



ELECTRONIC TUBE REFERENCE

6173

Diode (NOT rectifier) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

DIODE

Pencil-type high-perveance UHF diode designed for pulse detection and pulse-power measurement at frequencies extending to approximately 3.3 GHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6173	BASE PINS	—
NOMINAL HEATER	6.3 V / 135 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Diode	
PEAK INVERSE VOLTAGE	1000 V
NOMINAL OUTPUT CURRENT	5.5 mA
PEAK FORWARD CURRENT	1 A
MAXIMUM HEATER-CATHODE VOLTAGE	90 V
<i>Published ratings and characteristics promoted from approved datasheet.</i>	

Pencil-type high-perveance UHF diode for pulse detection and pulse-power measurement at frequencies up to approximately 3.3 GHz.



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 · Diode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	6.3 V	Published nominal value
Heater or filament current	135 mA	Published nominal value
Maximum operating frequency	3300 MHz	Pulse detection/power measurement

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak pulse plate voltage	150 V	Published
Peak pulse plate current	1 A	Published
Average plate current	1 mA	Published

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-to-cathode capacitance	1.1 pF	Approximate



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC output current	5.5 mA	HalfWave
Peak inverse voltage	375 V	HalfWave
Peak current	50 mA	HalfWave



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	135 mA	Nominal
Maximum peak inverse plate voltage	1000 V	Promoted published value
Maximum heater-cathode voltage	90 V	Promoted published value
PEAK INVERSE PLATE VOLTAGE	1000 V	Maximum Ratings, Absolute Values:
PEAK PULSE PLATE VOLTAGE	150 V	Maximum Ratings, Absolute Values:
PEAK PULSE PLATE CURRENT	1 mA	Maximum Ratings, Absolute Values:
DC PLATE CURRENT	1 mA	Maximum Ratings, Absolute Values:
Neater negative with respect to cathode	90 V	Maximum Ratings, Absolute Values:
Heater positive with respect to cathode	90 V	Maximum Ratings, Absolute Values:
SEAL TEMPERATURE (Plate or cathode)	175 mA	Maximum Ratings, Absolute Values:
PEAK INVERSE PLATE VOLTAGE	375 V	Maximum Ratings, Absolute Values:
PEAK PLATE CURRENT.	50 mA	Maximum Ratings, Absolute Values:

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC OUTPUT CURRENT	5.5 mA	Maximum Ratings, Absolute Values:
Heater negative with respect to cathode	90 V	Maximum Ratings, Absolute Values:
minimum of	60 V	Maximum Ratings, Absolute Values:
Heater Current	143 mA	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
PEAK INVERSE PLATE VOLTAGE	1000 V	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
PEAK PULSE PLATE VOLTAGE	150 V	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
PEAK PULSE PLATE CURRENT	1 mA	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
AVERAGE PLATE CURRENT	1 mA	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
Heater negative with respect to cathode	90 V	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
Heater positive with respect to cathode	90 V	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
SEAL TEMPERATURE (Plate or Cathode)	175 mA	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
PEAK PLATE CURRENT	50 mA	Maximum Ratings, Absolute Values:
SEAL TEMPERATJRE (Plate or Cathode]	175 mA	Maximum Ratings, Absolute Values:
Heater Current	143 mA	CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN
Note	6.3 V	CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Nominal/DC output current	5.5 mA	Promoted published value
Peak forward/plate current	1 A	Promoted published value
Voltage	10 V	—
Current	135 A	—
Resonant Frequency (Approx)	1600 MHz	—
Tube Voltage Drop	15 V	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Note	50 A	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
Voltage	10 V	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
Current	135 A	CHARACTERISTICS RANGE VALUES FDR EQUIPMENT DESIGN
Tube Voltage Drop	15 V	CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN
Note	5 A	CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN
d[voltage.	7 V	CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN
al lowable peak-pulse plate current is	670 mA	CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN