



502-A

502-A GAS THYRATRON

NEGATIVE-CONTROL TETRODE TYPE WITH METAL SHELL

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

	Min.	Av.	Max.	
Voltage.	5.7	6.3	7	ac or dc volts
Current at 6.3 volts	-	0.6	0.66	amp

Cathode:

Minimum heating time				
prior to tube conduction	10			sec

Direct Interelectrode Capacitances:

Grid No.1 to anode	0.2			μf
------------------------------	-----	--	--	---------------

Grid No.1 to cathode & shell, grid				
------------------------------------	--	--	--	--

No.2, and heater	2.5			μf
----------------------------	-----	--	--	---------------

Ionization Time (Approx.).	0.5			μsec
------------------------------------	-----	--	--	-----------------

Deionization Time (Approx.):

For conditions: dc anode ma = 100, grid-No.1-circuit resistor (ohms) = 1000, and dc grid-No.1 supply volts = -250	10			μsec
--	----	--	--	-----------------

For conditions: dc anode ma = 100, grid-No.1-circuit resistor (ohms) = 1000, and dc grid-No.1 supply volts = -15	150			μsec
---	-----	--	--	-----------------

Maximum Critical Grid-No.1 Current:

For conditions: anode volts (rms) = 460, and dc grid-No.1 volts ad- justed to cutoff	2			μamp
--	---	--	--	-----------------

Anode Voltage Drop	8			volts
------------------------------	---	--	--	-------

Mechanical:

Mounting Position	Any			
-----------------------------	-----	--	--	--

Maximum Overall Length	2-5/8"			
----------------------------------	--------	--	--	--

Seated Length.	1-31/32" $\pm$ 3/32"			
------------------------	----------------------	--	--	--

Maximum Diameter	1-5/16"			
----------------------------	---------	--	--	--

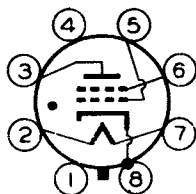
Weight (Approx.)	2 oz			
----------------------------	------	--	--	--

Bulb	Metal Shell MT8G			
----------------	------------------	--	--	--

Base	Small-Wafer Octal 8-Pin (JETEC No. B8-21)			
----------------	---	--	--	--

BOTTOM VIEW

- Pin 1 - No Connection
Pin 2 - Heater
Pin 3 - Anode
Pin 4 - No Connection



- Pin 5 - Grid No.1
Pin 6 - Grid No.2
Pin 7 - Heater
Pin 8 - Cathode, Shell

RELAY and GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward.	180 max.	650 max.	volts
Inverse.	360 max.	1300 max.	volts

← Indicates a change.

MAY 1, 1955

TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA

502-A



502-A

GAS THYRATRON

GRID-No.2 (SHIELD-GRID)

VOLTAGE:

Peak, before tube			
conduction	-100 max.	-100 max.	volts
Average [■] , during tube			
conduction	-5 max.	-5 max.	volts

GRID-No.1 (CONTROL-GRID)

VOLTAGE:

Peak, before tube			
conduction	-250 max.	-250 max.	volts
Average [■] , during tube			
conduction	-10 max.	-10 max.	volts

CATHODE CURRENT:

Peak	1.0 max.	1.0 max.	amp
Average [●]	0.2 max.	0.1 max.	amp
Fault, for duration of			
0.1 second max.	10 max.	10 max.	amp

GRID-No.2 CURRENT:

Average [■]	+0.01 max.	+0.01 max.	amp
--------------------------------	------------	------------	-----

GRID-No.1 CURRENT:

Average [■]	+0.01 max.	+0.01 max.	amp
--------------------------------	------------	------------	-----

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with			
respect to cathode . . .	100 max.	100 max.	volts
Heater positive with			
respect to cathode . . .	25 max.	25 max.	volts

AMBIENT-TEMPERATURE RANGE. .	-55 to +90	-55 to +90	°C
------------------------------	------------	------------	----

■ Averaged over 1 cycle.

● Averaged over any interval of 30 seconds maximum.

