

ELECTRONIC TUBE REFERENCE

24BAP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Twenty-four-inch directly viewed rectangular television picture tube with 110-degree magnetic deflection, low-voltage electrostatic focusing, aluminized screen, and low-grid-No.2 cathode-drive design for a shallow receiver cabinet.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 Cathode Ray
No fixed ratings recorded.
Source-derived section; promoted values populated where applicable.

from JEDEC release #2442, April 13, 1959 24BAP4 PICTURE TUBE Low-Voltage Electro- Aluminized Screen 21-7/18" x 16-7/8" Screen static Focus Low-Grid-No.2-Voltage Type 24-1 /8" Max. Bulb Diagonal 110° Magnetic Deflection for Cathode-Drive Operation 16-3/16" Max. Length TENTATIVE DATA RCA- 24BAP4 is a directly viewed, rectangular through the wide deflection angle with only glass picture tube having a 24-inch diagonal slightly more power than is required to scan a envelope. Employing a |109- diagonal deflection tube with 90° deflection angle. angle and low-voltage electrostatic focus, The 24BAP4 has a spherical Filterglass face— it is intended primarily for use in cathode- plate; an aluminized screen 21-7/16" x 16-7/8" drive applications. with slightiy curved sides and rounded corners; a minimum projected screen area of 332 square inches; a maximum overall length of 16-3/16"; an external condu

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Low-Voltage Electro-Aluminized Screen	8	Low-Voltage Electro- Aluminized Screen 21-7/18" x 16-7/8" Screen
static Focus Low-Grid-No	8	static Focus Low-Grid-No.2-Voltage Type 24-1/8" Max. Bulb Diagonal
110° Magnetic Deflection for Cathode-Drive Operation 16-3/16	16	110° Magnetic Deflection for Cathode-Drive Operation 16-3/16" Max. Length
envelope. Employing a	90	envelope. Employing a 109-diagonal deflection tube with 90° deflection angle.
angle and low-voltage electrostatic focus, The	24	angle and low-voltage electrostatic focus, The 24BAP4 has a spherical Filterglass face—
voltage {AC or OC)	6.3 V	voltage {AC or OC). 6.3 volts
Current	600 mA	Current . . . 0.6 amp
vertical., ... + .« o e	87	vertical., ... + .« o e . . . 87°
gperating Position. . . . « . v . . . v v	0	gperating Position. . . . « . v . . . v v 0. e 0 Any equivalent absclute minimum ultor-to-grid=-No.! voltage
is 11000 volts below which the serviceability of the	11000 V	is 11000 volts below which the serviceability of the
da.1 veltage is aever less than 11000 volts.	11000 V	da.1 veltage is aever less than 11000 volts.
Maximum Ratings, Design-Center Volues: The grid-No	1	Maximum Ratings, Design-Center Volues: The grid-No.4-to-grid-Ho0.1 voltage required for optimum
<?0000 max. volts between	400 V	. <?0000 max. volts between 0 and 400 volts; is independent of ultor current;

