

TRIPLE DIODE TRIODE

UABC80

Triple diode triode with 100mA heater and one diode having a separate cathode. Primarily intended for use in f.m./a.m. receivers.

HEATER Suitable for series operation a.c. or d.c.

I_h	100	mA
V_h	28	V

CAPACITANCES

$C_{g-a'd}$	< 70	mpF
$C_{at-a'd}$	< 120	mpF
$C_{at-a''d}$	< 100	mpF
$C_{at-k''d}$	< 10	mpF
$C_{g-a''d}$	< 20	mpF
$C_{g-k''d}$	< 5.0	mpF

Triode section

C_{in}	1.9	pF
C_{out}	1.4	pF
C_{a-g}	2.0	pF
C_{g-li}	< 40	mpF

Diode sections

$C_{a'd-(h+kt,k'd,k''d,s)}$	800	mpF
$C_{a''d-(h+k''d+kt,k'd,k''d,s)}$	4.8	pF
$C_{a''d-(h+kt,k'd,k''d,s)}$	4.8	pF
$C_{k''d-all}$	5.0	pF
$C_{a'd-h}$	< 250	mpF
$C_{a''d-h}$	< 200	mpF
$C_{k''d-h}$	2.5	pF

CHARACTERISTICS

Triode section

V_a	170	200	V
V_g	-1.85	-2.3	V
I_a	1.0	1.0	mA
g_m	1.45	1.4	mA/V
μ	70	70	
r_a	48	50	kΩ
$V_g \text{ max. } (I_g = +0.3\mu A)$		-1.3	V

Diode sections

$r_{a'd} (V_{a'd} = +10V)$	5.0	kΩ
$r_{a''d} (V_{a''d} = +5V)$	200	Ω
$r_{a''d} (V_{a''d} = +5V)$	200	Ω
$r_{a''d}/r_{a''d}$	0.65 to 1.5	

OPERATING CONDITIONS AS RESISTANCE COUPLED A.F. AMPLIFIER* (with grid current biasing)

V_b (V)	R_a (k Ω)	I_a (mA)	$\frac{V_{out}}{V_{in}}$	D_{tot} (%) for $V_{out(r.m.s.)}$			$R_{g\dagger}$ (k Ω)
				= 3V	= 5V	= 8V	
170	47	1.25	32	0.6	1.1	2.0	150
170	100	0.82	42	0.5	0.8	1.3	330
170	220	0.46	51	0.4	0.5	1.1	680
200	47	1.6	34	0.5	0.9	1.5	150
200	100	1.0	44	0.4	0.6	1.0	330
200	220	0.56	53	0.3	0.4	0.9	680
250	47	2.2	36	0.3	0.6	1.0	150
250	100	1.4	47	0.25	0.5	0.8	330
250	220	0.76	54	0.2	0.25	0.6	680

*Measured with a grid resistor of 10M Ω .

$\dagger R_g$ = grid resistor of following value.

LIMITING VALUES

Triode section

$V_{a(b)}$ max.	550	V
V_a max.	250	V
p_a max.	1.0	W
I_k max.	5.0	mA
R_{g-k} max.	3.0	M Ω
$\dagger V_{h-k}$ max.	150	V
R_{h-k} max.	20	k Ω

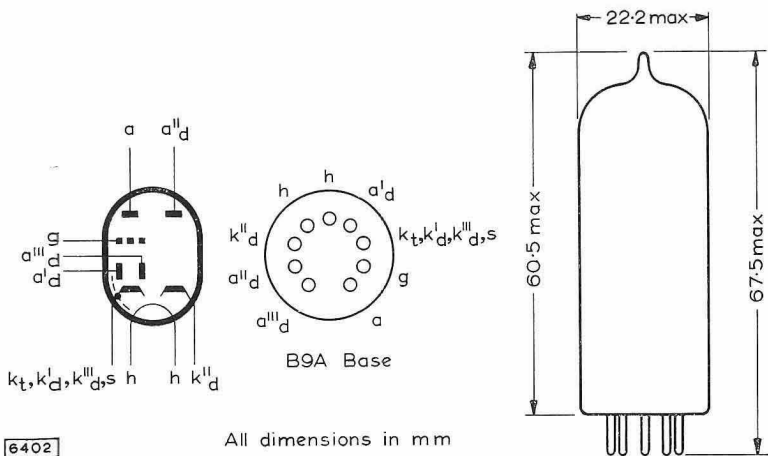
$\dagger$ In order to avoid excessive hum the a.c. component should be as low as possible (<30V_{r.m.s.})

