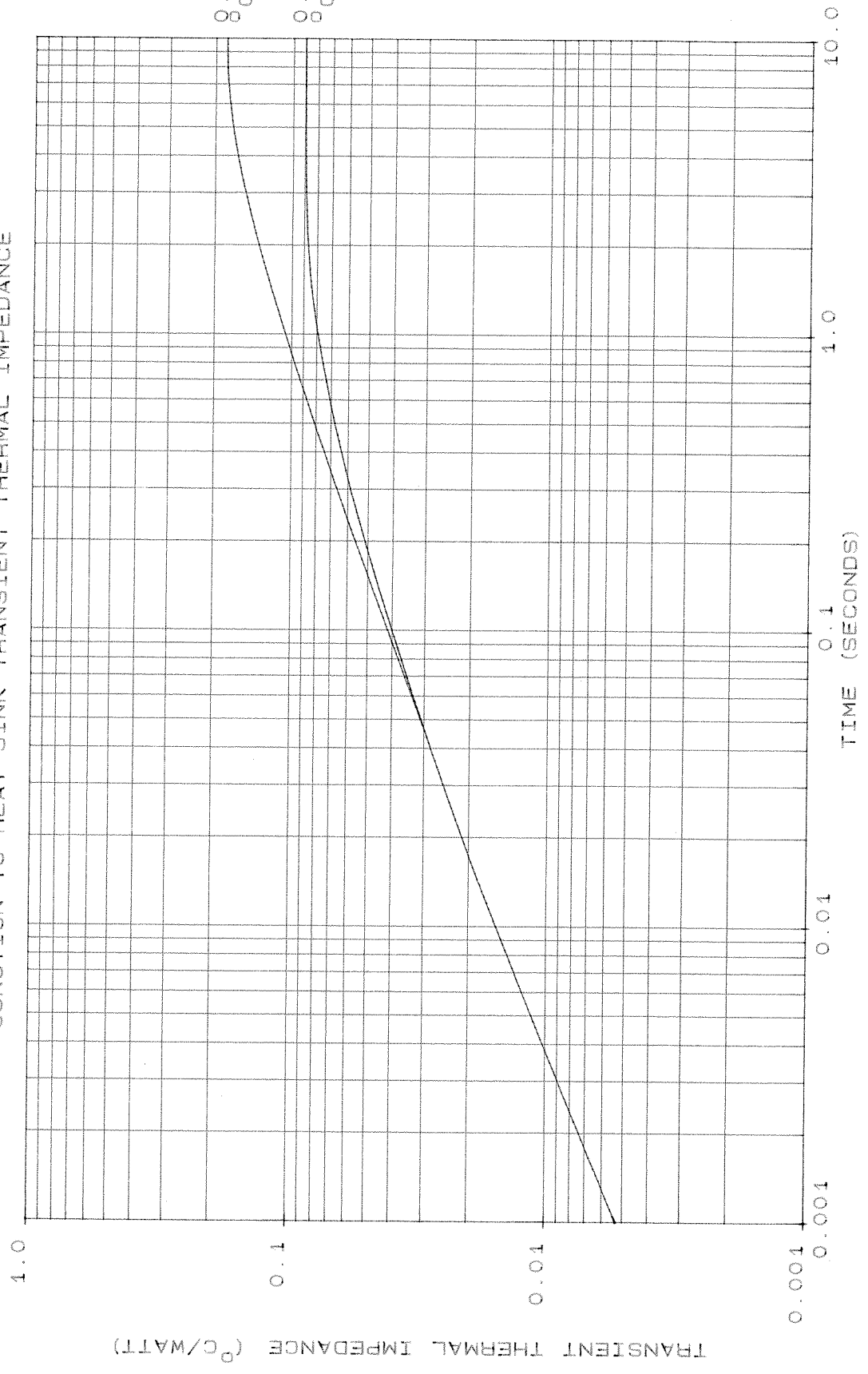


SINGLE SIDE COOLED

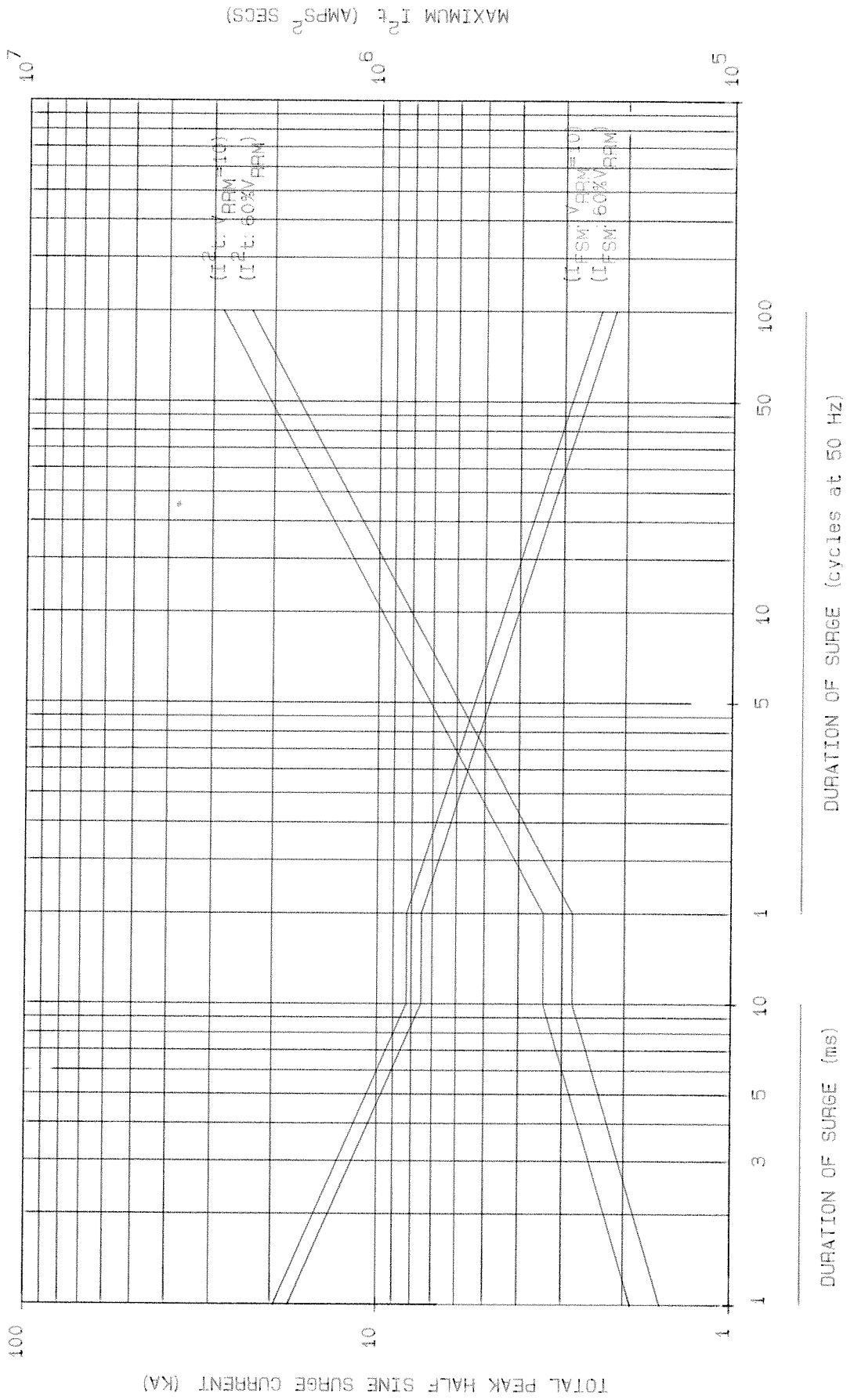




JUNCTION TO HEAT SINK TRANSIENT THERMAL IMPEDANCE



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



TOTAL PEAK HALF SINE SURGE CURRENT (KA)

MAXIMUM I^2t (AMPS² SECS)

(I^2t : $V_{RPM} = 10V$)
(I^2t : 60% RPM)

(I^2t : $V_{RPM} = 10V$)
(I^2t : 50% RPM)

DURATION OF SURGE (cycles at 50 Hz)

