

MATSUMITA ELECTRONICS CORPORATION
TAKATSUKI JAPAN



E I A

Type 27WP4

REGISTRATION DATA

Date issued March 18, 1959

National 27WP4 is a direct view picture tube with 27" diagonal rectangular filterglass screen and with external conductive coating.

The tube has electrostatic focusing, magnetic deflection and incorporates an iontrap.

This tube has an aluminized P4 screen with medium persistence and excellent brightness.

HEATER DATA

Heater voltage 6.3 volts
Heater current at 6.3 volts 0.3 amp. $\pm 10\%$

DIRECT INTERELECTRODE CAPACITANCES

Grid No. 1 to all other electrodes $7 \mu\mu F$
Cathode to all other electrodes $4 \mu\mu F$
External conductive coating to grids No. 4 and 6
Max. $2000 \mu\mu F$
Min. $750 \mu\mu F$



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SCREEN

Phosphor number (JETEC registration)	P. 4
Fluorescent color	White
Phosphorescent color	White
persistence	Medium
Light transmission at center	68 %
Usefull length of diagonal	Min. 25 $\frac{3}{4}$ "
Useful width	Min. 24"
Useful height	Min. 18 $\frac{1}{2}$ "

FOCUSING METHOD Electrostatic

DEFLECTION METHOD Double magnetic

Deflection angle, horizontal	85°
Deflection angle, diagonal	90°

MOUNTING POSITION Any

RATINGS (Design Center Values)

Grids No. 4 and 6 voltage	20000 max. volts D. C.
Positive grids No. 3 and 5 voltage	500 max. volts D. C.
Negative grids No. 3 and 5 voltage	-500 max. volts D. C.
Grid No. 2 voltage	500 max. volts D. C.
Negative grid No. 1 voltage	125 max. volts D. C.
Positive grid No. 1 voltage	0 max. volts D. C.
Positive grid No. 1 peak voltage	2 max. volts
Heater to cathode voltage	
Heater positive with respect to cathode	125 max. volts
Heater negative with respect to cathode	200 max. volts
Peak value during a warm-up period not exceeding 45 sec.: heater negative	410 max. volts

MAXIMUM CIRCUIT VALUES

Grid No. 1 circuit resistance	1.5 max. megohms
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TYPICAL OPERATING CONDITIONS

Grid No. 4 and 6 voltage	18000 volts D. C.
Grid No. 3 and 5 voltage	-60 to 350 volts D. C.
Grid No. 2 voltage	300 volts D. C.
Grid No. 1 voltage for visual extinction of focused raster	-40 to -80 volts D. C.

MECHANICAL DATA

Overall length	22 3/32" $\pm$ 3/8"
Greatest dimensions of bulb	
Diagonal	26 13/16" $\pm$ 1/8"
Width	25 9/32" $\pm$ 1/8"
Height	20 7/32" $\pm$ 1/8"
Neck length	6 1/2"
Bulb number (ASA designation)	J 171
Bulb contact (JETEC designation)	J 1-21
Base	Small Shell Duodecal 7-Pin
Basing	—
Bulb contact alignment, contact aligns with pin position 6	$\pm$ 15°
Pin connections	

Pin No. 1 - Heater

Pin No. 2 - Grid No. 1

Pin No. 6 - Grid No. 3 and 5

Pin No. 7 - Internal con. Do not use

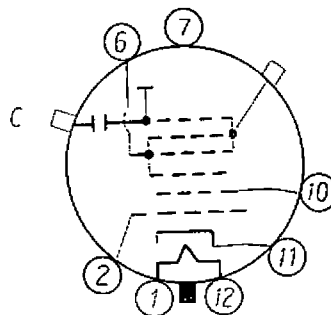
Bulb contact - Grid No. 4 and 6, Collector

