ELECTRONIC TUBE REFERENCE

53AVP

Specialized - Photo Tube electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PHOTOMULTIPLIER

Amperex photomultiplier tube designed for sensitive optical measurement. Its internal multiplier chain provides substantial electron gain from weak photocathode signals for low-light detection applications.

General characteristics

BASE DESIGNATION	DIHEPTAL 14-p	**BASE PINS**	14
NOMINAL HEATER	– / –	**PARALLEL HEATER**	– / –
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Photomultiplier

MAXIMUM PLATE DISSIPATION	0.5 W

Published ratings and operating/characteristic data reviewed.

53AVP is listed in the supplied Amperex material as a photomultiplier tube. Published ratings and operating characteristics were captured from the supplied table.

SOURCE OPERATING CONDITIONS

1963 Amperex Condensed

SOURCE PDF

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

1963 AMPEREX CONDENSED

Section 1 · Photomultiplier

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum useful photocathode diameter	**4 mm**	Photomultiplier
Number of dynodes	**11**	Photomultiplier
Maximum spectral response	**4200 angstrom**	Photomultiplier
Minimum photocathode sensitivity	**25 uA/lm**	Photomultiplier
Average photocathode sensitivity	**50 uA/lm**	Photomultiplier
Minimum anode sensitivity	**60 A/lm**	Photomultiplier
Average anode sensitivity	**500 A/lm**	Photomultiplier
Minimum sensitivity	**60 A/lm**	Photomultiplier
Luminous-flux linearity lower ratio	**30**	Photomultiplier
Luminous-flux linearity upper ratio	**100**	Photomultiplier

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Supply voltage	**1800 V**	Photomultiplier
Maximum direct dark current	**50 nA**	Photomultiplier
Maximum anode dissipation	**0.5 W**	Photomultiplier

SOURCE DATA APPENDIX

1999 Philips 0-D

SOURCE PDF

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

1999 PHILIPS 0-D

Section 1 · Photomultiplier

CONSTRUCTION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Multiplier stages	**11**	—

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum useful photocathode diameter	**44 mm**	—
Wavelength at maximum response	**4200 angstrom**	—
Linear-response anode pulse current	**30 mA**	CircuitFigure1
Linear-response anode pulse current	**100 mA**	CircuitFigure2
Typical anode sensitivity	**500 A/lm**	—
Minimum anode sensitivity	**60 A/lm**	—
Maximum anode dark current	**0.00005 mA**	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum total supply voltage	**1800 V**	—
Maximum anode current	**1 mA**	—
Maximum anode dissipation	**0.5 W**	—
Minimum cathode to first dynode voltage	**180 V**	—
Minimum consecutive dynode voltage	**80 V**	—

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode to final dynode capacitance	**3 pF**	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode to all other electrodes capacitance	**5 pF**	—

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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