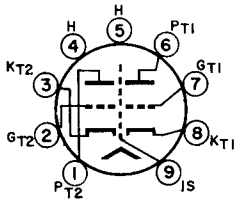
AMPEREX TUBE TYPE 6GM8/ECC86

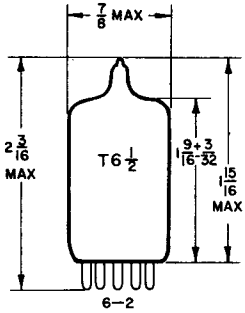
TENTATIVE DATA

The Amperex 6GM8/ECC86 is a frame grid, twin triode designed for low supply voltage applications. It is especially suitable for instrumentation and industrial applications as a direct-coupled wide band amplifier and for automobile radio sets as an RF amplifier and self-oscillating mixer. The tube can be directly operated from a storage battery.



PIN CONNECTIONS

1 – PLATE, TRIODE NO.2
2 – GRID , TRIODE NO.2
3 – CATHODE , TRIODE NO.2
4 – HEATER
5 – HEATER
6 – PLATE, TRIODE NO.1
7 – GRID , TRIODE NO.1
8 – CATHODE, TRIODE NO.1
9 – INTERNAL SHIELD



GENERAL CHARACTERISTICS

MECHANICAL

Maximum Dimensions	see outline drawing
Bulb	T6½
Outline	6-2
Base	E9-1
Basing	9DE
Mounting position	any

ELECTRICAL

Cathode	coated, unipotential
Heater voltage	6.3 volts
Heater current	330 mA

Direct Interelectrode Capacitances (Each Section)

Output	1.8 $\mu\mu$f
Input	3 $\mu\mu$f
Plate to grid	1.3 $\mu\mu$f

Between the 2 sections

Plate to plate	max.	0.05 $\mu\mu$f
Grid to grid	max.	0.005 $\mu\mu$f
Plate section 1 to grid section 2	max.	0.005 $\mu\mu$f
Plate section 2 to grid section 1	max.	0.005 $\mu\mu$f

6GM8/ECC86

Typical Characteristics (each section)

Plate Voltage	6.3 volts
Grid voltage	− 0.4 volt
Plate current	0.9 mA
Transconductance	2600 micromhos
Amplification Factor	14

Maximum Ratings (Design Center Values)

Plate Voltage	max.	30 volts
Plate dissipation	max.	0.6 watt
Cathode current	max.	20 mA
Grid circuit resistance	max.	1 megohm
Voltage between cathode and heater	max.	30 volts
Circuit resistance between cathode and heater	max.	20,000 ohms

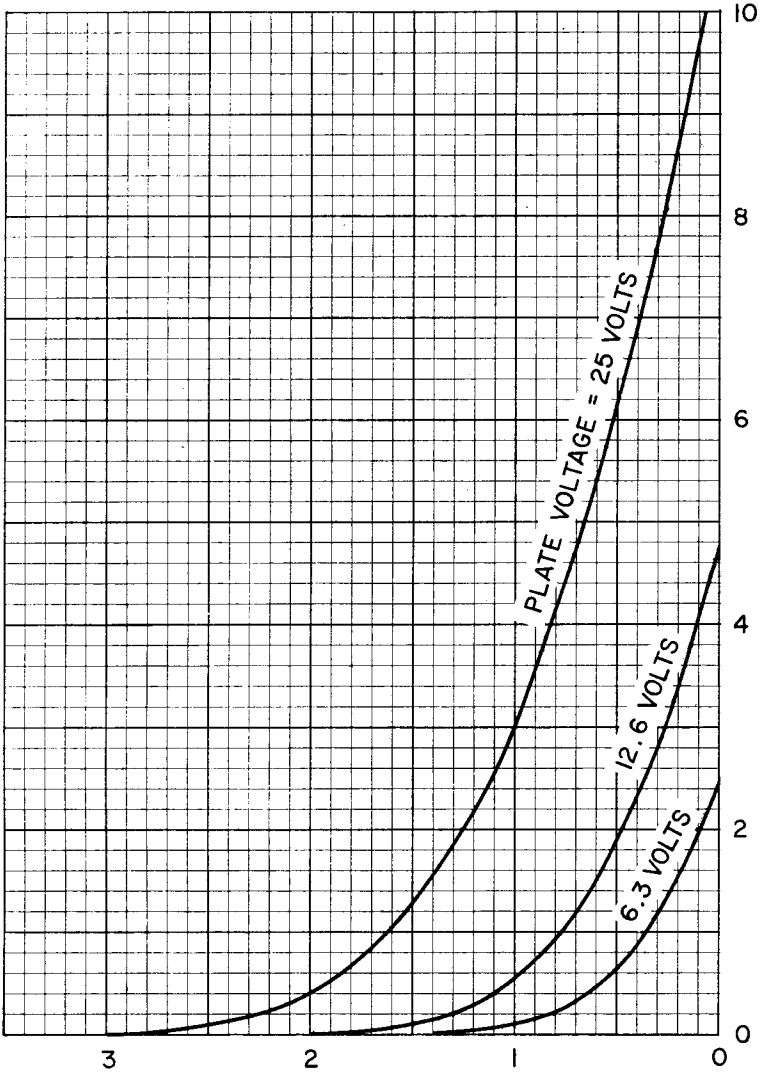
Operating Characteristics as RF Amplifier (each section)

