

# RADIO MANUFACTURERS ASSOCIATION ENGINEERING DEPARTMENT

RMA DATA BUREAU  
90 West Street  
New York 6, N. Y.

sponsor:  
Amperex Electronic Corp.

Release No. 657

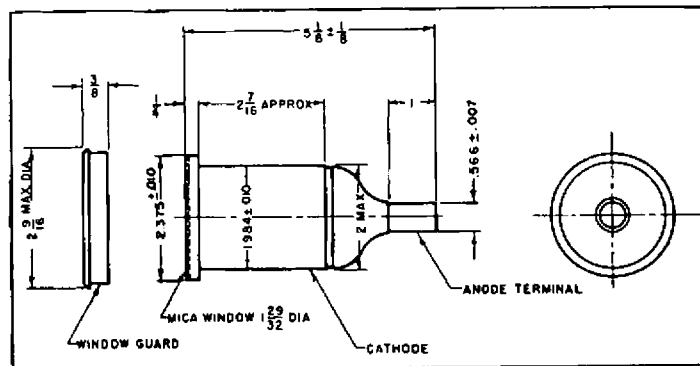
April 30, 1948

## BETA COUNTER TUBE

# 1B77

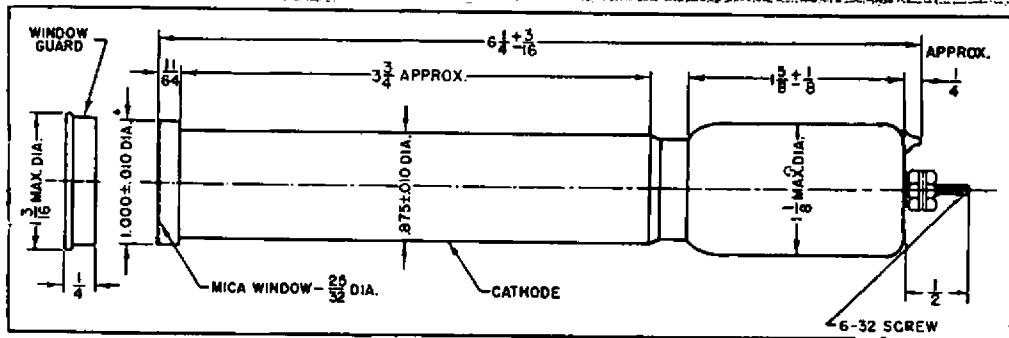
Filling .....	Argon + quenching admixture
Operating Temperature	
Range .....	-70°C to +100°C
Operating Voltage .....	1200 volts D.C.
Plateau .....	in excess of 300 volts
Slope of plateau .....	2% to 5% per 100 volts
Capacity at terminals .....	1.0 mml
Cosmic Ray Efficiency .....	
Dead time .....	200 microseconds
Background-unshielded .....	250 counts per minute
Life expectancy in counts .....	unlimited by use
Average Mica Window	
Thickness .....	.0008 in. = 5.6mg/cm <sup>2</sup> = 20.32 microns
Effective Diameter of Mica Window .....	1 29/32"
Cathode Material .....	Stainless Steel
Effective Cathode	
Dimensions .....	2 11/16" long x 2" O.D. x 5/64" wall

Mica windows 5.6mg/cm<sup>2</sup> thick will pass all beta radiation of energy in excess of 57 KEV. when the source is in close proximity to the window.

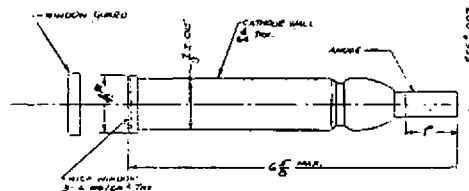


March 26th, 1949

<u>Tube Type</u>	<u>Item</u>	<u>As Registered</u>	<u>As Proposed</u>
1B69	Plateau Slope of Plateau Dead Time	in excess of 300 Volts 2% to 5% per 100 volts 200 microseconds	in excess of 200 volts 5% per 100 volts max. approx. 70 microseconds
1B73	Slope of Plateau Dead Time	2% to 5% per 100 volts 200 microseconds	5% per 100 volts max. approx. 100 microseconds
1B75	Oper. Temp. range Slope of Plateau	- 70°C to + 100°C 2% to 5% per 100 volts	- 55°C to +75°C 10% per 100 volts max.
1B76	Oper. Temp. range Operating Voltage Plateau Slope of Plateau	- 70°C to + 100°C 450 Volts D.C. in excess of 100 volts 5% per 100 Volts	- 55°C to + 75°C 700 Volts D.C. in excess of 200 volts 10% per 100 volts max.
1B77	Oper. Temp. range Slope of Plateau Dead time	- 70°C to + 100°C 2% to 5% per 100 volts 200 microseconds	- 55°C to + 75°C 10% per 100 volts max. approx. 320 microseconds
1B78	Oper. Temp Range Slope of Plateau Dead Time Outline drawing	- 70°C to + 100°C 5% per 100 volts 200 microseconds see attached sheet	- 55°C to + 75°C 10% per 100 volts max. approx 100 microseconds
1B80	Oper. Temp. range Operating voltage Plateau Slope of Plateau Dead time Outline drawing	- 70°C to + 100°C 450 volts D.C. in excess of 100 volts 5% per 100 volts 200 microseconds see attached sheet	- 55°C to + 75°C 700 Volts D.C. in excess of 200 volts 10% per 100 volts max. approx. 180 microseconds
1B81	Oper. Temp. Range Slope of Plateau	- 70°C to + 100°C 2% to 5% per 100 Volts	- 55°C to + 75°C 10% per 100 volts max.



OLD TYPE 1B78 AND 1B80



(NEW)

(1B78, 1B80)