TELEVISION PICTURE TUBE

DESCRIPTION

The 5TP4 is a five-inch electrostatic-focus and magnetic-deflection projection picture tube for television applications. It is designed for use with a reflective optical system. Features of this tube are a reflective metal-backed screen which gives improved brightness, picture contrast and detail, and an external conductive coating on the neck which acts as a corona shield when grounded.

TECHNICAL INFORMATION

GENERAL

Electrical

Heater voltage	6.3	volts
Heater current	0.6 ± 10%	ampere
Focusing method—electrostatic		
Deflecting method—magnetic		
Deflecting angle	50 max	degrees
Phosphor—P4		
Fluorescence—white		
Persistence—medium		
Direct interelectrode capacitances, approximate		
Cathode to all other electrodes	5	uuf
Grid No. 1 to all other electrodes	7	uuf
External conductive coating to anode capacitance, approximate	300	uuf

GE Electronic TUBE

GENERAL ELECTRIC

Supersedes ET-T-419A dated 10-47

TECHNICAL INFORMATION (CONT'D)

Mechanical

Over-all length . . . . . $11\frac{3}{4} \pm \frac{3}{8}$ inches
Greatest bulb diameter . . . . . $5 \pm \frac{1}{8}$ inches
Minimum useful screen diameter . . . . . $4\frac{1}{2}$ inches
Anode contact—recessed small-cavity cap, J1-21
Base—small-shell duodecal 7-pin, B7-51
Basing—12C
Base pin connections

Pin 1—heater	Pin 7 —internal connection
Pin 2—grid No. 1	Pin 10—grid No. 2
Pin 6—anode No. 1	Pin 11—cathode
	Pin 12—heater

Anode contact alignment
Anode No. 2 contact aligns with vacant pin No. 3 position ±30 degrees

MAXIMUM RATINGS Design Center Values

Anode No. 2 voltage	27000 max	volts d-c
Anode No. 1 voltage	6000 max	volts d-c
Grid No. 2 voltage	350 max	volts d-c
Grid No. 1 voltage		
Negative-bias value	150 max	volts d-c
Positive-bias value	0 max	volt d-c
Positive-peak value	2 max	volts
Peak heater-cathode voltage*		
Heater negative with respect to cathode		
During warm-up period not to exceed 15 seconds	410 max	volts d-c
After equipment warm-up period	175 max	volts d-c
Heater positive with respect to cathode	10 max	volts d-c

