

ELECTRONIC TUBE REFERENCE

3CX300A1

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Low-mu ceramic/metal power triode developed specifically for high-quality audio amplification. Suitable for single-ended Class A1 or push-pull A1/AB1 operation, with published outputs of about 15 W single-ended and 40 W push-pull.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 2.65 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	9
MAXIMUM PLATE VOLTAGE	1800 V
MAXIMUM PLATE DISSIPATION	300 W
MAXIMUM GRID DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	470 mA
Published ratings/characteristics promoted where unambiguous.	

High-power triode, metal-ceramic construction, external anode with 300-watt

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

199X Svetlana

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

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Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current	2.65 A	3CX300A1 is suitable for single-ended Class A1 or push-pull Class A1 or AB1 operation.
Plate resistance	450 ohms	3CX300A1 is suitable for single-ended Class A1 or push-pull Class A1 or AB1 operation.
Input	25 pF	3CX300A1 is suitable for single-ended Class A1 or push-pull Class A1 or AB1 operation.
Output	1 pF	3CX300A1 is suitable for single-ended Class A1 or push-pull Class A1 or AB1 operation.
Feedback	10 pF	3CX300A1 is suitable for single-ended Class A1 or push-pull Class A1 or AB1 operation.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC plate voltage	1800 V	Maximum Ratings
Maximum signal DC plate current	470 mA	Maximum Ratings
Grid dissipation (maximum)	1 W	Maximum Ratings
Control grid maximum negative voltage	-400 V	Maximum Ratings
Plate voltage	500 V	Typical Operation, Class A, Audio Amplifier (single tube)
Grid voltage	-55 V	Typical Operation, Class A, Audio Amplifier (single tube)
Plate current, no signal	80 mA	Typical Operation, Class A, Audio Amplifier (single tube)
Plate current, max signal	95 mA	Typical Operation, Class A, Audio Amplifier (single tube)

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Effective load resistance	1600 ohms	Typical Operation, Class A, Audio Amplifier (single tube)
Distortion at 1 watt into	8 ohms	Typical Operation, Class A, Audio Amplifier (single tube)
Power output at 5% distortion	15 W	Typical Operation, Class A, Audio Amplifier (single tube)
Plate voltage	500 V	Typical Operation, Class AB1, Audio Power Amplifier, Push-Pull
Grid voltage	-45 V	Typical Operation, Class AB1, Audio Power Amplifier, Push-Pull
Plate current, no signal (both tubes)	300 mA	Typical Operation, Class AB1, Audio Power Amplifier, Push-Pull
Load resistance, plate-to-plate	2000 ohms	Typical Operation, Class AB1, Audio Power Amplifier, Push-Pull
Power output	40 W	Typical Operation, Class AB1, Audio Power Amplifier, Push-Pull
obtain base temperature not more than	220 °C	Typical Operation, Class AB1, Audio Power Amplifier, Push-Pull