

ELECTRONIC TUBE REFERENCE

E86C

Voltage - Triode (single high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRIODE

Special-quality UHF triode for professional high-frequency service, co-designated with EC806S.

GENERAL CHARACTERISTICS

BASE DESIGNATION	Noval	BASE PINS	9
NOMINAL HEATER	6.3 V / 165 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	2500 Ω
TRANSCONDUCTANCE	0.014 S
AMPLIFICATION FACTOR	68
MAXIMUM PLATE VOLTAGE	440 V
MAXIMUM PLATE DISSIPATION	2.4 W
MAXIMUM CATHODE CURRENT	20 mA
Published Telefunken ratings and characteristics promoted from the supplied source.	

Special-quality UHF triode for professional high-frequency service; equivalent to E86C. This is the E86C co-designation of EC806S.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1955 Lorenz

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

1955 LORENZ

Section 1 · Triode

CONSTRUCTION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ruggedized construction	TRUE	—

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum intended frequency	800 MHz	—



SOURCE OPERATING CONDITIONS

1959 Telefunken

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

1959 TELEFUNKEN

Section 1 · Triode

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	300 mA	—
EquivalentDesignation	EC806S	—
Application	UHF amplifier	—



1963 Siemens

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

1963 SIEMENS

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency limit	800 MHz	Amplifier service

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Noise figure	2 dB	700MHz
Cathode resistance	250 Ohm	—



SOURCE DATA APPENDIX

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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
oscillating mixer (max. frequency)	800 MHz	Published datasheet value
Life	10000 h	Published datasheet value
Heater voltage V_{ϕ}	6.3 V	Published datasheet value
Heater current I_{ϕ}	165 mA	Published datasheet value
Anode current I_a	12 mA	Published datasheet value
Mutual conductance S	14 mA/V	Published datasheet value
Heater current I_t	175 mA	Published datasheet value
Cathode resistor R_y	800 Ω	Published datasheet value
Mutual conductance S	9.5 mA/V	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current $I_a =$	0.1 mA	Published datasheet value
Equivalent noise resistance R_{eq}	250 Ω	Published datasheet value
Frequency =	100 MHz	Published datasheet value
cathode and heater $I_{kt} \max$	10 μA	Published datasheet value
and heater $V_{if} =$	100 V	Published datasheet value
anode and other electrodes $R_{ins} \min$	100 M Ω	Published datasheet value
other electrode =	300 V	Published datasheet value
other electrode =	100 V	Published datasheet value
Grid to cathode C_{gk}	5.6 pF	Published datasheet value
Anode current $I_a =$	12 mA	Published datasheet value
The tube is subjected during	32 h	Published datasheet value
during	10000 h	Published datasheet value
Heater voltage: The average heater voltage should be	6.3 V	Published datasheet value
heater voltage exceeding the range of	6.6 V	Published datasheet value
Anode voltage $V_{ao} \max$	440 V	Published datasheet value
$V_a \max$	250 V	Published datasheet value
Anode dissipation $W_a \max$	2.4 W	Published datasheet value
Grid voltage $-V_g \max.$	50 V	Published datasheet value
Grid dissipation $W_g \max$	20 mW	Published datasheet value
Grid resistor $R_g \max.$	1.2 M Ω	Published datasheet value
Cathode current $I_k \max$	20 mA	Published datasheet value
Voltage between cathode and heater $V_{it} \max.$	100 V	Published datasheet value
Frequency (as amplifier) f up to	800 MHz	Published datasheet value
Anode supply voltage V_{ha}	175 V	Published datasheet value
Cathode resistor R_k	125 Ω	Published datasheet value
Anode current I_y	12 mA	Published datasheet value
Anode supply voltage V_{ba}	220 V	Published datasheet value
Grid current I_g	50 mA	Published datasheet value

TUBE TINKER

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