

QUICK REFERENCE DATA

*Quick heating V.H.F. power amplifier for mobile transmitters.
70% power output in less than half a second.*

f max.	175	Mc/s
V _a max.	650	V
p _a max.	25	W
Performance		
f	60	Mc/s
P _{out}	65	W

These data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS – TRANSMITTING VALVES which precede this section of the handbook.

CLASS 'C' TELEGRAPHY OR F.M. TELEPHONY (Intermittent mobile service)

Absolute maximum ratings

f max.	175	Mc/s
V _a max.		
f < 60Mc/s	650	V
f = 175Mc/s	400	V
V _{g2} max.	200	V
-V _{g1} max.	150	V
I _a max.	160	mA
I _{g1} max.	5.0	mA
p _a max.	25	W
p _{g2} max.	5.0	W
R _{g1-k} max.	30	kΩ

Typical operating conditions

f	60	175	Mc/s
V _a	600	400	V
V _{g2}	180	190	V
-V _{g1}	71	54	V
I _a	150	150	mA
I _{g2}	15	15	mA
I _{g1}	2.8	2.2	mA
V _{in(pk)}	91	68	V
P _{load} (driver)	2.0	5.0	W
P _a	25	25	W
p _{g2}	2.7	2.9	W
η _a	73.5	58	%
P _{out}	65	35	W
P _{load}	53	28	W

CLASS 'C' ANODE AND SCREEN GRID MODULATION (Intermittent mobile service)

Absolute maximum ratings

Carrier condition for a modulation factor of 1

f max.	175	Mc/s
V _a max.		
f < 60Mc/s	480	V
f = 175Mc/s	350	V
V _{g2} max.	250	V
-V _{g1} max.	150	V
I _a max.	120	mA
I _{g1} max.	3.5	mA
P _a	14	W
P _{g2} max.	2.0	W
R _{g1-k} max.	30	kΩ

Typical operating conditions

f	60	60	Mc/s
V _a	475	400	V
V _{g2}	135	150	V
-V _{g1}	77	87	V
I _a	94	112	mA
I _{g2}	9.0	12	mA
I _{g1}	2.8	3.4	mA
V _{in(pk)}	95	107	V
P _{load} (driver)	0.3	0.4	W
P _a	11	13	W
P _{g2}	1.2	1.8	W
η _a	75	71	%
P _{out}	34	32	W
P _{load}	29	27	W
η _{transfer}	85	85	%

CATHODE

Quick heating filament. 70% P_{out} in less than 0.5 second.

V _f	1.6	V
I _f	3.2	A

Frequency of filament supply

Sine wave	max. 200	c/s
Square wave	Any	

The filament has been designed to accept temporary variations in supply voltage of ±15%.

CAPACITANCES

C _{a-g1}	< 240	mpF
C _{in}	13.5	pF
C _{out}	8.5	pF

CHARACTERISTICS (measured at $V_a = 200V$, $V_{g2} = 200V$, $I_a = 100mA$)

g_m	7.0 mA/V
μ_{g1-g2}	4.5

COOLING

Radiation and convection

$T_{bulb \text{ max.}}$	220 °C
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MOUNTING POSITION