Plate Voltage	6.3	12.6	25 volts
Grid supply voltage	0	0	0 volts
Grid circuit resistance	0.1	0.1	0.1 megohm
Plate current	0.9	2.5	7.5 mA
Transconductance	2600	4600	7800 micromhos
Internal resistance	5000	3400	2100 ohms
Equivalent noise resistance	1000	--	-- ohms

Operating Characteristics As Self-Oscillating Mixer (each section)

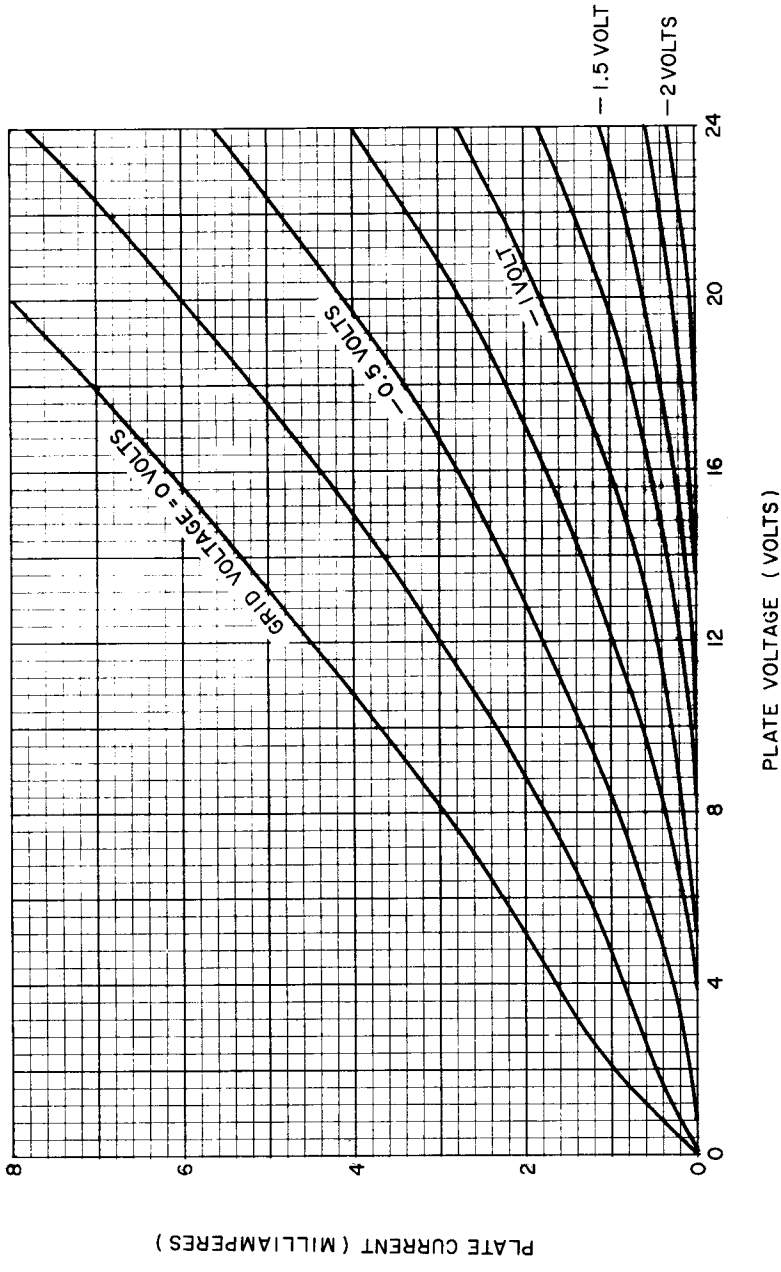
Plate supply voltage	6.3	12.6	25 volts
Plate circuit resistance	500	500	500 ohms
Grid circuit resistance	0.22	0.22	0.22 megohm
Oscillator voltage	0.7	1.0	1.5 volts (rms)
Plate Current	0.4	1.0	2.6 mA
Conversion transconductance	800	1300	2000 micromhos
Internal resistance	11000	8000	5300 micromhos

