



ELECTRONIC TUBE REFERENCE

TT21

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

High-current Marconi beam tetrode for RF amplification, audio output, and pulse modulation, with 45 W plate dissipation and substantial peak-current capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 1.6 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
PLATE RESISTANCE	12000 Ω
TRANSCONDUCTANCE	0.011 S
MAXIMUM PLATE VOLTAGE	1250 V
MAXIMUM SCREEN VOLTAGE	600 V
MAXIMUM PLATE DISSIPATION	45 W
MAXIMUM SCREEN DISSIPATION	6 W
MAXIMUM GRID DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	230 mA
<i>Published maximum ratings and characteristics audited; remaining useful numerical data retained in parameter table.</i>	

The TT21 is a beam tetrode for RF power amplification up to about 30 MHz, also useful as an audio-output valve and pulse modulator.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1955 Marconi

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

1955 MARCONI

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Beam tetrodes with oxide coated cathodes, the TT2 [1]	1	Beam tetrodes with oxide coated cathodes, the TT21 and TT22 are identical except
Beam tetrodes with oxide coated cathodes, the TT2 [2]	2	Beam tetrodes with oxide coated cathodes, the TT21 and TT22 are identical except
at frequencies up to	30 MHz	at frequencies up to 30Mc/s and are also useful as audio output valves and pulse modulators.
HEATER TT2 [1]	1	HEATER TT21 TT22
HEATER TT2 [2]	2	HEATER TT21 TT22
iarpk) (pulse) [1]	75	iarpk) (pulse) 75 7-5 A
iarpk) (pulse) [2]	7	iarpk) (pulse) 75 7-5 A
iarpk) (pulse) [3]	-5	iarpk) (pulse) 75 7-5 A
Rg1 -k (cathode bias) [1]	220	Rg1 -k (cathode bias) 220 220 kQ
Rg1 -k (cathode bias) [2]	220	Rg1 -k (cathode bias) 220 220 kQ
Efficiency [1]	61	Efficiency 61 75 78 81 %
Efficiency [2]	75	Efficiency 61 75 78 81 %
Efficiency [3]	78	Efficiency 61 75 78 81 %
Efficiency [4]	81	Efficiency 61 75 78 81 %
Efficiency [1]	59	Efficiency 59 74 765 74-5 795 %
Efficiency [2]	74	Efficiency 59 74 765 74-5 795 %
Efficiency [3]	765	Efficiency 59 74 765 74-5 795 %
Efficiency [4]	74	Efficiency 59 74 765 74-5 795 %
Efficiency [5]	-5	Efficiency 59 74 765 74-5 795 %
Efficiency [6]	795	Efficiency 59 74 765 74-5 795 %
Efficiency [1]	72	Efficiency 72 76 80 81 %

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Efficiency [2]	76	Efficiency 72 76 80 81 %
Efficiency [3]	80	Efficiency 72 76 80 81 %
Efficiency [4]	81	Efficiency 72 76 80 81 %
Efficiency [1]	70	Efficiency 70 755 785 82
Efficiency [2]	755	Efficiency 70 755 785 82
Efficiency [3]	785	Efficiency 70 755 785 82
Efficiency [4]	82	Efficiency 70 755 785 82
Efficiency [1]	63	Efficiency 63 69
Efficiency [2]	69	Efficiency 63 69
Fig [1]	1 A	Fig. 1. Constant anode current curves at $V_{g2}=300V$.
Fig [2]	300 A	Fig. 1. Constant anode current curves at $V_{g2}=300V$.
Fig [1]	2 A	Fig. 2. Constant screen current curves at $V_{g2}=2300V$.
Fig [2]	2300 A	Fig. 2. Constant screen current curves at $V_{g2}=2300V$.
Fig [1]	3 A	Fig. 3. Constant grid current curves at $V_{g2}=300V$.
Fig [2]	300 A	Fig. 3. Constant grid current curves at $V_{g2}=300V$.
Fig [1]	4 A	Fig. 4. Anode current curves at $V_{g2}=300V$ and V_g negative.
Fig [2]	300 A	Fig. 4. Anode current curves at $V_{g2}=300V$ and V_g negative.
Fig [1]	5 A	Fig. 5. Constant anode current curves at $V_{g2}=600V$.
Fig [2]	600 A	Fig. 5. Constant anode current curves at $V_{g2}=600V$.
Fig [1]	6 A	Fig. 6. Constant screen current curves at $V_{g2}=600V$.
Fig [2]	600 A	Fig. 6. Constant screen current curves at $V_{g2}=600V$.
Fig [1]	7 A	Fig. 7. Constant grid current curves at $V_{g2}=600V$.
Fig [2]	600 A	Fig. 7. Constant grid current curves at $V_{g2}=600V$.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Fig	8 A	Fig. 8. Anode current curves for pulse modulator applications.
Fig	9 A	Fig. 9. Screen current curves for pulse modulator applications.
Fig	10 A	Fig. 10. Grid current curves for pulse modulator applications.
Fig	12 V	Fig. 12. Class C telegraphy. Power output/anode voltage curves.
Fig	13	Fig. 13. Anode modulated class C telephony.
Heater voltage	6.3 V	Published heater rating.
Heater current	1.6 A	Approximate published heater current.

TUBE TINKER

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