

ELECTRONIC TUBE REFERENCE

QE0540F

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Heater variant of the QE0540 beam-power transmitting tetrode, with the source explicitly referring electrical data and curves to the parent type.

GENERAL CHARACTERISTICS

BASE DESIGNATION	OCTAL 8P	BASE PINS	8
NOMINAL HEATER	12.6 V / 625 mA	PARALLEL HEATER	- / -
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Beam Power	
TRANSCONDUCTANCE	0.007 S
AMPLIFICATION FACTOR	4.5
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	20 W
MAXIMUM SCREEN DISSIPATION	3 W
MAXIMUM CATHODE CURRENT	125 mA
Heater-variant beam-power tetrode; the sheet explicitly refers electrical data and curves to QE0540.	

Heater-variant beam-power tetrode; the sheet explicitly refers electrical data and curves to QE0540.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V4

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 PHILIPS ELECTRON TUBES HANDBOOK V4

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Chauffage: indirect If	1.25 A	Chauffage: indirect If = 1.25 A

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitances Ca	8.5 pF	Capacitances Capacitances Ca = 8.5 pF
Kapazitäten Cg	13.5 pF	Capacitances Kapazitäten Cg1 = 13.5 pF
C	0.24 pF	Capacitances C8g1 C 0.24 pF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical characteristics Va	200 V	Typical characteristics Typical characteristics Va = 200 V
Kenndaten Vg	200 V	Typical characteristics Kenndaten Vg2 = 200 V
S Ia	7 mA/V	Typical characteristics S Ia = 100 m 7 mA/V
Temperature de l'ampoule max	220 °C	Modulator operation Temperature de l'ampoule max. 220 °C
Published electrical value	1 ma	Maximum ratings 3)Vg1 may be obtained from a separate supply. or from
not be used. Vg	400 V	Maximum ratings not be used. Vg2 must not exceed 400 V under key-up
de	400 V	Maximum ratings de 400 V dans le cas de manipulateur leve.
Schirmgitterserienwiderstand verwendet werden. V	82 s	Maximum ratings Schirmgitterserienwiderstand verwendet werden. V82 soil

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical value	1 ma	Maximum ratings 5)Vg1 may be obtained by means of a grid resistor or from
Plate voltage	750 V	Maximum ratings Va = max. 600 750 V
See page	90 W	Maximum ratings See page 4 for Wia = max. 67.5 90 W
Derating table Wa = max	25 W	Maximum ratings Derating table Wa = max. 20 25 W
Plate current	150 mA	Maximum ratings Ia = max. 140 150 mA
Voir page	250 V	Maximum ratings Voir page 4 pour Vg2 = max. 250 250 V
Tableau d'abaissement Wg	3 W	Maximum ratings Tableau d'abaissement Wg2 = max. 3 3 W
Control-grid voltage	150 V	Maximum ratings -Vg1 = max. 150 150 V
Igt = max	4 mA	Maximum ratings Igt = max. 3.5 4 mA
Fir Reduktionstabelle . V)ç p = max	135 V	Maximum ratings Fir Reduktionstabelle . V)ç p = max. 135 135 V
siehe Seite	4 ma	Maximum ratings siehe Seite 4 max.
Plate voltage	400 V	Maximum ratings Va = 600 500 320 750 600 400 V
Vg	-54 V	Maximum ratings Vg14) = -58 -66 -51 -62 -71 -54 V
Vgp)	190 V	Maximum ratings Vgp) = 150 170 180 160 180 190 V
Plate current	150 mA	Maximum ratings Ia = 112 135 140 120 150 150 mA
Control-grid current	2.2 mA	Maximum ratings Ig1 = 2.8 2.5 2.0 3.1 2.8 2.2 mA
Published electrical value	10.4 mA	Maximum ratings 182 = 9 9 10 11 10 10.4 mA
Wigt	3 W	Maximum ratings Wigt = 0.2 0.2 3 0.2 0.3 3 W
Wa	25 W	Maximum ratings Wa = 15.5 19.5 20 20 24 25 W
f = max	60 MHz	Maximum ratings f = max. 60 60 Mc/s
Plate voltage	600 V	Maximum ratings Va = max. 480 600 V
Derating table Wia = max	67.5 W	Maximum ratings Derating table Wia = max. 45 67.5 W
Voir page	16.7 W	Maximum ratings Voir page 4 pour Wa = max. 13.3 16.7 W