Diode sections

P.I.V. _(a'd) max.	350	V
P.I.V. _(a''d) max.	350	V
P.I.V. _(a'''d) max.	350	V
$I_{a'd}$ max.	1.0	mA
$I_{a''d}$ max.	10	mA
$I_{a'''d}$ max.	10	mA
$i_{a'd(pk)}$ max.	6.0	mA
$i_{a''d(pk)}$ max.	75	mA
$i_{a'''d(pk)}$ max.	75	mA

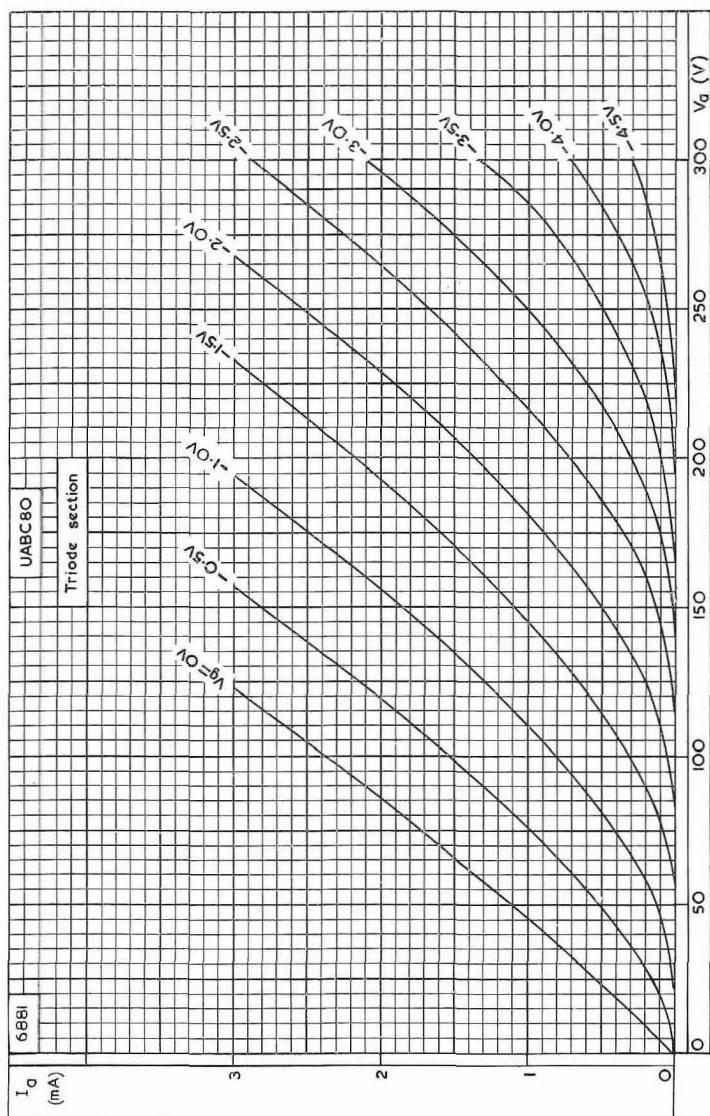
MICROPHONY

This valve can be used without special precautions against microphony in circuits in which the input voltage is not less than 10mV for an output of 50mW from the output stage at 800c/s and higher frequencies.

