



ELECTRONIC TUBE REFERENCE

4CX600B

Power - Beam (NOT sweep) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

High-frequency ceramic/metal power tetrode intended for RF transmitting and amplifier service, providing substantial power capability in a compact forced-air-cooled construction.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6 V / 1.25 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Beam Power	
MAXIMUM PLATE VOLTAGE	2500 V
MAXIMUM SCREEN VOLTAGE	400 V
MAXIMUM PLATE DISSIPATION	600 W
MAXIMUM SCREEN DISSIPATION	16 W
MAXIMUM GRID DISSIPATION	3 W
Single electrical section; values mapped from printed ratings/characteristics.	

The EIMAC 4CX600B and 4CX600F are ceramic/metal, air cooled radial beam tetrodes designed for use in wideband amplifiers, particularly distributed amplifiers.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 Eimac

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

1962 EIMAC

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The maximum rated plate dissipation of either type is	600 watts	The maximum rated plate dissipation of either type is 600 watts.
Current, at	4.3 A	Current, at 6.0 vOItS . . . v i v it it e it ittt e e e 4.3 A
Current, at	1.05 A	Current, at 26.5voltS . . . vt v i it vt et i e i e e 1.05 A
N (¢ Y U	41000 umhos	N (¢ Y U 41,000 umhos
OUtPUL & v v vt ittt et e it it st st s e e e s'	5.8 pF	OUtPUL & v v vt ittt et e it it st st s e e e s' 5.8 pF
Feedback « v v v v v v it e i ittt e e e e e e e	0.1 pF	Feedback « v v v v v v it e i ittt e e e e e e e 0.10 pF
(Effective	1970 A	(Effective 3-20-70) © 1970 by Varian Printed in U.S.A.
Ceramic/Metal Seals and Anode Core e v e	250 °C	Ceramic/Metal Seals and Anode Core e v e 250°C
SK	150 °C	SK-680 capacitor whenused e R e 150°C
DCPLATEVOLTAGE. v v v v	585 VOLTS	DCPLATEVOLTAGE. v v v v 3000 VOLTS Single Tone Plate Current 570 580 585 mAdc
DC SCREEN VOLTAGE. v v nv n v	17 VOLTS	DC SCREEN VOLTAGE. v v nv n v . 400 VOLTS Single-Tone Screen Current2. . . 32 29 17 mAdc
DCGRIDVOLTAGE &+ v v v v inn v	42 VOLTS	DCGRIDVOLTAGE &+ v v v v inn v -150 VOLTS Peak rf Grid Voltage 44 43 42 v
DC PLATE CURRENT	47 AMPERE	DC PLATE CURRENT 0.6 AMPERE Screen Dissipation 8.8 8.0 47 W

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE DISSIPATION	570 WATTS	PLATE DISSIPATION 600 WATTS Plate Input Power 570
{(Key-Down Conditions) Frequency . . « v v e v v e v e v i v o	8656 MHz	{(Key-Down Conditions) Frequency . . « v v e v v e v e v i v o 432 8656 MHz
ABSOLUTE MAXIMUM RATINGS (	53 MHz	ABSOLUTE MAXIMUM RATINGS (890 MHz): Grid VOlage « v v v v v v v n v n o o -4 -53 Vdc
on	8 VOLTS	on. . 2500 VOLTS Screen Currentl. oo 7.5 8 mAdc
DC SCREEN VOLTAGE	1 VOLTS	DC SCREEN VOLTAGE 400 VOLTS Grid Current1. o 0 v e e e e 12 -1.0 mAdc
DCGRIDVOLTAGE	15 VOLTS	DCGRIDVOLTAGE. -150 VOLTS Zero-Signal dc Plate Current! 20 15 mAdc
DCPLATECURRENT	0.6 AMPERE	DCPLATECURRENT 0.6 AMPERE Measured Driving Powerl, ...
Class-B, Television Service (Frequencies to	300 MHz	Class-B, Television Service (Frequencies to 890 MHz) Screen to Cathode Voltage 300 Vdc
Bandwidththat	9 MHz	Bandwidththat 3dbpoints 9 MHz
DC PLATE VOLTAGE	2500 VOLTS	DC PLATE VOLTAGE 2500 VOLTS
DC SCREEN VOLTAGE	600 VOLTS	DC SCREEN VOLTAGE 400 VOLTS dcPlateCurrent . . . v v v v v e o e n n o s 600 mAdc
DC PLATE CURRENT	0.6 AMPERE	DC PLATE CURRENT 0.6 AMPERE Pulse Screen Currentl.
PLATE DISSIPATION	52 WATTS	PLATE DISSIPATION 600 WATTS DrivePower 1. . . . o v v v v i e r e e e, 52 W
SCREEN DISSIPATION	100 WATTS	SCREEN DISSIPATION 16 WATTS Zero-Signal dc Plate Current 100 mAdc
GRID DISSIPATION	550 WATTS	GRID DISSIPATION 3 WATTS Plate Dissipation c c o v u a. 550 W
DC GRID VOLTAGE	686 VOLTS	DC GRID VOLTAGE -160 VOLTS Useful Power Output 686 W
TYPICAL OPERATION (	560 MHz	TYPICAL OPERATION (865 MHz) Plate Dissipation c c c 0 560 W
Heater: Current at	4.7 volts	Heater: Current at 6.0 volts . . . v t v i t t t v t i t e e i t t t c t s e e v e e 40 4.7 A
Heater: Current at	1.25 A	Heater: Current at 26.5 v O I t S « v v v v v v v t t v t e v t v s s e n e e s n e e r n e e e e e s. 085 1.25 A
e i e i i a a a a	48 pF	e i e i i a a a a 42 48 pF

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Feedback .. v v vt ittt it it ittt iien it	0.2 pF	Feedback .. v v vt ittt it it ittt iien it --- 0.2 pF
quired. The tube may be mounted directly on the temperatures below	250 °C	quired. The tube may be mounted directly on the temperatures below 250°C, The tabulation (page
mounted to the chassis with four screws. The level and	50 °C	mounted to the chassis with four screws. The level and 10,000 feet with 50°C ambient air.
CFM minimum should be directed straight up volts for the	26.5 volts	CFM minimum should be directed straight up volts for the 4CX600B and 26.5 volts for the
toward the center of tube base from a duct or	0 a	toward the center of tube base from a duct or 4CX600F. The voltage, as measured at the tube,
of	3 watts	of 3.0 watts and precautions should be observed
base flange temperature exceeds	150 °C	base flange temperature exceeds 150°C.,
is	15 watts	is 15 watts.
be bome in mind that operating temperature is	20 mA	be bome in mind that operating temperature is 4CX600B and 4CX600F is 20 mA for each tube
A low inductance screen bypass capacitor,	600 A	A low inductance screen bypass capacitor, 4CX600F is 600 watts. Except for brief periods
six	680 a	six 0-80 screws. With the SK-680 capacitor in- is accomplished by a clamp around the anode.
A K	44.45 A	A K 1710 1750 43.43 44.45