

Rectifier Diode Stud

Types W0438S/RX160 to M0334S/RX240

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

(Rating Report 80NR8 Issue 2)

This data reflects the old part number for this product which is: SW16-24PHN/R320. 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 S/RC outline drawing (W24) in datasheet
No reverse recovery data available

The following links will direct you to the appropriate outline drawings

[Outline W24](#) – ¾" ceramic stud
[Outline W26](#) – ¾" ceramic stud removed

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			
W0438	S/RX	◆◆	0
Fixed Type Code	S/RC - ¾" ceramic stud S/RD - ¾" ceramic stud removed	Voltage code V _{RRM} /100 16-24	Fixed Code
Typical Order Code: W0438SD180, Forward polarity, ¾" ceramic stud removed, 1800V 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: 80NR8 (Issue 2)

Date: 15th January, 1987

Origin:

Pages: 9

Diode Type SW16-24PHN/R320

Written by: *M/W Jmlyp*

Checked: *M/W Jmlyp*

Approved: *B. L. H.*

This diode consists of a diffused 24 mm diameter silicon slice mounted under spring pressure in a stud base, top hat housing with a flexible lead.

This Report supersedes Rating Report No. 80NR8 (Issue 1)

Ratings

Voltage Grades	: 16-24
V_{RSM}	: 1700-2500
V_{RRM}	: 1600-2400

I_F (AV); Single phase; 50 Hz, 180°C half sinewave; $T_{CASE} = 100^\circ C$: 320A

I_F (rms) max. : 595A

I_F d.c. max. : 595A

I_{FSM} : $t = 10$ ms half sinewave; T_J (initial) = 180°C ; $V_{RM} = 0.6V_{RRM}$ (MAX) : 4000A

I_{FSM} : $t = 10$ ms half sinewave; T_J (initial) = 180°C ; $V_{RM} = 10V$: 4400A

I^2_t : $t = 10$ ms; T_J (initial) = 180°C ; $V_{RM} = 0.6V_{RRM}$ (MAX) : $80 \times 10^3 A^2 S$

I^2_t : $t = 10$ ms; T_J (initial) = 180°C ; $V_{RM} = 10V$: $96.8 \times 10^3 A^2 S$

I^2_t : $t = 3$ ms; T_J (initial) = 180°C ; $V_{RM} = 10V$: $71.6 \times 10^3 A^2 S$

T_C Operating Range : -40 to +180°C

T_{stg} Non-operating : -40 to +200°C

Characteristics

(maximum values unless otherwise stated)

$V_D; T_J = 180^{\circ}\text{C}$	: 1.0V
$r_s; T_J = 180^{\circ}\text{C}$	: 0.835mohms
$V_{FM}; I_{FM} = 1000\text{A} \quad T_{VJ} = 180^{\circ}\text{C}$	: 1.835V
$R_{th(J-C)}$	: 0.15°C/W
	: 0.04°C/W
$R_{th(C-HS)}$	: 15mA
$I_{RRM} : T_J = 180^{\circ}\text{C} : V_{RM} = V_{RRM(Max)}$	:
$Q_{rr} (I_{FM} = \quad ; dI/dt = \quad)$	:
$t_{rr} (V_{RM} = 50\text{V}; T_{VJ} = \quad)$	: 2.5 - 2.77 Kg.f.m.
Mounting torque	: 100A280
Outline drawing	:
JEDEC Outline No.	:

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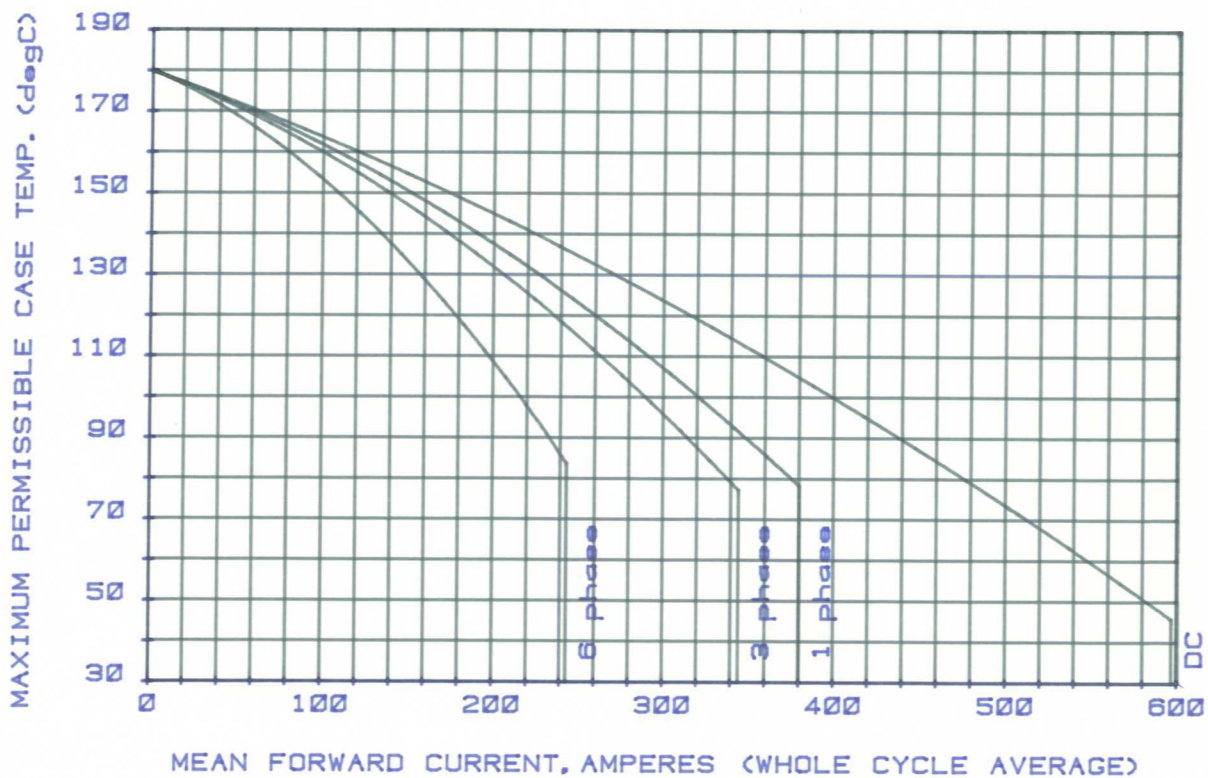
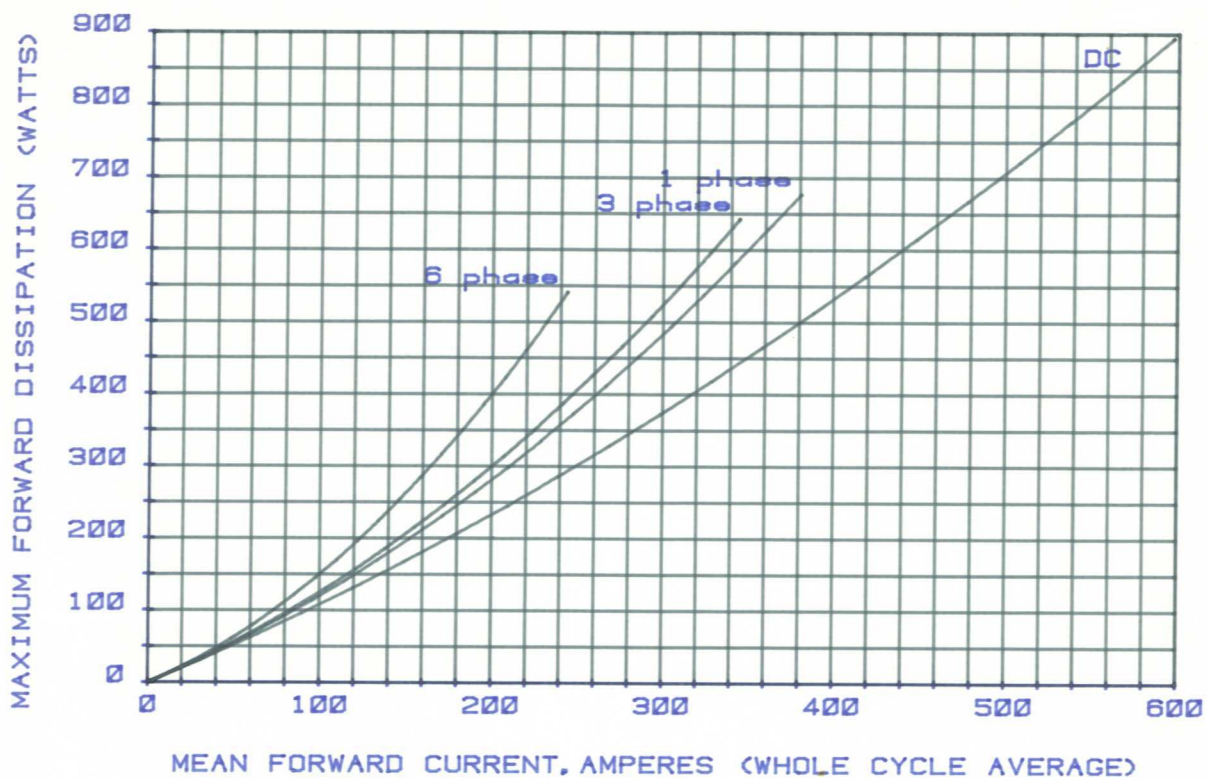
Changes to 80NR8 (Issue 1)