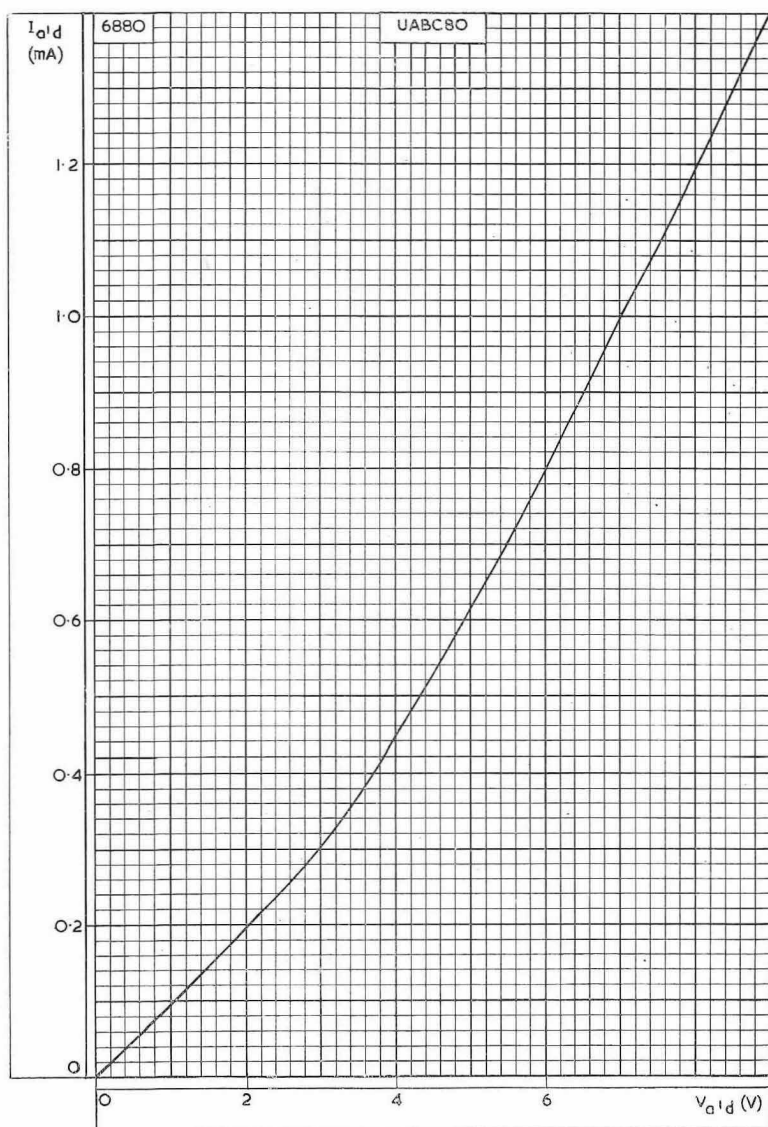


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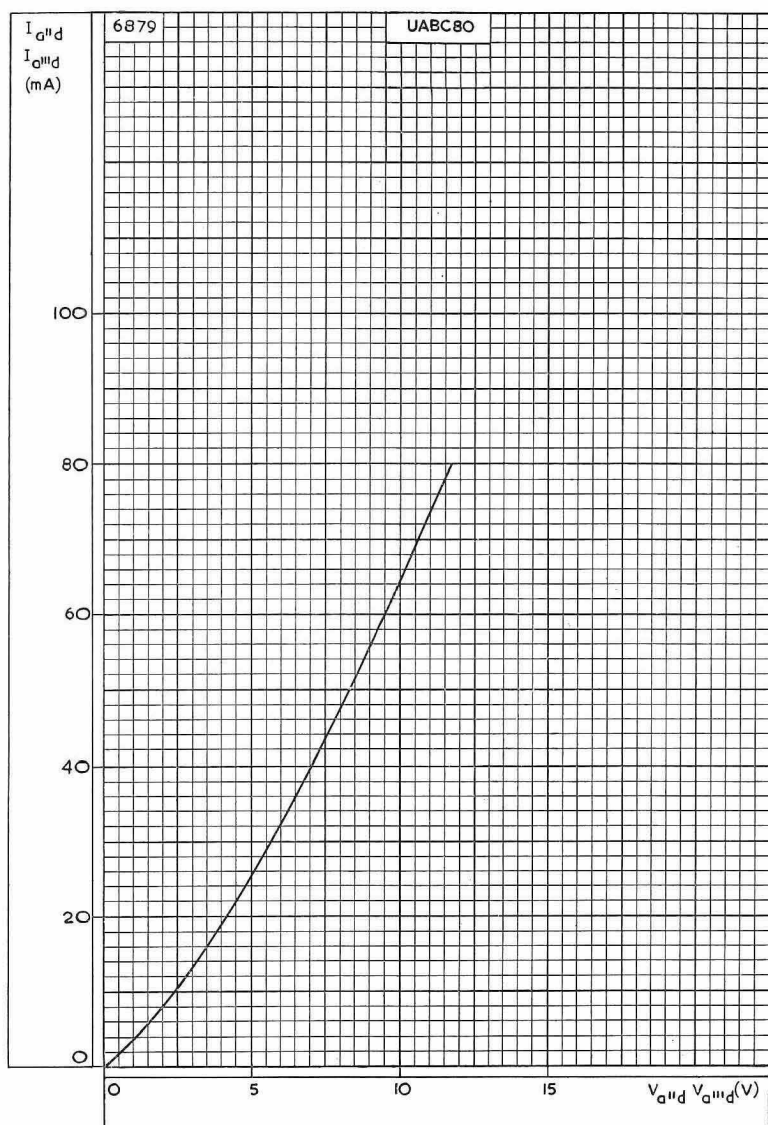
It is recommended that pin 5 be earthed.