PLATE CHARACTERISTICS

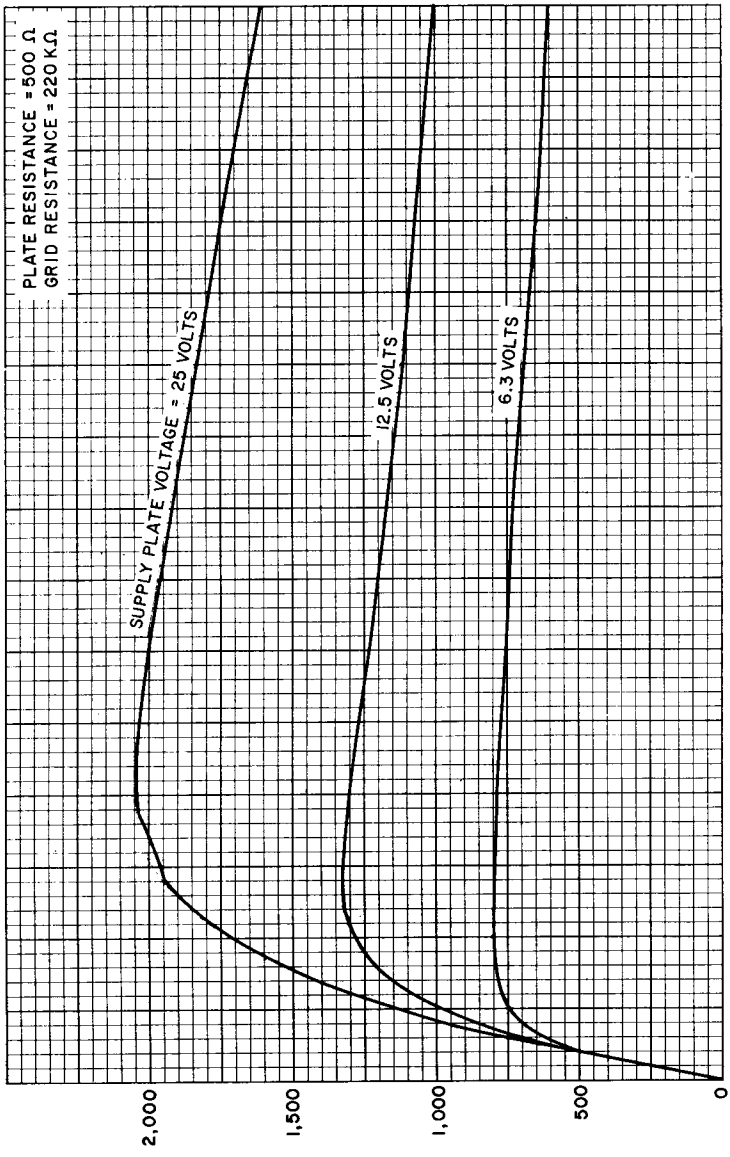


6GM8/ECC86

PLATE CHARACTERISTICS



CONVERSION CHARACTERISTICS



6GM8/ECC86

TRANSCONDUCTANCE CHARACTERISTICS