

ELECTRONIC TUBE REFERENCE

Z303C

Nixie electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
NIXIE

Cold-cathode bidirectional decade counter for counting, stepping, and selector functions rather than passive digit display.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 Nixie
No fixed ratings recorded.
Cold-cathode gas-filled bidirectional decade counter/selector tube with ten main cathodes.

Z303C is a cold-cathode bi-directional decade counter, classified as Nixie for this batch. The supplied datasheet was reviewed for operating conditions, ratings, and display/counting characteristics.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V2

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V2

Section 1 · Nixie

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode maintaining voltage at 300 μ A	186–196 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical anode current	340 μ A	Counting
Maximum voltage between non-anode electrodes	—140 V	—
Maximum main/auxiliary cathode current	—550 μ A	—
Number of main cathodes	10 count	—



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 · Nixie

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PHILIPS [z3	3 C	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
cation and operates at speeds up to	4 kc/s	—
a une vitesse jusqu'a	4 kHz	—
Geschwindigkeiten bis zu	4 kHz	—
an absolute minimum of +	18 V	—
être utilisée jusqu'a un minimum absolu de +	18 V	—
Vo min,	350 V	—
conques (sauf l'anode = max,	140 V	—
v pulse drive at	4 kc/s	—
Vkg impulsions integrees a [1]	4 kHz	—
Vkg impulsions integrees a [2]	35 V	—
grierter Impulssteuerung bei	4 kHz	—
Vko max	20 V	—
Largeur des impulsions min	65 usec	—
Current of main and auxiliary cathodes = max	550 pA	—
PHILIPS (Zz3	3 C	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
sinusoidale ou par impulsions) = max	4 kc/s	—
conseécutifs = min	250 usec	—
Va (Ix [1]	300 pa	—
Va (Ix [2]	186-196 V	—
Impulsion necessaire pour la remise en = min.,	120 V	—
Vy	475 V	—
Vko	12 V	—
Ia	340 pA	—
Vky = Vkg	440 V	—
Amplitude des impulsions	100 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Largeurs des impulsions	75 usec	—
V _{kap} = V _{kp} +	40 V	—
Largeur des impulsions	75 usec	—
0 475V10%	300 V	—
z3	3 C	—
AAAAAA	82 pF	—
Input pulse 2 [1]	30 V	—
Input pulse 2 [2]	108 V	—
Impulsion d'entrée 2 [1]	30 V	—
Impulsion d'entrée 2 [2]	108 V	—
Eingangsimpuls f [1]	30 V	—
Eingangsimpuls f [2]	108 V	—
PHILIPS [z3	3 C	—
\f{}\l = \,1(13 +	10 V	—
2) This resistor is required only wenn the	40 V	—
de	40 V	—
Dieser Widerstand ist nur erforderlich wenn die	40 V	—
Z3	3 C	—