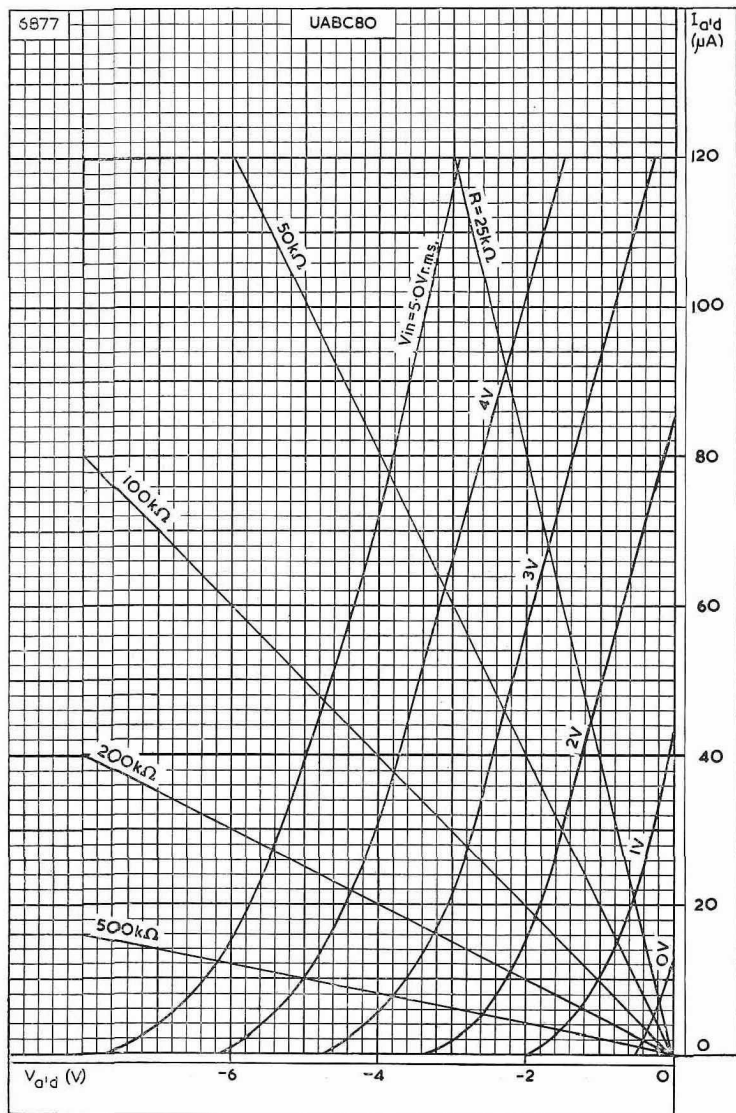
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH GRID VOLTAGE AS PARAMETER



