S.Q. TUBE

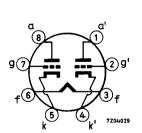
Special quality double triode designed for use as $A.\,F.$ amplifier and multivibrator.

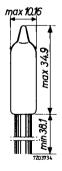
QUICK REFERENCE DATA			
Life test	1000 hours		
Mechanical quality	Shock and vibration resistant		
Base	Subminiature		
Heating	<pre>Indirect A.C. or D.C.; parallel supply</pre>		
Heater voltage	$V_{\mathbf{f}}$ 6.3 V		
Heater current	I _f 300 mA		
Anode current	I _a 0.8 mA		
Mutual conductance	S 1.8 mA/V		

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Subminiature





The leads should not be soldered nearer than $5\ \mathrm{mm}$ to the seal and should not be bent nearer than 1.5 mm to the seal.

CHARACTERISTICS

Column I Nominal values or setting of the tube

II Range values for equipment design: Initial spread III Range values for equipment design: End of life

		I	II	III	
Heater voltage	$\overline{v_{f}}$	6.3			v
Heater current	$I_{\mathbf{f}}$	300	280 - 320		mA
Anode voltage	Va	100			v
Grid voltage	$-v_g$	1.2			v
Anode current	Ia	0.8			mA
Mutual conductance	S	1.8			mA/V
Amplification factor	μ	70			
Internal resistance	$R_{\mathbf{i}}$	38.8			kΩ
Anode voltage	Va	100			v
Cathode resistor	$R_{\mathbf{k}}$	1500			Ω
Anode current	$I_{\mathbf{a}}$	0.8	0.5 - 1.1	i	mA
Mutual conductance	S	1.8	1.5 - 2.1		mA/V
Amplification factor	μ	70	60 - 80		
Cut off voltage	-v _g	2.8			V
Anode voltage	v_a	100			v
Anode current	I_a		max. 50		μA
Leakage current between cathode and heater Voltage between cathode	I _{kf}		max. 5	max. 10	μΑ
and heater V _{kf} = 100 V	<u></u>				
Negative grid current	$-I_{\mathbf{g}}$		max.0.3	max. 0.9	μA
Anode voltage	v_a	150			V
Cathode resistor	$R_{\mathbf{k}}$	820			Ω



CHARACTERISTICS (continued)		I	II	
Vibrational noise output	$\overline{v_o}$		max. 25	mV _{RMS}
Anode supply voltage V _{ba} = 100 V			•	
Cathode resistor R $_{k}$ = 1500 Ω				
Anode resistor R_a = 10 $k\Omega$				
Grid resistor $R_g = 0.1 M\Omega$		İ		
Cathode bypass capacitor C_k = 1000 μ F	1			
Vibration frequency 50 Hz				
Acceleration 15 g				
CAPACITANCES				
Anode to cathode and heater	C _{a/kf}	0.23	0.16-0.30	pF
	Ca'/k'f	0.28	0.21 - 0.35	pF
Grid to cathode and heater	C _{g/kf}	1.7	1.3 - 2.1	pF
Anode to anode other section	Caa'		max. 0.8	pF
Grid to grid other section	Cgg'		max. 14.0	mpF
Anode to grid	Cag	1.0	0.8 - 1.2	pF

SHOCK AND VIBRATION RESISTANCE

The following test conditions are applied to assess the mechanical quality of the tube. These conditions are not intended to be used as normal operating conditions.

Shock

The tube is subjected 5 times in each of 4 positions to an acceleration of 500~g supplied by an NRL shock machine with the hammer lifted over an angle of 30° .

Vibration

The tube is subjected during 32 hours in each of 3 positions to a vibration frequency of 50 Hz with an acceleration of 2.5 g.

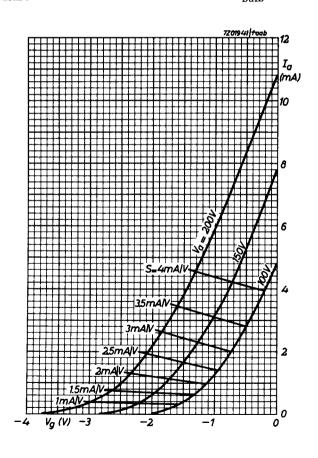
LIFE

Production samples are tested to be within the end of life values (column III) under the following conditions during 1000 hours.

Anode supply voltage	${ m v_{ba}}$	100	V
Cathode resistor	$R_{\mathbf{k}}$	1500	Ω

LIMITING VALUES (Absolute max. rating system)

•				
Anode voltage	v_{a_0}	max.	330	v
	v_a	max.	165	V
Grid voltage	$+V_{g}$	max.	0	v
	-V _g	max.	55	V
Anode dissipation	w_a	max.	0.55	W
Anode current	I_a	max.	3.3	mA
Peak voltage between cathode and heater	v_{kf_p}	max.	200	V
Grid resistor	R_{g}	max.	1	MΩ
Bulb temperature	^t bulb	max.	220	$^{\mathrm{o}}\mathrm{C}$





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