Any

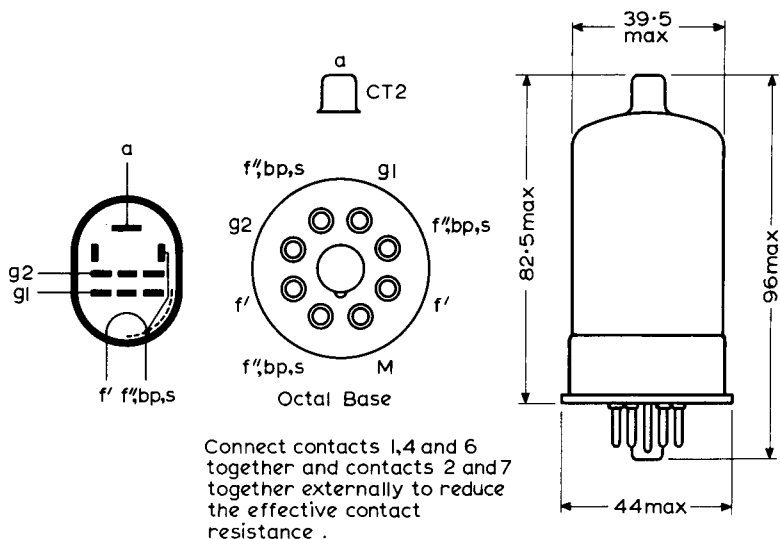
PHYSICAL DATA

Weight of valve	{ 2.08 oz 59 g
Weight of valve plus carton	{ 3.0 oz 85 g

ACCESSORIES

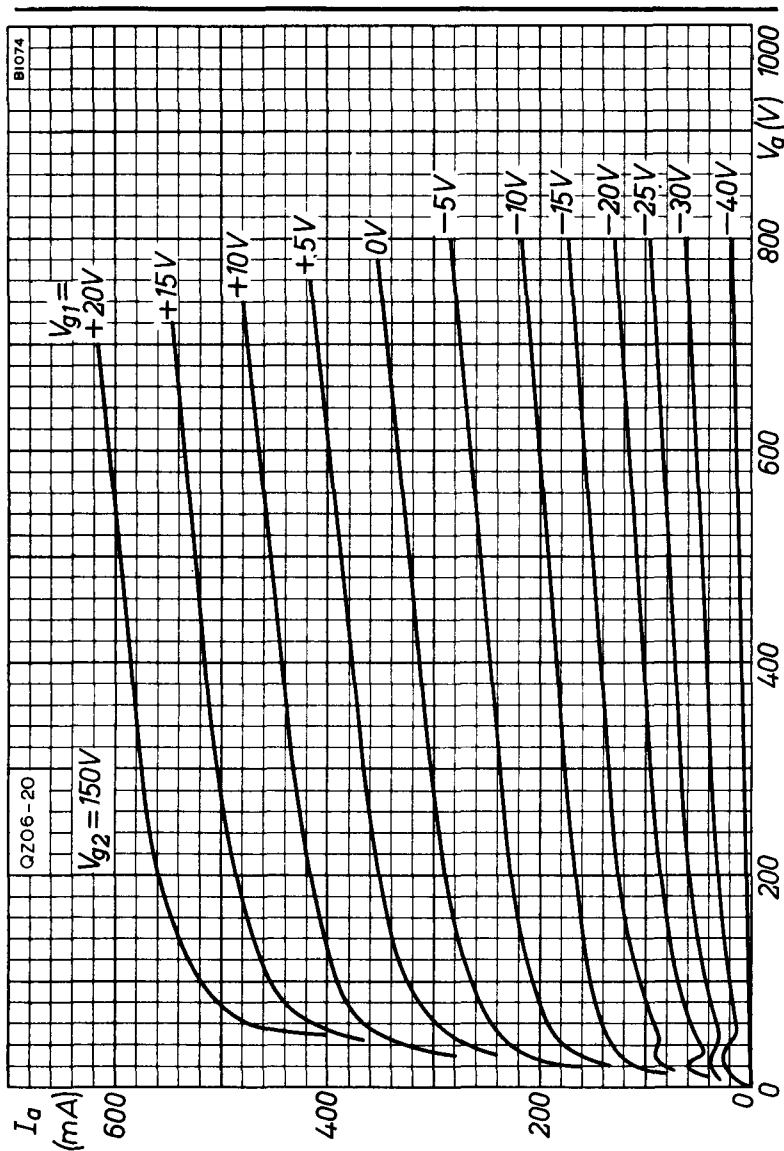
Socket
Anode cap

5903/13