For Dimensional Outline, see GENERAL SECTION

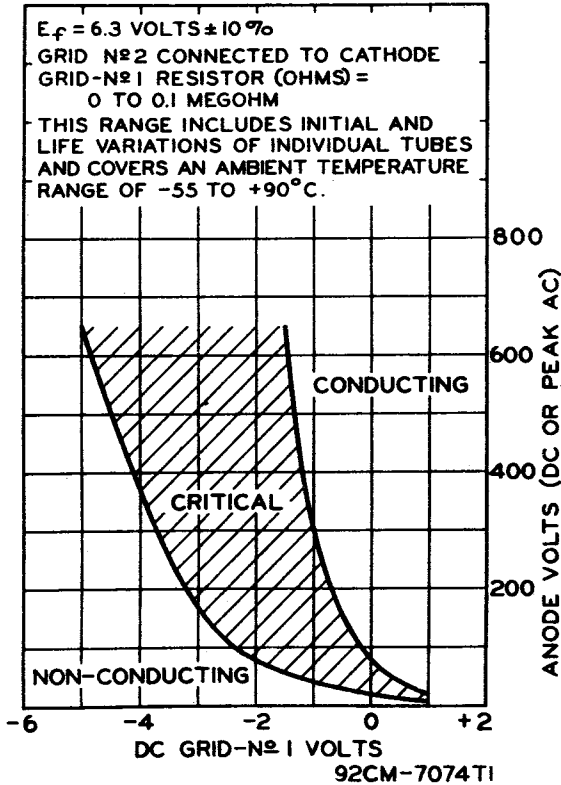


502-A

GAS THYRATRON

502-A

OPERATIONAL RANGE OF CRITICAL GRID-N^o 1 VOLTAGE



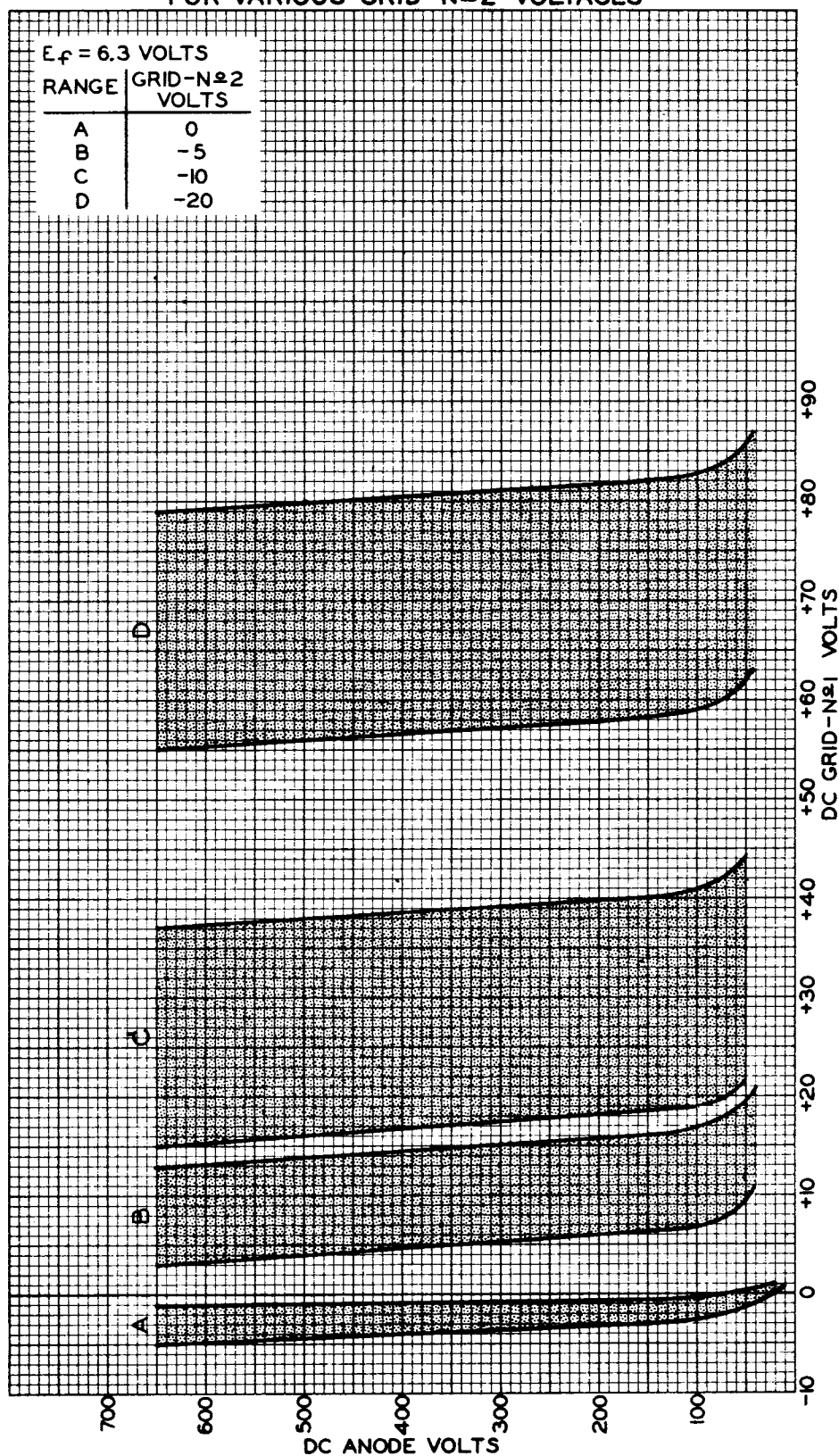
502-A



502-A
OPERATIONAL RANGES
OF CRITICAL GRID-№1 VOLTAGE
FOR VARIOUS GRID-№2 VOLTAGES

 $E_f = 6.3$ VOLTS

RANGE	GRID-№2 VOLTS
A	0
B	-5
C	-10
D	-20



APRIL 26, 1955

TUBE DIVISION

92CM-8607

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



502-A

502-A

CHARACTERISTIC CURVES