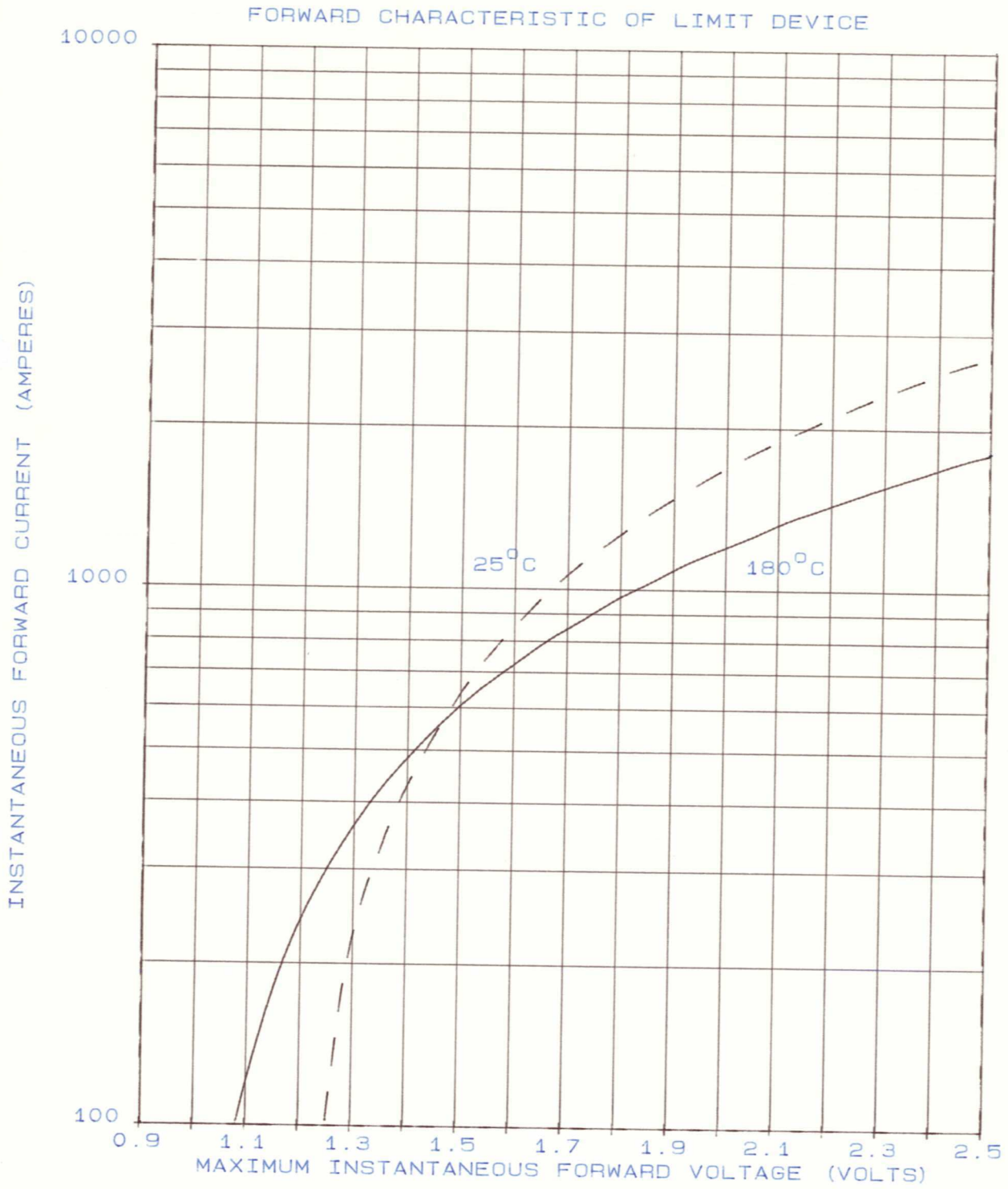
p1	V_{RWM} omitted
	T_C (operating range) MIN reduced to -40°C
p6	$I_F - V_F$ and $Z_{th} - t$ curves drawn on separate sheets

