

RADIO MANUFACTURERS ASSOCIATION ENGINEERING DEPARTMENT

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

Release No. 657

April 30, 1948

COUNTER TUBES
1B80, 1B81

sponsor:
Amperex Electronic Corp.

1B80

Filling	Neon + quenching admixture
Operating Temperature Range	-70°C to +100°C
Operating Voltage	450 volts D.C.
Plateau	in excess of 100 volts
Slope of plateau	5% per 100 volts
Capacity at terminals	2.4 mml
Cosmic Ray Efficiency	greater than 80%
Dead time	200 microseconds
Background-unshielded	62 counts per minute
Life expectancy in counts....	unlimited by use
Average Mica Window Thickness0005 in. = 3.5mg/cm ² = 12.70 microns
Effective dia. of Mica Window	25/32"
Cathode Material	Stainless Steel
Effective Cathode Dimensions	4" long x 7/8" O.D. x .047" wall

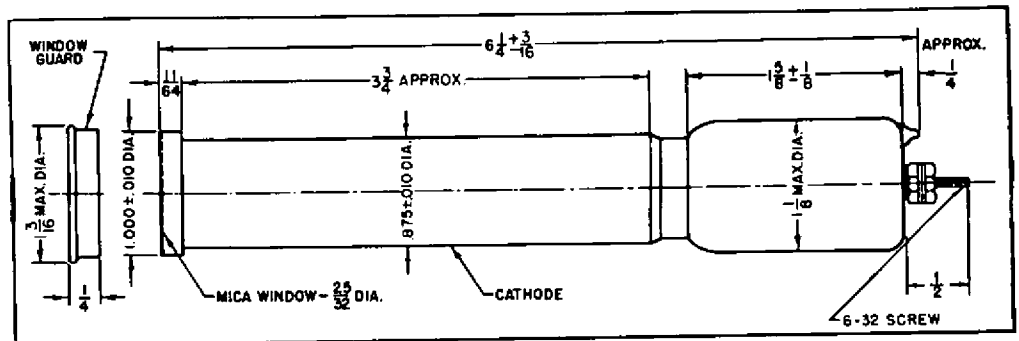
Mica windows 3.5mg/cm² thick will pass all beta radiation of energy in excess of 43 KEV. when the source is in close proximity to the window.

1B81

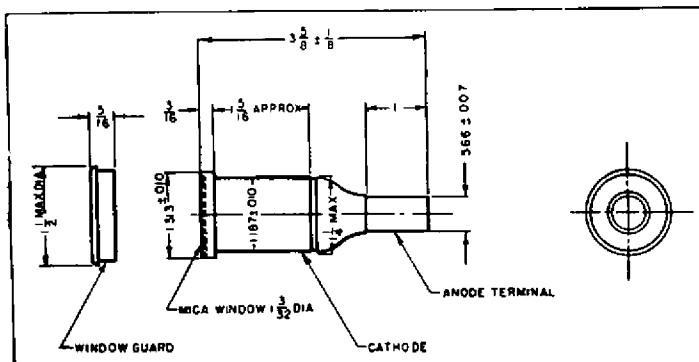
Filling	Argon + quenching admixture
Operating Temperature Range	-70°C to +100°C
Operating Voltage	1200 volts D.C.
Plateau	in excess of 300 volts
Slope of plateau	2% to 5% per 100 volts
Capacity at terminals	1.0 ramf
Cosmic Ray Efficiency
Dead time	200 microseconds
Background-unshielded	50 counts per minute
Life expectancy in counts....	unlimited by use
Average Mica Window Thickness0002 in. = 1.4mg/cm ² = 5.08 microns
Effective Diameter of Mica Window	1 3/32"
Cathode Material	Stainless Steel
Effective Cathode Dimensions	1 1/2" long x 1 3/16" O.D. x 3/32" wall

For alpha radiation, a mica window thickness of 1.4mg/cm² has the equivalent stopping power of one centimeter of air.
Mica windows 1.4mg/cm² thick will pass all beta radiation of energy in excess of 25 KEV. when the source is in close proximity to the window.

1B80.....

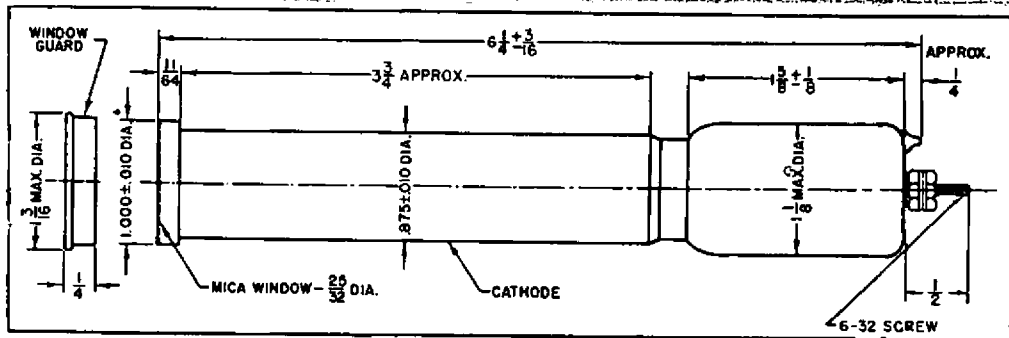


1B81.....

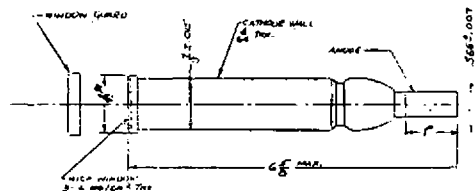


March 26th, 1949

<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)