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Amperex[®] ELECTRONIC CORPORATION
230 DUFFY AVENUE, HICKSVILLE, L. I., N. Y.

TUBE TYPE
8463

The Amperex 8463 is an instant heating RF power pentode for use as a power amplifier or frequency doubler in mobile equipment up to 200 Mc.

GENERAL CHARACTERISTICS

MECHANICAL

Mounting Position	any
Dimensions	see outline drawing
Base	9 pin
Bulb	T 6-1/2

ELECTRICAL

Filament Voltage ¹	1.1 volts $\pm$ 15%
Filament Current	1.05 amps
Warm Up Time (Power Output = 70% of full load)	0.5 sec.
Amplification Factor (Grid No. 1 to Grid No. 2) at $I_b = 30$ ma	8.0
Transconductance at $I_b = 30$ ma	4500 μ mhos
Direct Interelectrode Capacitances (unshielded)	
Feedback	0.15 pf
Input	6.5 pf
Output	3.8 pf
Modulation Hum ²	60 db down relative to carrier

¹ The filament supply may be DC or 50 to 60 cps AC (sinusoidal or square wave). Sinusoidal supply voltages within the frequency range of 200 to 2000 cps should not be used.

² Center tapped filament transformer on a single stage.

Amperex

Class C Telegraphy
Maximum Ratings, Absolute Values

Frequency	50	175 Mc
DC Plate Voltage	300	300 volts
Plate Dissipation	5.0	5.0 watts
Cathode Current	50	50 ma
Screen Grid Voltage	300	300 volts
Screen Grid Dissipation	1.0	1.0 watt
Negative Control Grid Voltage	100	100 volts
DC Plate Current	40	40 ma
DC Plate Input Power	12	9 watts

Class C Telegraphy
Typical Operation

Frequency	50	50	50	175	175	175 Mc
DC Plate Voltage	300	250	200	300	250	200 volts
DC Grid No. 2 Voltage	150	150	150	150	150	150 volts
DC Grid No. 1 Voltage	-35	-35	-35	-35	-35	-35 volts
Peak Grid No. 1 Voltage	49.5	52	53	--	--	-- volts
DC Plate Current	40	40	40	30	35	40 ma
DC Grid No. 2 Current	3.5	5	6	2	2.5	3 ma
DC Grid No. 1 Current	0.85	0.95	1.05	0.07	0.2	0.5 ma
DC Plate Input Power	12	10	8	9	8.75	8 watts
Plate Dissipation	3.6	3	2.5	4.6	4.2	3.5 watts
Grid No. 2 Dissipation	0.53	0.75	0.9	0.3	0.38	0.45 watts
Useful Output Power to Load	8	6.7	5.2	3.3	3.6	3.6 watts
Driving Power	0.5	--	--	--	1.0	-- watts

Class C Frequency Doubler
Maximum Ratings, Absolute Values

Frequency	50	175 Mc
DC Plate Voltage	300	300 volts
DC Plate Input Power	10	7.5 watts
Plate Dissipation	5	5 watts
DC Plate Current	35	35 ma
DC Grid No. 2 Voltage	300	300 volts
Grid No. 2 Dissipation	1.0	1.0 watt
DC Grid No. 1 Voltage	-100	-100 volts

Class C Frequency Doubler
Typical Operation
(Frequency between 25/50 Mc)

DC Plate Voltage	300	250	200 volts
DC Grid No. 2 Voltage	150	150	150 volts
DC Grid No. 1 Voltage	-90	-90	-90 volts
Peak Grid No. 1 Voltage	105	106	106.5 volts
DC Plate Current	30	30	30 ma
DC Grid No. 2 Current	2.6	3.2	3.6 ma
DC Grid No. 1 Current	0.73	0.8	0.85 ma
DC Plate Input Power	9.0	7.5	6.0 watts
Plate Dissipation	3.5	2.7	2.3 watts
Grid No. 2 Dissipation	0.56	0.48	0.54 watts
Useful Output Power to Load	5.15	4.45	3.5 watts
Driving Power	1.0	--	-- watts

Class C Frequency Doubler
Typical Operation
(Frequency between 87.5/175Mc)

DC Plate Voltage	300	250	200 volts
DC Grid No. 2 Voltage	150	150	150 volts
DC Grid No. 1 Voltage	-90	-90	-90 volts
DC Plate Current	25	30	35 ma
DC Grid No. 2 Current	1.22	1.62	1.85 ma
DC Grid No. 1 Current	0.34	0.6	0.66 ma
DC Plate Input Power	7.5	7.5	7.0 watts
Plate Dissipation	4.4	4.5	3.6 watts
Grid No. 2 Dissipation	0.18	0.25	0.28 watts
Useful Output Power to Load	2.1	2.4	2.55 watts
Driving Power	--	--	1.5 watts

Class C Frequency Tripler
Maximum Ratings, Absolute Values

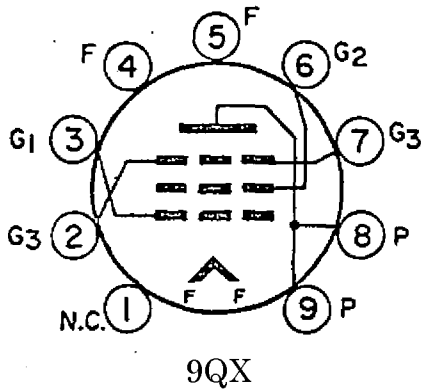
Frequency	50	175 Mc
DC Plate Voltage	300	300 volts
DC Plate Input Power	7.5	6 watts
Plate Dissipation	5	5 watts
DC Plate Current	30	30 ma
DC Grid No. 2 Voltage	300	300 volts
Grid No. 2 Dissipation	1	1 watt
DC Grid No. 1 Voltage	-100	-100 volts

Class C Frequency Tripler
Typical Operation
(Frequency between 16.3/50 Mc)

DC Plate Voltage	250	200	150 volts
DC Grid No. 2 Voltage	150	150	150 volts
DC Grid No. 1 Voltage	-100	-100	-100 volts
Peak Grid No. 1 Voltage	117	117.5	118 volts
DC Plate Current	30	30	30 ma
DC Grid No. 2 Current	2.3	2.45	2.8 ma
DC Grid No. 1 Current	0.7	0.72	0.75 ma
DC Plate Input Power	7.5	6.0	4.5 watts
Plate Dissipation	3.9	3.0	2.3 watts
Grid No. 2 Dissipation	0.4	0.4	0.42 watts
Useful Output Power to Load	3.2	2.7	2.0 watts

Class C Frequency Tripler
Typical Operation
(Frequency between 58.3/175 Mc)

DC Plate Voltage	250	200	150 volts
DC Grid No. 2 Voltage	150	150	150 volts
DC Grid No. 1 Voltage	-100	-100	-100 volts
DC Plate Current	20	30	30 ma
DC Grid No. 2 Current	1.1	1.7	1.9 ma
DC Grid No. 1 Current	0.18	0.6	0.7 ma
DC Plate Input Power	5	6	4.5 watts
Plate Dissipation	3.2	3.7	2.8 watts
Grid No. 2 Dissipation	0.16	0.25	0.3 watt
Useful Output Power to Load	1.0	1.4	1.1 watts
Driving Power	--	1.0	-- watt



PIN CONNECTIONS

- 1 - NO CONNECTION
- 2 - GRID NO.3
- 3 - GRID NO.1
- 4 - FILAMENT
- 5 - FILAMENT
- 6 - GRID NO.2
- 7 - GRID NO.3
- 8 - PLATE
- 9 - PLATE