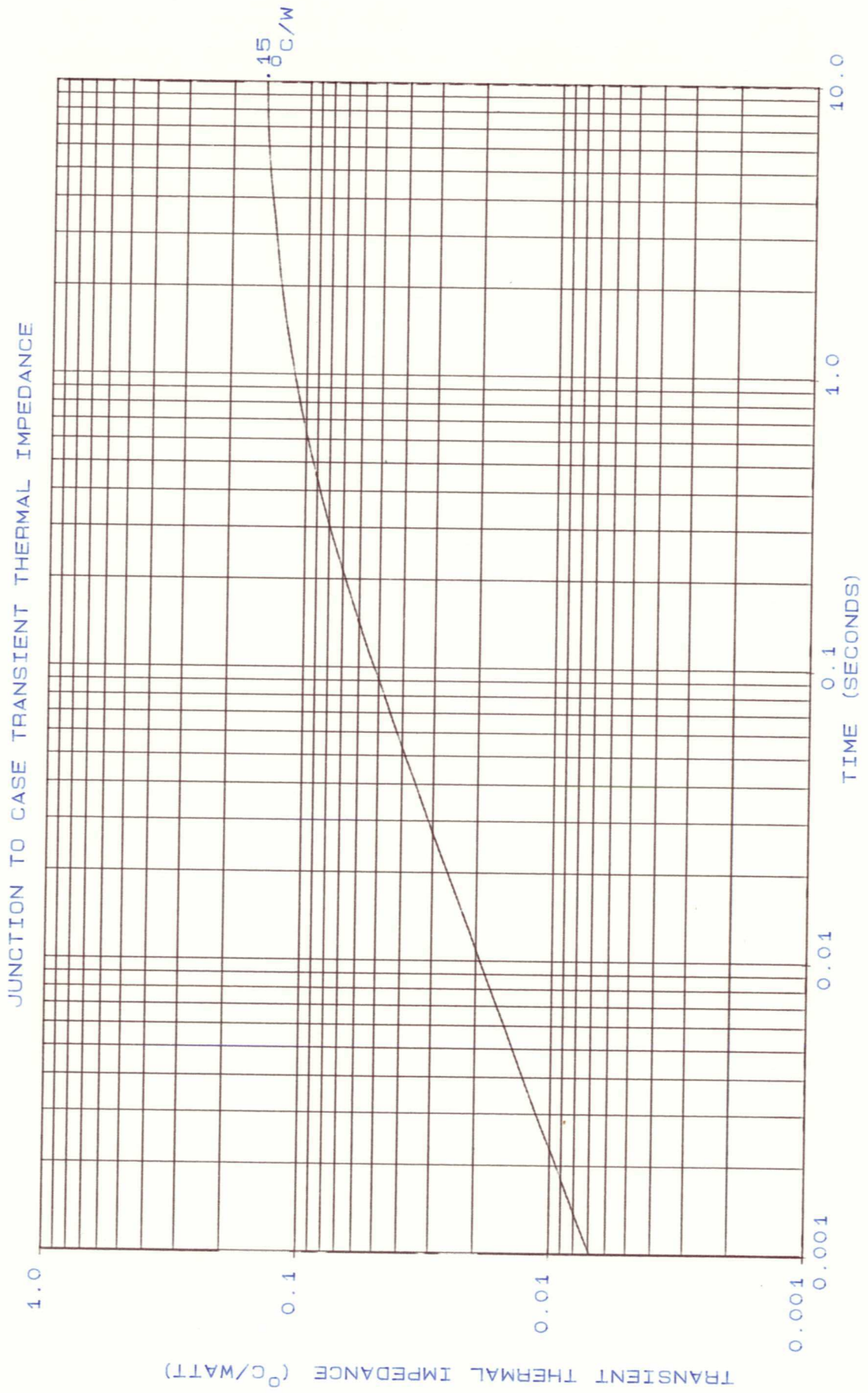
Voltage Ratings

Voltage Class	V_{RRM} V	V_{RSM} V
16	1600	1700
18	1800	1900
20	2000	2100
22	2200	2300
24	2400	2500