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
ULTOR =TO	12000 V	ULTOR =TO0-GRID-NO.1 VOLTAGE. . . . 12000@ min. volts and will remain essentially constant for values of
GRID-NO	1	GRID-NO.4=TO-GRID-NO.1 VOLTAGE: ultor-to—grid-no.1 voltage, or grid-HNn.2-to—grid-no.1
Positive value « .« .«	1000 V	Positive value « .« .« . . . 1000 max. volts voltage, within design ranges shown for these items.
Negative value «	500 V	Negative value « 500 max. volts Distance fram.Reference Line for svitaple PM centering
GRID=-NO	61 V	GRID=-NO.2-TO-GRID~NO.1 VOLTAGE . . . 61 max. volts fields, the center of the undeflected focused sgot will
CATHODE=TO~GRID-NO.{ VOLTAGE: fall within a circle havinga	8	CATHODE=TO~GRID—NO.{ VOLTAGE: fall within a circle havinga 3/8~inch radius concentric
Positive peak value	200 V	Positive peak value. 200 max. volts with the center of the tube face. It is tobenoted that
Positive bias value	2 V	Positive bias value. 140 max. volts the earth's magnetic field can cause as much as 1/2-inch
Negative bias value	0 V	Negative bias value. 0 max. volts
Negative peak valve	2 V	Negative peak valve. 2 max. volts
Ef=	6.3 V	Ef=6.3 VOLTS
PEAK HEATER-CATHODE VOLTAGE: ULTOR-TO-GRID=N	16000 V	PEAK HEATER-CATHODE VOLTAGE: ULTOR-TO-GRID=N2I VOLTS=16000Q
Heater negative with GRID-N	4 V	Heater negative with GRID-N24-TO-GRID-N2) VOLTS ADJUSTED FOR FOCUS.
respect to cathode	18 V	respect to cathode 18¢ max. volts ¥ NCREASES OR DECREASES DIRECTLY BY APPROX.
2%, FOR EVERY [1000~-VOLT CHANGE [N ULTOR-TO-	1000 V	2%, FOR EVERY [1000~-VOLT CHANGE [N ULTOR-TO-
respect to cathode . ,	180 V	respect to cathode . , ... 180 max. volts eeaeey
¥ith any ultor-te-grid-¥o.! voltage (Ecjgl) between	12000	¥ith any ultor—te-grid-¥o.! voltage (Ecjgl) between 12000 e
and	50 V	and 20000 volts and grid-¥o.2-to-grid-Fo.l voltage rEcngJ > 50

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
between	1 V	between 50 and 64 volts 1 F FERFCELE
voltage for Focusy ϕ to	400 V	voltage for Focusy ϕ to 400 volts
Cathode-to-Grid--No	1	Cathode-to-Grid~No.1 Voltage
GRID-N	2 V	GRID-N22~TO~GRID-N2I VOLTS
No.1 voltage of	20000	No.1 voltage of 18000 20000 volts lished in accordance with the following definition of the
KYe.l voltage of	6 V	KYe.l voltage of 50 6y volts pesign-Center ratingsarelimitin? values of operating
voltage for Focus	400 V	voltage for Focus. . . 0 to 440 ϕ to 400 volts device of a specified type as defined by its pudlished
of Focused Raster	58 V	of Focused Raster. . . 32 to 47 42 to 58 volts applications, takiag responsibility for normal changes in
Cathode-to-Grid-yo	1	Cathode-to-Grid-yo.1 operating conditions due to rated supply voltage variation*,
Grid-No	1.5	Grid-No.1-Circuit Resistance 1.5 max. megohms r-Ray Farnini. when operated at ultor vottages up ta
@ 16 kilovolts, the 2uBaPu does not produce any harmful	2	@ 16 kilovolts, the 2uBaPu does not produce any harmful
which is applied tne highest dc voltage for acceler-- permits operation at voltages as highh as	22	which is applied tne highest dc voltage for acceler— permits operation at voltages as highbh as 22 kilovolts
16 xilovolts. resuliing from tuce implosion under some abnor	16	16 xilovolts. resuliing from tuce implosion under some abnormal condi-
Ef=	6.3 V	Ef=6.3 YOLTS Ef= 6.3 VOLTS
ULTOR-TO-GRID-N%I VOLTS=	50 V	ULTOR-TO-GRID-N%I VOLTS=16000 ULTOR-TO-GRID-N2 VOLTS= 50
GRID-N\$	50 V	GRID-N\$ 2-TO-GRID-N21 VOLTS=50 CATHODE BIASED POSITIVE WITH RESPECT TO
AASTER SIZE =	21	AASTER SIZE = 21° x b
/ 7°R COATING	7	/ 7°R COATING
AX1S) OF £ 30°.	30	AX1S) OF £ 30°.