C - External Conductive Coating

Pin No. 10 - Grid No. 2

Pin No. 11 - Cathode

Pin No. 12 - Heater

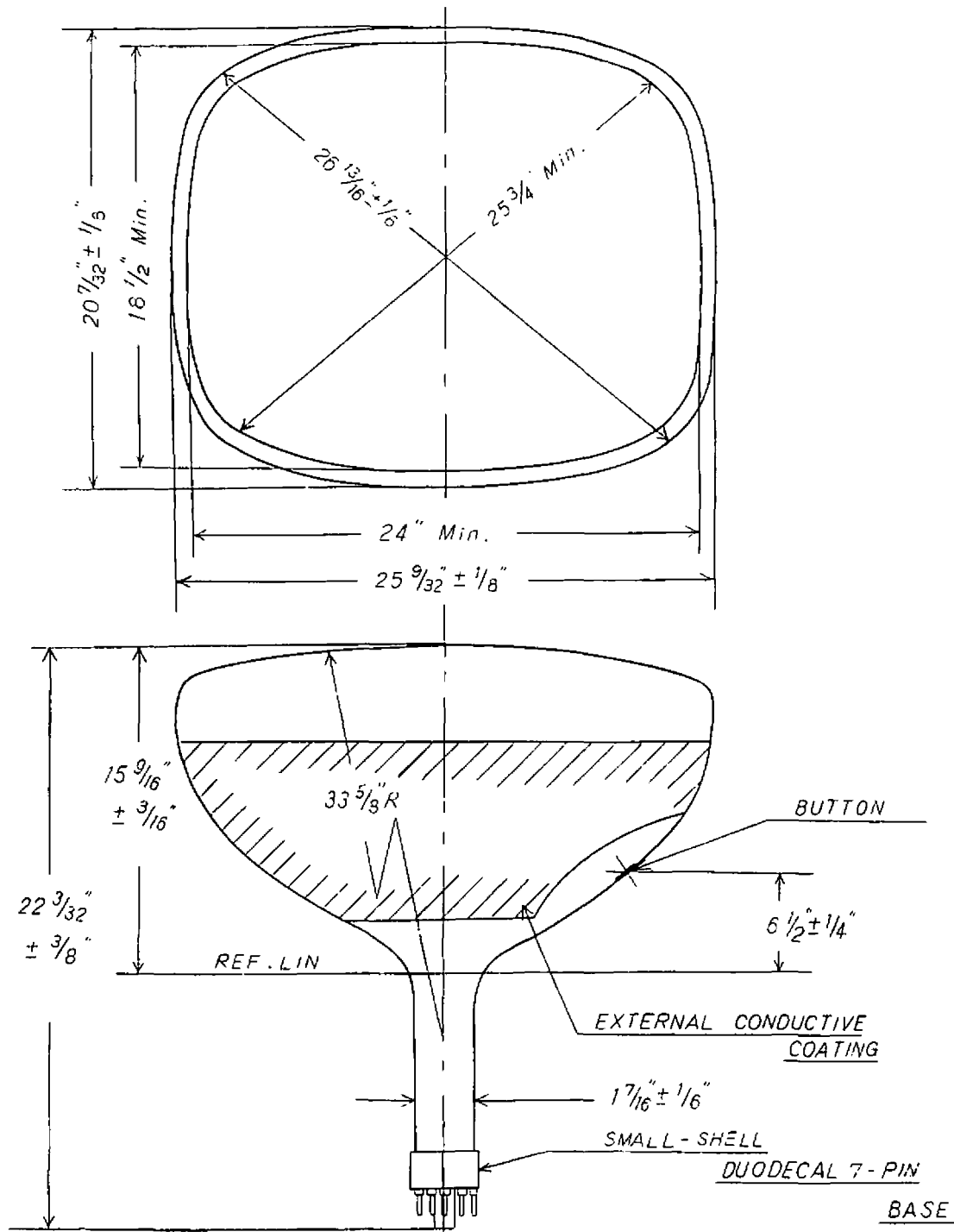


BOTTOM VIEW
12AJ



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