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

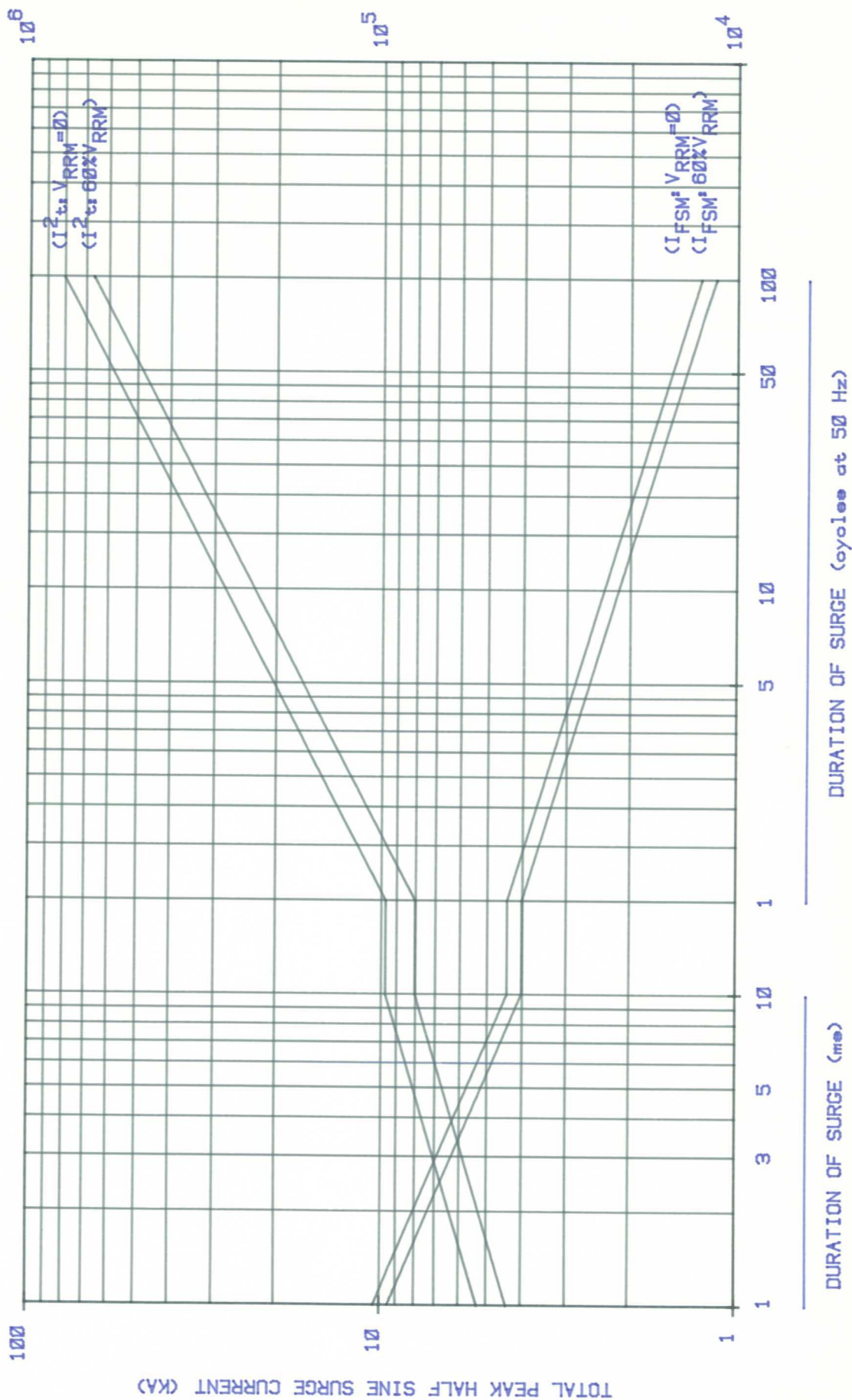






320948

MAXIMUM NON REPETITIVE SURGE CURRENT AT INITIAL JUNCTION TEMPERATURE 180°C

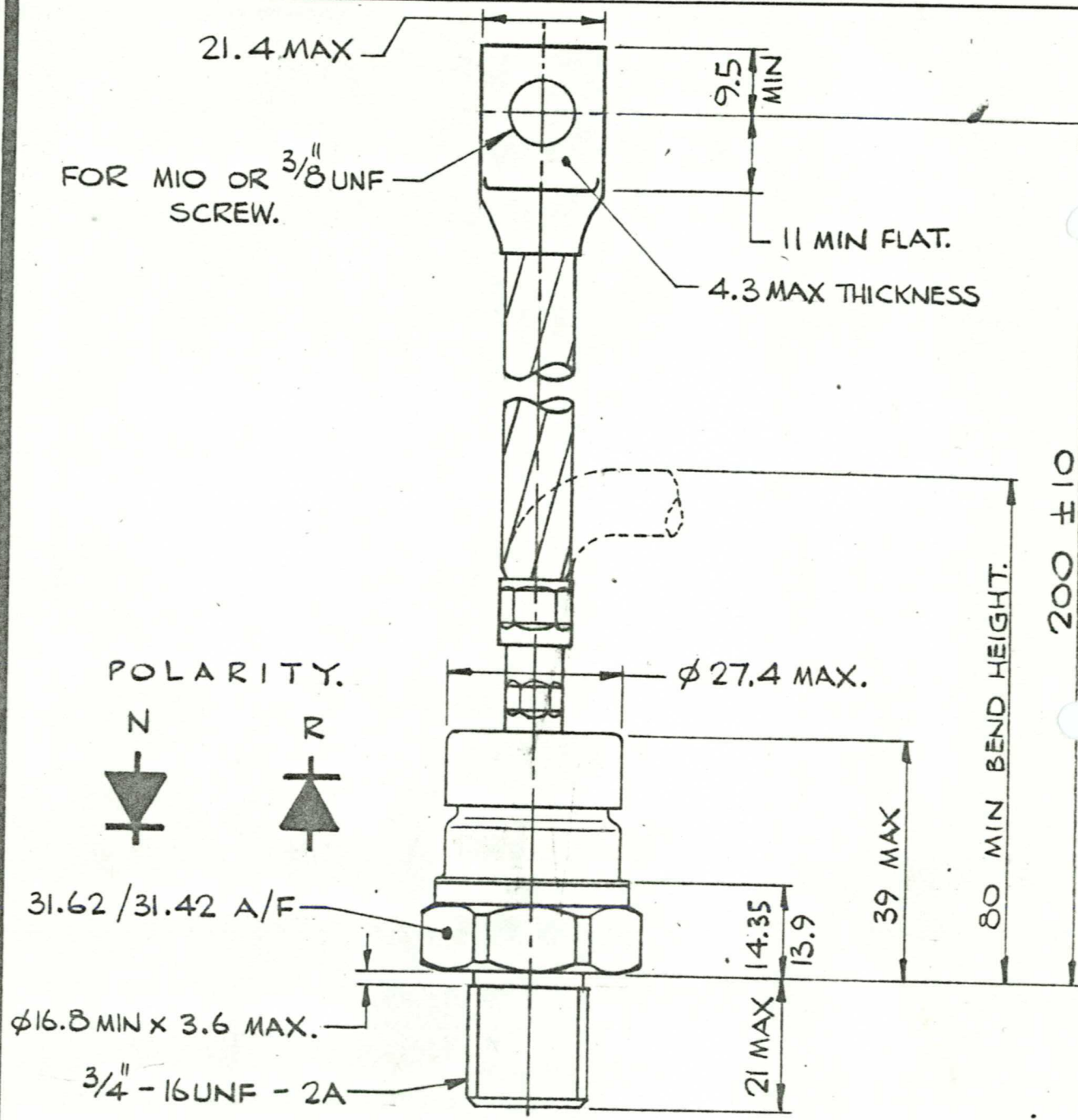


SCALE	1/1
DRN	68
CHKD	
APPD	
S	A
S	NI

INTERNATIONAL OUTLINE No.
 WEIGHT. 250 GRAMS.
 FINISH. BRIGHT NICKEL PLATE.
 DEVICE MARKING INCLUDES MONOGRAM, TYPE No., SPEC.
 No. AND POLARITY SYMBOL.
 DEVICE MOUNTING:
 MOUNTING TORQUE TO BE
 27 - 24.5 Nm (2.77 - 2.5 kgf m).
 THREAD MUST NOT BE LUBRICATED.

DIODE TYPE NUMBER
 PHN/R 380
 PHN/R320
 PHN/R174

G.A. DRG. No. 102A216H04.



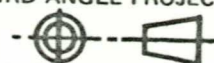
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WESTCODE®
 SEMICONDUCTORS

THIRD ANGLE PROJECTION



DIMNS. IN MILLIMETRES

DRG. No.

100A280

ISS	REVISIONS
1	11.9.78
4	12.12.79 M806 REDRAWN. DRG. N° WAS 100A257.
5	27.11.84 11/218 FIN WAS ET