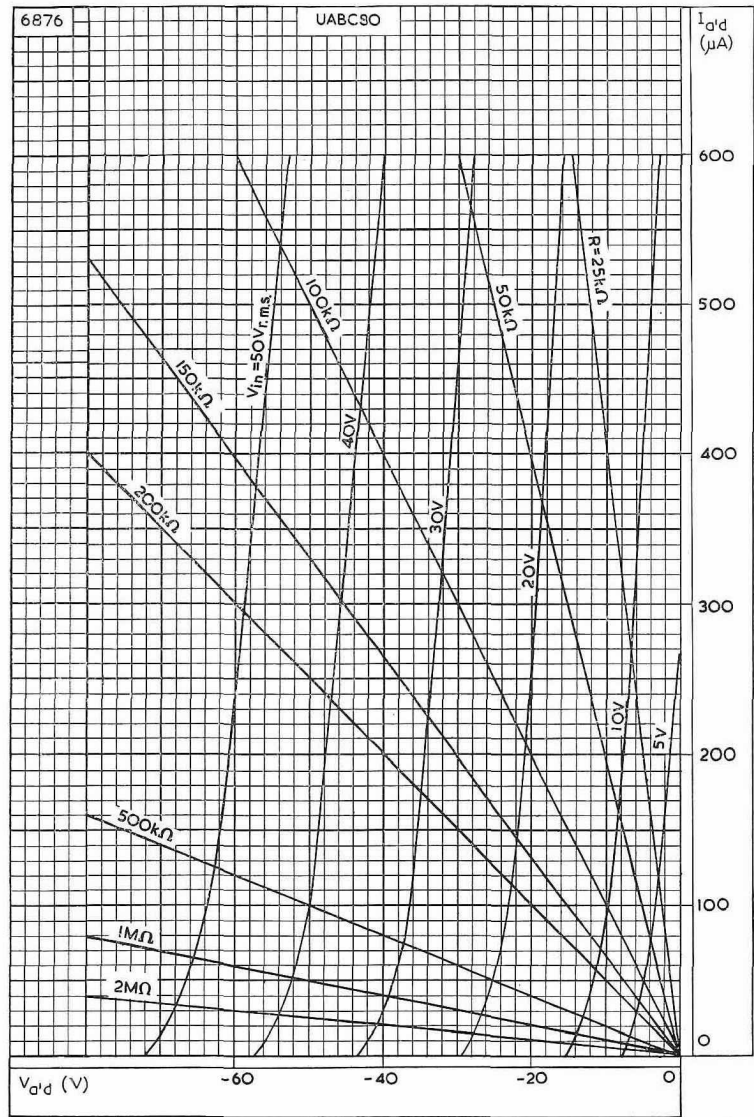
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE FOR DIODE SECTION $a'd$



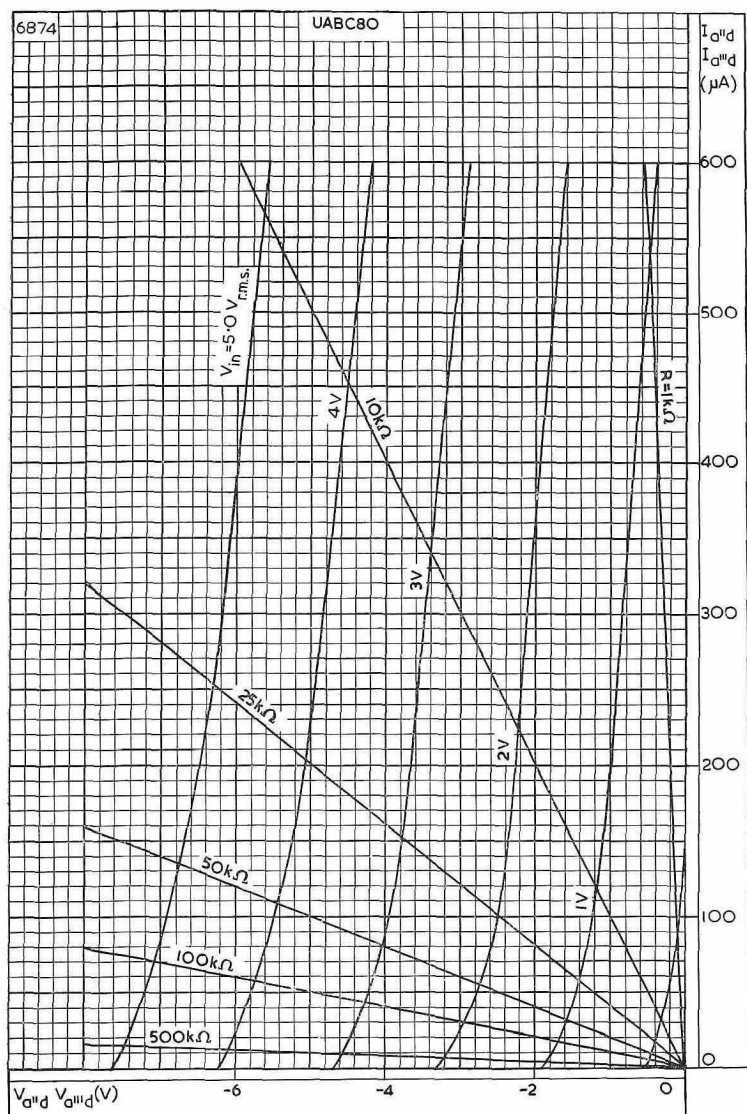
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE FOR DIODE SECTIONS a''_d and a'''_d