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tableau d.'abaissement Ia = max	125 mA	Maximum ratings Tableau d.'abaissement Ia = max. 117 125 mA
FUr Reduktionstabelle Vg	250 V	Maximum ratings FUr Reduktionstabelle Vg2 = max. 250 250 V
Wg	2 W	Maximum ratings Wg2 = max. 2 2 W
Igi = max	4 mA	Maximum ratings Igi = max. 3.5 4 mA
Vkfp = max	135 V	Maximum ratings Vkfp = max. 135 135 V
f	60 MHz	Maximum ratings f = 60 60 60 Mc/s
Va	600 V	Maximum ratings Va 475= 400 600 V
Vgi	-87 V	Maximum ratings Vgi 5) = -77 -87 -87 V
Vg	150 V	Maximum ratings Vg2 6) = 135 150 150 V
Plate current	112 mA	Maximum ratings Ia = 94 112 112 mA
Igi	3.4 mA	Maximum ratings Igi 2.8 3.4 3.4 mA
Ig	7.8 mA	Maximum ratings Ig2 6.4 7.8 7.8 mA
Vgip	107 V	Maximum ratings Vgip = 95 107 107 V
Wigi	0.4 W	Maximum ratings Wigi = 0.3 0.4 0.4 W
Wg	1.2 W	Maximum ratings Wg2 = 1.0 1.2 1.2 W
Wia	67.5 W	Maximum ratings Wia = 45 45 67.5 W
Wa	15.5 W	Maximum ratings Wa = 11 13 15.5 W
Wa	52 W	Maximum ratings Wa = 34 32 52 W
Wmod	34 W	Maximum ratings Wmod = 23 23 34 W
Plate voltage	600 V	Maximum ratings Va = max. 600 V Vg2 = max. 250 V
Plate voltage	250 V	Maximum ratings Va = max. 600 V Vg2 = max. 250 V
Wia = max	60 W	Maximum ratings Wia = max. 60 W Wg2 = max. 3 W
Wia = max	3 W	Maximum ratings Wia = max. 60 W Wg2 = max. 3 W
Wa = max	20 W	Maximum ratings Wa = max. 20 W V1ϕp = max. 135 V
Wa = max	135 V	Maximum ratings Wa = max. 20 W V1ϕp = max. 135 V
Plate current	125 mA	Maximum ratings I a = max. 125 mA Rgt = max. 100 k4

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	500 V	Maximum ratings $V_a = 600$ 500 V
Vg	185 V	Maximum ratings $V_{g2\ 8}) = 180$ 185 V
Vg	-40 V	Maximum ratings $V_{g1\ 7}) = -45$ -40 V
Plate current	108 mA	Maximum ratings $I_a = 2\times 13\ 2\times 100\ 2\times 29\ 2\times 108$ mA
Screen-grid current	13 mA	Maximum ratings $I_{g2} = 2\times 0.5\ 2\times 12\ 2\times 1\ 2\times 13$ mA
Wg	2.4 W	Maximum ratings $W_{g2} = 2\times 0.1\ 2\times 2\ 2\times 0.2\ 2\times 2.4$ W
Wia	54 W	Maximum ratings $W_{ia} = 2\times 7.8\ 2\times 60\ 2\times 14.5\ 2\times 54$ W
Wa	19 W	Maximum ratings $W_a = 2\times 7.8\ 2\times 19\ 2\times 14.5\ 2\times 19$ W
Plate voltage	400 V	Maximum ratings $V_a = 400$ V
Vg	190 V	Maximum ratings $V_{g2\ 8}) = 190$ V
Vgt	-40 V	Maximum ratings $V_{gt\ 7}) = -40$ V
Plate current	114 mA	Maximum ratings $I_a = 2\times 32\ 2\times 114$ mA
Wg	2.5 W	Maximum ratings $W_{g2} = 2\times 0.25\ 2\times 2.5$ W
Wia	45.5 W	Maximum ratings $W_{ia} = 2\times 12.8\ 2\times 45.5$ W
Ala	18 W	Maximum ratings $A_{la} = 2\times 12.8\ 2\times 18$ W
Plate voltage	750 V	Maximum ratings $V_a = \text{max. } 750$ V $V_{g2} = \text{max. } 250$ V
Plate voltage	250 V	Maximum ratings $V_a = \text{max. } 750$ V $V_{g2} = \text{max. } 250$ V
Wia = max	85 W	Maximum ratings $W_{ia} = \text{max. } 85$ W $W_{g2} = \text{max. } 3$ W
Wia = max	3 W	Maximum ratings $W_{ia} = \text{max. } 85$ W $W_{g2} = \text{max. } 3$ W
Wa = max	25 W	Maximum ratings $W_a = \text{max. } 25$ W VIP = max. 135 V
Wa = max	135 V	Maximum ratings $W_a = \text{max. } 25$ W VIP = max. 135 V
Ig = max	135 mA	Maximum ratings $I_g = \text{max. } 135$ mA Rgl 7) = max. 100 kQ
Plate voltage	600 V	Maximum ratings $V_a = 750$ 600 V

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips E-Z

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1999 PHILIPS E-Z

Section 1 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	12.6 V	—
Heater/filament current	625 mA	—
Transconductance	7000 μ S	—
Screen-grid amplification factor	4.5	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate/anode voltage	750 V	—
Maximum screen-grid voltage	250 V	—
Maximum plate/anode dissipation	25 W	—
Maximum screen-grid dissipation	3 W	—
Operating plate voltage	750 V	ClassC;Telegraphy;60MHz
RF output power	70 W	ClassC;Telegraphy;60MHz
Operating plate voltage	400 V	ClassC;Telegraphy;175MHz
RF output power	35 W	ClassC;Telegraphy;175MHz
Electrical data reference	QE0540	FamilySheet

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate/anode capacitance	8.5 pF	—
Control-grid capacitance	13.5 pF	—
Plate-grid capacitance	0.24 pF	—

TUBE TINKER

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and their source documents.

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