28906 022



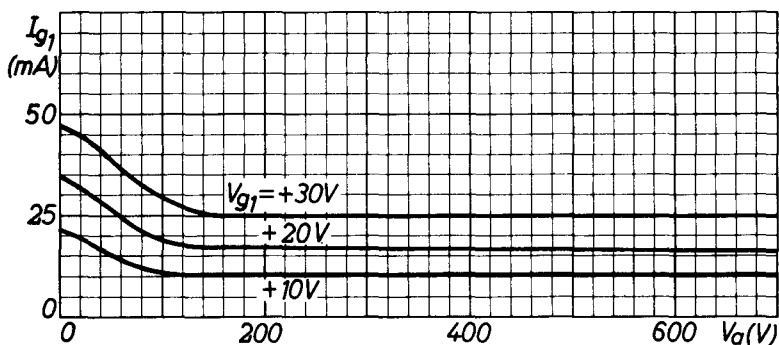
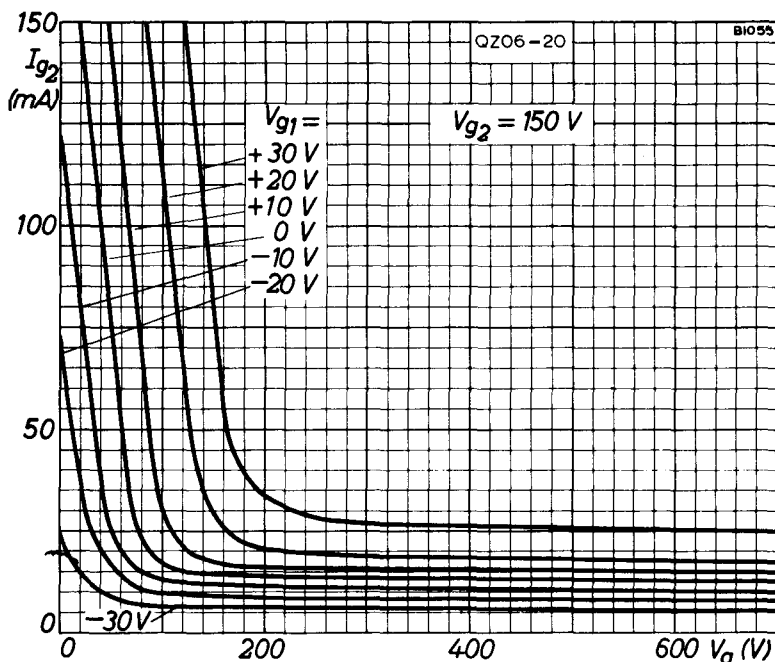
All dimensions in mm

822B



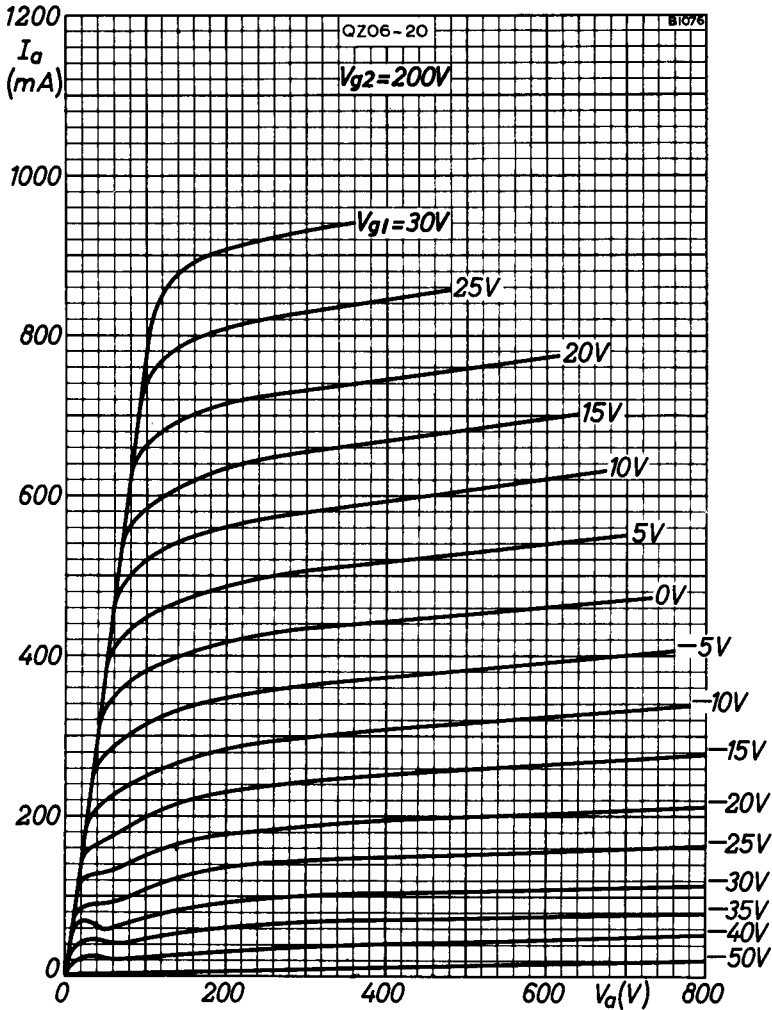
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER.

$V_{g2} = 150V$

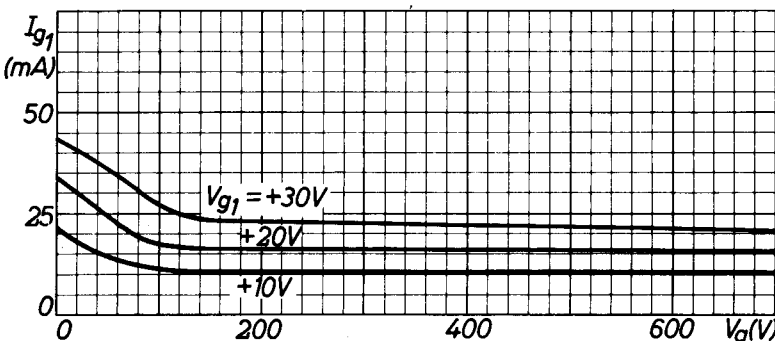
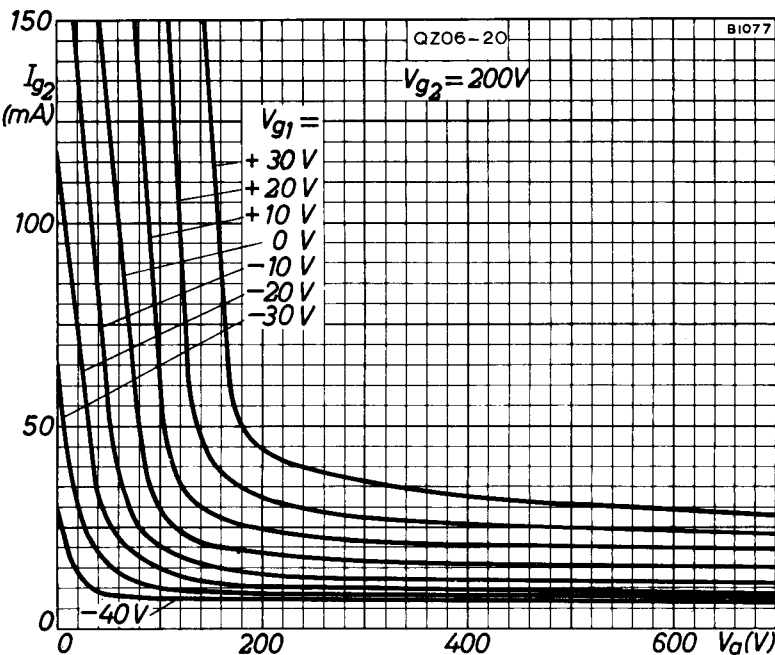


SCREEN-GRID AND CONTROL-GRID CURRENTS PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER.

$V_{g2} = 150V$



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER.
 $V_{g2} = 200V$



SCREEN-GRID AND CONTROL-GRID CURRENTS PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER.
 $V_{g2} = 200V$