

QQE06/40

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R.F. DOUBLE POWER TETRODE

QUICK REFERENCE DATA

λ (m)	Freq. (MHz)	C telegr.				C_{ag2} mod.			
		C.C.S.		I.C.A.S.		C.C.S.		I.C.A.S.	
		V_a (V)	W_o (W)	V_a (V)	W_o (W)	V_a (V)	W_o (W)	V_a (V)	W_o (W)
5	60					600	71	600	79
1.5	200	600	90						
1.2	250	750	85	750	96	600	64	600	71
0.7	430	520	66						
0.6	500	500	60						

λ (m)	Freq. (MHz)	C fr. mult.		B mod.	
		V_a (V)	W_o (W)	V_a (V)	W_o (W)
6/2	50/150	500	20	600	86
		400	18	450	60
4/1.3	75/225	400	12	300	37

HEATING: indirect; cathode oxide-coated

Heater voltage	V_f	=	6.3	12.6	V
Heater current	I_f	=	1.8	0.9	A
Pins			5-(1+7)	1-7	

TYPICAL CHARACTERISTICS

Amplification factor of grid No.2
with respect to grid No.1

$$\mu_{g2g1} = 8.2$$

Mutual conductance (per system)

$$S (I_a = 30 \text{ mA}) = 4.5 \text{ mA/V}$$

COOLING: radiation

When the tube is used at frequencies above 150 Mc/s, it may be necessary to direct a low-velocity air flow on the bulb and on the anode seals

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CAPACITANCES

Anode to all other elements except grid No.1

$$C_a = 3.2 \text{ pF}$$

Grid No.1 to all other elements except anode

$$C_{g1} = 10.5 \text{ pF}$$

Anode to grid No.1

$$C_{ag1} < 0.09 \text{ pF}$$

$$C_{ag1} - C_n < 0.035 \text{ pF}$$

See electrode arrangement for internal neutralisation by C_n and C_n'

per system

Output capacitance

$$C_o = 2.1 \text{ pF}$$

Input capacitance

$$C_i = 6.7 \text{ pF}$$

TEMPERATURE LIMITS (Absolute limits)

Temperature of bulb and anode seals

$$\text{max. } 250^\circ \text{C}$$

Temperature of bottom pin seals

$$\text{max. } 180^\circ \text{C}$$

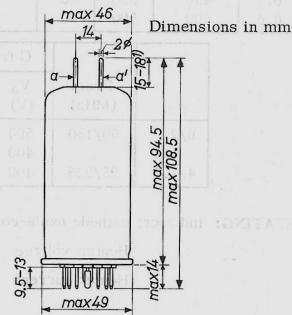
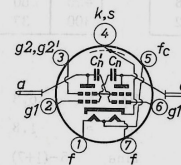
MECHANICAL DATA

Base : Septar

Socket : 2422 513 00001

Anode connector: 40623

Net weight : 60 g

Mounting position: vertical with base up or down
horizontal with anode pins in a horizontal plane

1) Max. 3 mm glass included

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R.F. CLASS C TELEGRAPHY

C.C.S. LIMITING VALUES (Absolute limits), continuous service

Frequency	f	up to 250	up to 500	MHz
Anode voltage	V_a	= max. 750	max. 600	V
Anode input power	W_{ia}	= max. 2x60	max. 2x50	W
Anode dissipation	W_a	= max. 2x20		W
Anode current	I_a	= max. 2x110		mA
Grid No.2 voltage	V_{g2}	= max. 300		V
Grid No.2 dissipation	W_{g2}	= max. 2x3.5		W
Negative grid No.1 voltage	$-V_{g1}$	= max. 175		V
Grid No.1 current	I_{g1}	= max. 2x5		mA
Grid No.1 circuit resistance	R_{g1}	= max. .50		k Ω
Heater to cathode voltage	V_{kf}	= max. 100		V

C.C.S. OPERATING CONDITIONS, continuous service
two systems in push-pull

Frequency	f	=	200	250	430	500	MHz
Anode voltage	V_a	=	600	750	520	500	V
Grid No.1 voltage	V_{g1}	=	-80	-80	-80	-	V
Grid No.1 resistor	R_{g1}	=	-	-	-	20	k Ω
Grid No.2 voltage	V_{g2}	=	250	250	250	250	V
Anode current	I_a	=	2x100	2x80	2x100	2x100	mA
Grid No.1 current	I_{g1}	=	2x2.5	2x1.5	2x2.8	2x3	mA
Grid No.2 current	I_{g2}	=	16	17	18	20	mA
Input A.C. voltage, peak to peak	V_{g1g1p}	=	200	250	-	-	V
Grid No.2 dissipation	W_{g2}	=	4	4.25	4.5	5	W
Anode input power	W_{ia}	=	2x60	2x60	2x52	2x50	W
Anode dissipation	W_a	=	2x15	2x17.5	2x19	2x20	W
Output power	W_o	=	90	85	66	60	W
Efficiency	η	=	75	71	64	60	%

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