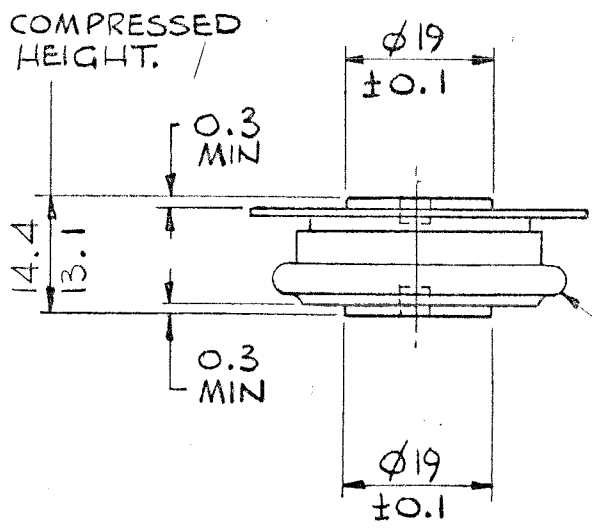
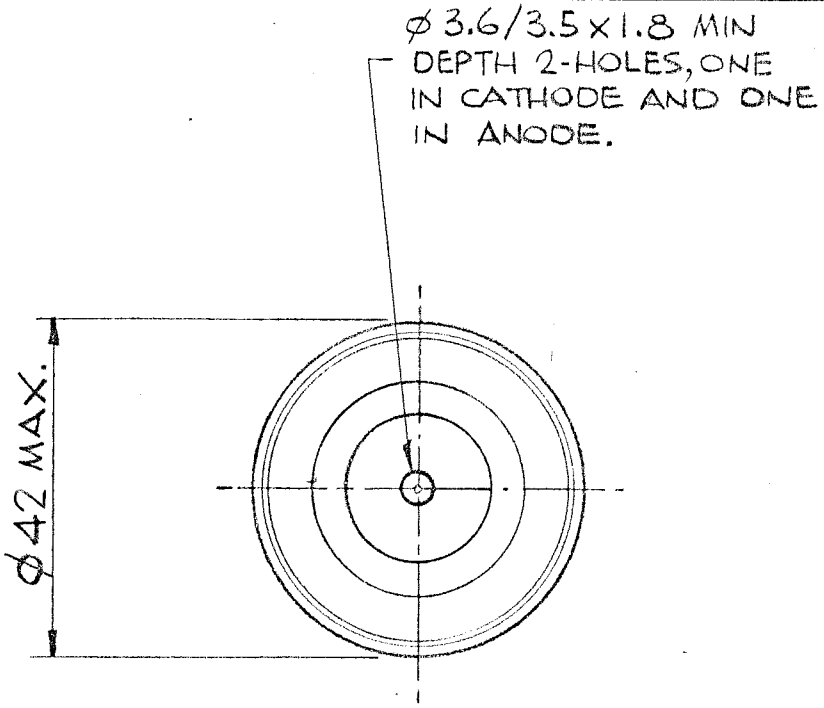
DURATION OF SURGE (ms)

SCALE	1/1
DRN	<i>[Signature]</i>
CHKD	<i>[Signature]</i>
APPD	
A	
S	NI

INTERNATIONAL OUTLINE No. **DO-200AA**,
 WEIGHT. **70 GRAMS**.
 FINISH. **NICKEL PLATE**. - 10 -
 DEVICE MARKING INCLUDES MONOGRAM, TYPE No., SPEC.
 No. AND POLARITY SYMBOL.
 DEVICE MOUNTING: CLAMPING FORCE TO BE APPLIED
 ON ϕ 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 - 550 kgf.

CXC300	TYPE NUMBER
CXC320	CXC170
CXC380	CXC174
CXC400	


G.A. DRG. No. **159B100H100-H110, 102B213.**



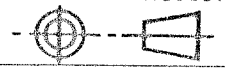
CREEP PATH OVER
 CONVOLUTION = 8 MIN.

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 SEMICONDUCTORS

THIRD ANGLE PROJECTION



DIMNS. IN MILLIMETRES

DRG. No.
100A 241

ISS	REVISIONS
1	10.9.76 P118
2	REDRAWN: 15.2 / 14 WAS 15.2 / 12.5. $\phi 19$ WAS $\phi 29$. P304 18.5.78 <i>[Signature]</i>
3	CLAMPING FORCE WAS 500-1200 kgf. 7.9.78 <i>[Signature]</i>
4	11.9.78 $\phi 42$ WAS $\phi 43$ 14.35 / 13.08 WAS 15.2 / 14. CLAMP FORCE WAS 400-700 kgf 18 <i>[Signature]</i>
5	19.9.78 14.4 / 13.1 WAS 14.35 / 13.08 18 <i>[Signature]</i>
6	30.10.78 M670 TYPE N° ADDED 18 <i>[Signature]</i>
7	17.9.79 M773 550 kgf WAS 700 kgf. 18 <i>[Signature]</i>