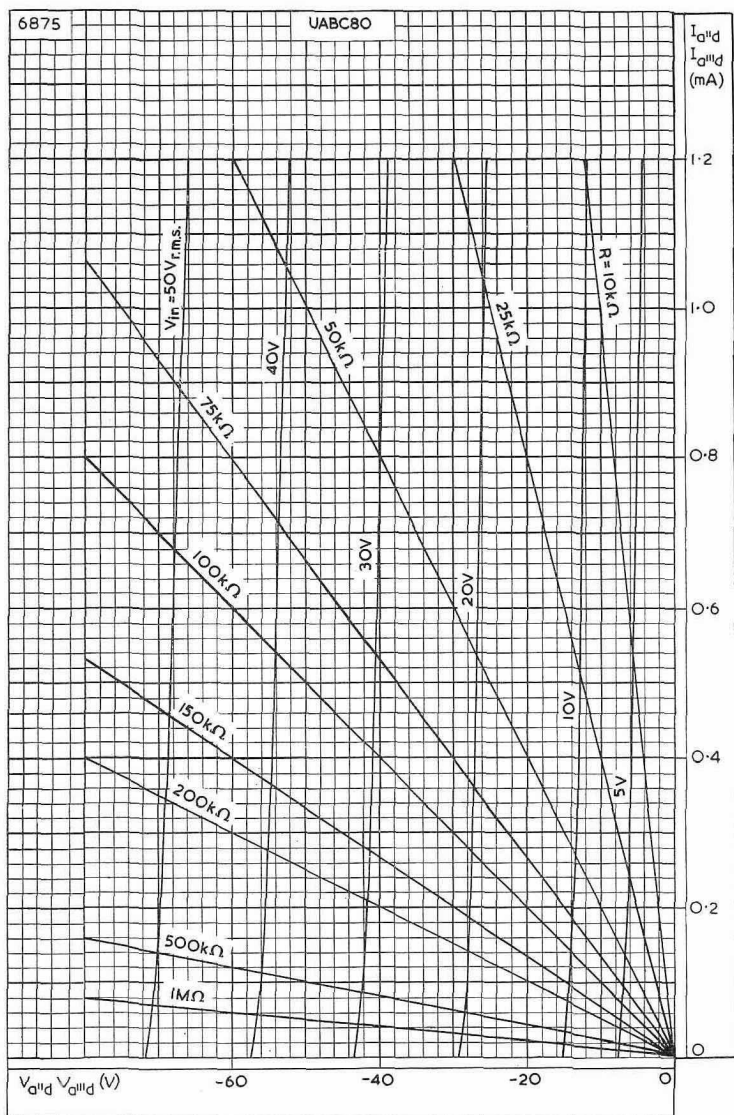
RECTIFIED CURRENT PLOTTED AGAINST OUTPUT VOLTAGE WITH
INPUT VOLTAGE BETWEEN 0V AND 5V_{r.m.s.} AS PARAMETER FOR
DIODE SECTION $a'd$



RECTIFIED CURRENT PLOTTED AGAINST OUTPUT VOLTAGE WITH INPUT VOLTAGE BETWEEN $5V_{r.m.s.}$ AND $50V_{r.m.s.}$ AS PARAMETER FOR DIODE SECTION a'_d



RECTIFIED CURRENT PLOTTED AGAINST OUTPUT VOLTAGE WITH INPUT VOLTAGE BETWEEN 0V AND 5V_{r.m.s.} AS PARAMETER FOR DIODE SECTIONS a''_d AND a'''_d



RECTIFIED CURRENT PLOTTED AGAINST OUTPUT VOLTAGE WITH
 INPUT VOLTAGE BETWEEN $5V_{r.m.s.}$ AND $50V_{r.m.s.}$ AS PARAMETER
 FOR DIODE SECTIONS a''_d AND a'''_d