RECOMMENDED OPERATING CONDITIONS

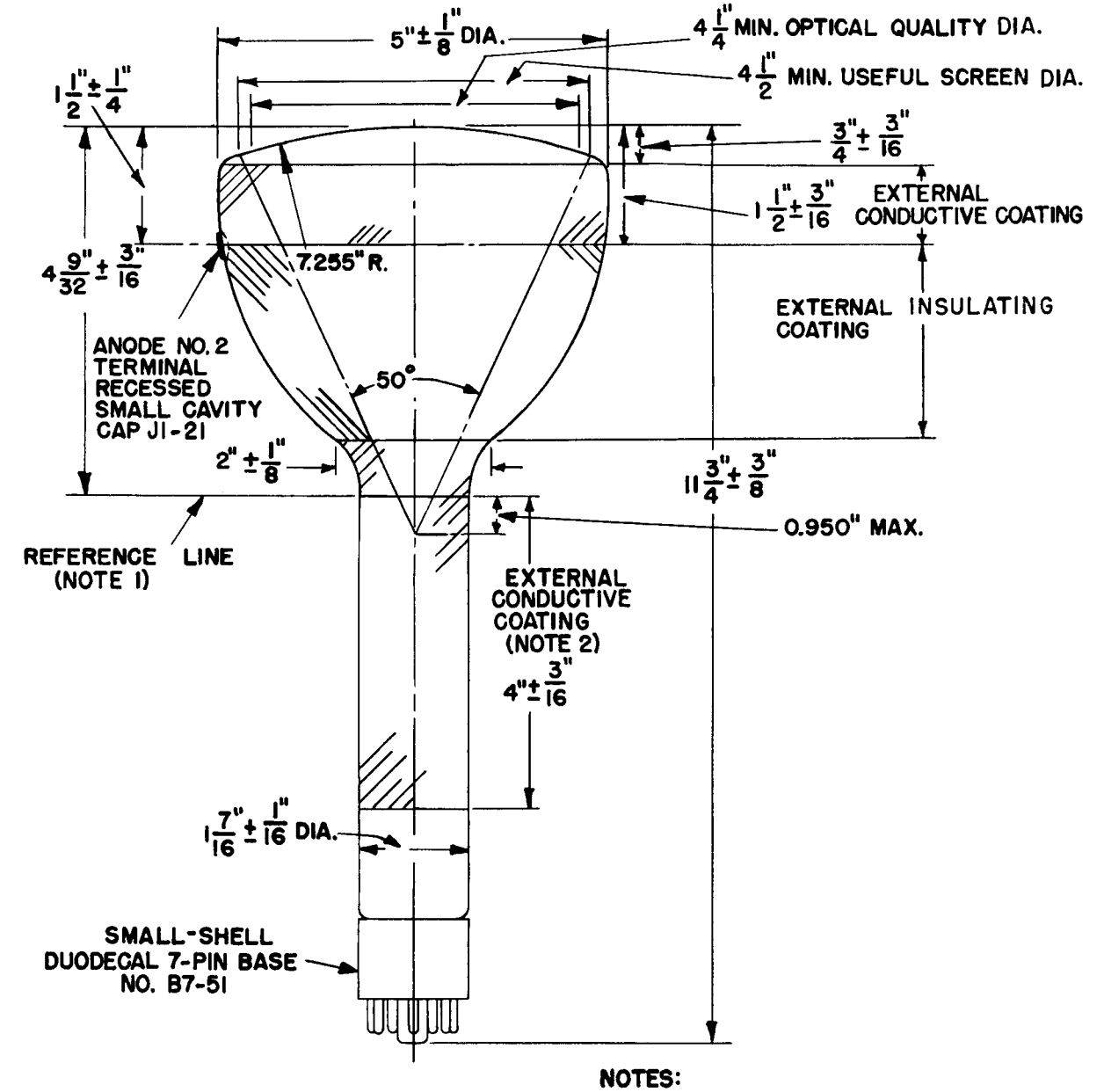
Anode No. 2 voltage	27000	volts
Anode No. 1 voltage	4320 to 5400	volts
Grid No. 2 voltage	200	volts
Grid No. 1 voltage**	−42 to −98	volts
Anode No. 2 current	200	microamperes
Anode No. 1 current	75 max	microamperes
Grid No. 2 current	−15 to +15 max	microamperes

MAXIMUM CIRCUIT VALUES

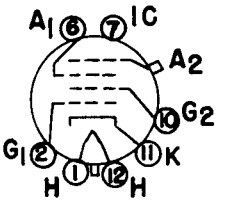
Grid No. 1 circuit resistance	1.5 max	megohms

*Cathode should be returned to one side or to the midtap of the heater transformer winding.
**For visual extinction of undeflected focused spot.

OUTLINE
5TP4



ANODE-NO. 2 TERMINAL ALIGNS WITH VACANT PIN-NO. 3 POSITION ± 30°



BASING DIAGRAM

NOTES:

1. REFERENCE LINE IS DETERMINED BY THE PLANE OF THE UPPER EDGE OF THE REFERENCE LINE GAGE (RTMA NO. 112) WHEN THE GAGE IS RESTING ON THE GLASS CONE.
2. EXTERNAL CONDUCTIVE COATING MUST BE GROUNDED.

N-20103AZ

1-26-51