

TRANSMITTING VALVES AND MERCURY VAPOUR RECTIFIERS

OPERATING CONDITIONS (contd.)

QVO47 (contd.)

As frequency trebler.	Single valve			Push-pull	
Output frequency	20	75	100	150	Mc/s
V_a	300	300	275	225	V
V_{g2}	250	250	200	200	V
V_{g1}	-120	-140	-140	-140	V
I_a	35.2	34.1	36.0	2 × 36	mA
I_{g2}	4.2	2.8	2.5	2 × 2.5	mA
I_{g1}	0.6	0.6	1.5	2 × 1.3	mA
$V_{ia(pk)}$	109	130	142	2 × 152	V
P_{out}	3.3	3.2	2.8	3.1	W
p_a	7.3	7.1	7.1	2 × 6.6	W
η	31	31	28	19	%



BASE :
B9G

DIMENSIONS :
L=78 mm
D=38 mm

Indirectly-heated beam tetrode rated for a maximum anode dissipation of 25 watts. It is suitable for use as an A.F. amplifier or modulator or as an R.F. amplifier or oscillator.

QVO5-25

HEATER

V_h 6.3 V I_h 0.9 A

Heating time 15 secs.

MOUNTING POSITION

Any

CAPACITANCES (measured with external shield)

C_{ja}	11	$\mu\mu F$
C_{out}	7	$\mu\mu F$
C_{a-g1}	<0.2	$\mu\mu F$

CHARACTERISTICS

At $V_a=600$ V $V_{g2}=300$ V $I_a=72$ mA

μ_{g1-g2}	8	
g_m	6.0	mA/V



4 VALVE DATA PREFERRED TYPES

H TRANSMITTING VALVES AND MERCURY VAPOUR RECTIFIERS

QVO5-25 LIMITING VALUES

(contd.)

V_a max.	600	V
V_a (pk) max.	2,000	V
p_a max.	25	W
V_{g2} max.	300	V
p_{g2} max.	3.5	W
V_{g1} max.	-200	V
i_k max.	150	mA
i_k (pk) max.	400	mA
i_{g2} max.	10	mA
i_{g1} max.	5	mA
i_{g1} (pk) max.	25	mA
V_{h-k} max.	100	V
R_{g1-k} max.	25	K Ω

Operating
frequency

Max. anode
voltage

Max. anode
input power

(Mc/s)
60
75

(V)
600
500

(W)
60
50

OPERATING CONDITIONS

For push-pull pair as Class "AB₂" A.F. power amplifier
and modulator

V_a	400	500	600	V
V_{g2}	300	300	300	V
V_{g1}	-25	-25	-30	V
$i_a(o)$	2 × 50	2 × 50	2 × 30	mA
$i_{g2(o)}$	2 × 2.5	2 × 2.5	2 × 2.5	mA
V_{in} (pk)	2 × 39	2 × 39	2 × 39	V
i_a (max. sig.)	2 × 120	2 × 120	2 × 100	mA
i_{g2} (max. sig.)	2 × 5	2 × 5	2 × 5	mA
R_{a-a}	3.2	4.24	6.4	K Ω
P_{drive} (max. sig.)*	0.2	0.2	0.1	W approx.
P_{out}	55	75	80	W approx.

*The effective resistance of the grid circuit should be below 500 Ω and the effective impedance should not exceed 700 Ω at the highest response frequency required.

For single valve as R.F. amplifier, Class "B" telephony

V_a	400	500	600	V
V_{g2}	250	250	250	V
V_{g1}	-25	-25	-25	V
i_a	75	75	62.5	mA
i_{g2}	4	4	3	mA
V_{in} (pk)	30	30	20	V
P_{drive} (approx.)	0.25	0.25	0.2	W
P_{out} (approx.)	9.0	12.5	12.5	W



TRANSMITTING VALVES AND MERCURY VAPOUR RECTIFIERS

OPERATING CONDITIONS (contd.)

QV05-25

For single valve as R.F. amplifier, Class "C" telephony, anode modulated

(contd.)

V_a	325	400	475	V
* V_{g2}	225	225	225	V
R_{g2}	20	30	50	K Ω
** V_{g1}	-75	-80	-85	V
R_{g1}	25	22.8	21.3	K Ω
I_a	80	80	83	mA
I_{g2}	5	5.75	5	mA
I_{g1}	3	3.5	4	mA approx.
V_{in} (pk)	90	95	110	V
P_{drive}	0.25	0.3	0.4	W approx.
P_{out}	17.5	22.5	27.5	W approx.

*Preferably obtained from modulated anode supply through resistor R_{g2} of value shown.

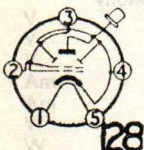
**May be obtained either from fixed supply or by a grid resistor of value shown, or by a combination of fixed supply and grid resistor.

For single valve as R.F. amplifier and oscillator, Class "C" telegraphy

V_a	400	500	600	V
* V_{g2}	250	250	250	V
R_{g2}	20	42	50	K Ω
** V_{g1}	-45	-45	-45	V
R_{g1}	12.8	12.8	12.8	K Ω
R_k	410	410	410	Ω
I_a	100	100	100	mA
I_{g2}	7.5	6.0	7.0	mA
I_{g1}	3.5	3.5	3.5	mA approx.
V_{in} (pk)	65	65	65	V
P_{drive}	0.2	0.2	0.2	W approx.
P_{out}	25	30	40	W approx.

*Obtained from a fixed supply or from a potentiometer, or from the anode supply through resistor of value shown.

**May be obtained from a fixed supply or from a grid or cathode resistor of value shown, or by a combination of these methods.



BASE :
American
Medium 5-Pin

DIMENSIONS :
L=147 mm
D=53 mm

