

6079/AX-9908

AMPEREX TUBE TYPE 6079/AX-9908

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Audio-Frequency Power Amplifier and Modulator—Class B

Maximum Ratings, Absolute Values	
D.C. Plate Voltage	5000 max. volts
D.C. Grid No. 2 Voltage	700 max. volts
D.C. Plate Current	450 max. ma.
Plate Input	2250 max. watts
Plate Dissipation	500 max. watts
Grid No. 2 Dissipation ¹	70 max. watts
Grid No. 1 Resistor	35,000 max. ohms

Typical Operation

Unless otherwise specified, values are for two tubes.

	CCS	CCS
Plate Voltage	5000	5000 volts
Grid No. 1 Voltage	-70	-60 volts
Grid No. 2 Voltage	700	600 volts
Effective load resistance, plate to plate	20,000	20,000 ohms
Peak A.F. Grid to Grid Voltage	290	270 volts
Zero Signal D.C. Plate Current	130	130 ma
Maximum Signal D.C. Plate Current	650	600 ma
Zero Signal D.C. Grid No. 2 Current	0	0 ma
Maximum Signal D.C. Grid No. 2 Current	180	170 ma
Maximum Signal Driving Power, approximate	2.6	2.4 watts
Maximum Signal Power Output	2550	2300 watts
Total Harmonic Distortion	3.8	4.6 per cent

Plate and Screen Grid Modulated, R.F. Power Amplifier—Class C Telephony

Carrier conditions per tube for use with a maximum modulation factor of 1.0.

Maximum Ratings, Absolute Values (Frequencies up to 75 mc.)	
D.C. Plate Voltage	4000 max. volts
D.C. Grid No. 2 Voltage	700 max. volts
D.C. Grid No. 1 Voltage	-500 max. volts
D.C. Plate Current	400 max. ma
D.C. Grid No. 1 Current	30 max. ma
Plate Input	1600 max. watts
Plate Dissipation	330 max. watts
Grid No. 2 Dissipation	50 max. watts
Grid No. 1 Dissipation	25 max. watts

Typical Operation

Frequency	60 mc
D.C. Plate Voltage	4000 volts
D.C. Grid No. 2 Voltage	600 volts
D.C. Grid No. 1 Voltage	-240 volts
Peak Grid No. 2 Voltage	340 volts
Peak R.F. Grid No. 1 Voltage	415 volts
D.C. Plate Current	380 ma
D.C. Grid No. 2 Current	80 ma
D.C. Grid No. 1 Current	20 ma
Driving Power	7.5 watts
Power Output	1200 watts

R.F. Power Amplifier Class C Telephony

Key-down conditions per tube without amplitude modulation¹

Maximum Ratings, Absolute Values (Frequencies up to 75 mc.)	
D.C. Plate Voltage ²	5000 max. volts
D.C. Grid No. 2 Voltage	700 max. volts
D.C. Grid No. 1 Voltage	-500 max. volts
D.C. Plate Current	450 max. ma
Plate Input ²	2250 max. watts
Plate Dissipation	500 max. watts
Grid No. 2 Dissipation ³	65 max. watts
Grid No. 1 Dissipation	25 max. watts

Typical Operation

	CCS	CCS	CCS
Frequency	60	60	60 mc
D.C. Plate Voltage	5000	5000	4000 volts
D.C. Grid No. 2 Voltage	600	700	500 volts
D.C. Grid No. 1 Voltage	-200	-200	-200 volts
D.C. Plate Current	440	440	450 ma
D.C. Grid No. 2 Current	80	75	90 ma
D.C. Grid No. 1 Current	35	25	39 ma
Driving Power	12	8	14 8.5 watts
Power Output	1760	1760	1410 1400 watts

¹Instantaneously, during modulation peaks.

²Modulation essentially negative may be used if the positive peak of the envelope does not exceed 115 per cent of the carrier conditions.

Frequency	75	100	mc.
% of Max. Reted Plate Voltage—Class C Telephony	100	90	%
% of Max. Reted Plate Input—Class C Telephony	100	80	%

³Maximum signal condition.

The 6079/AX-9908 is a four-electrode tube designed for use as a radio-frequency power amplifier, modulator and frequency multiplier. The anode is capable of dissipating 500 watts. The cathode is a thoriated-tungsten filament. Maximum ratings apply up to 75 megacycles. At reduced ratings it may be operated up to 100 megacycles.

GENERAL CHARACTERISTICS

ELECTRICAL DATA

Filament voltage	10 volts
Filament current	9.9 amps
Amplification factor	9.5
C ₂ -C ₁ Mu (plate current=120 ma)	7,000 micromhos
Transconductance (Plate Current=120 ma)	5 amps
Peak cathode current ¹	0.25 μμf
Direct Interelectrode Capacitances	24 μμf
Grid No. 1 to Plate (max.)	8.3 μμf
Grid No. 1 to Filament	
Plate to Filament	

MECHANICAL DATA

Max. overall dimensions	
Length	8 1/4 inches
Diameter	4-21/32 inches
Mounting position	vertical with plate up or down
Maximum Bulb Temperature	250° C
Maximum Plate Seal Temperature ²	220° C
Maximum Temperature Base Seals ²	180° C

ACCESSORIES

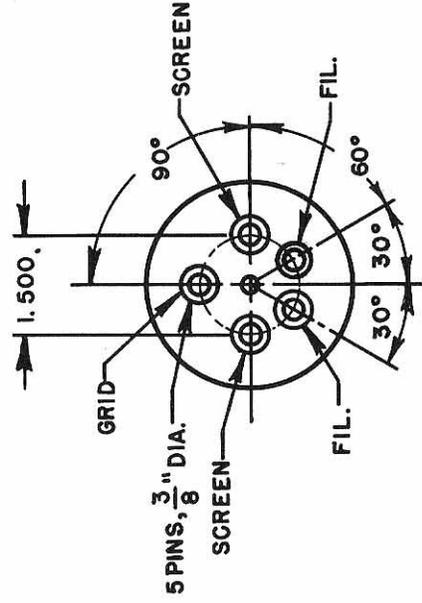
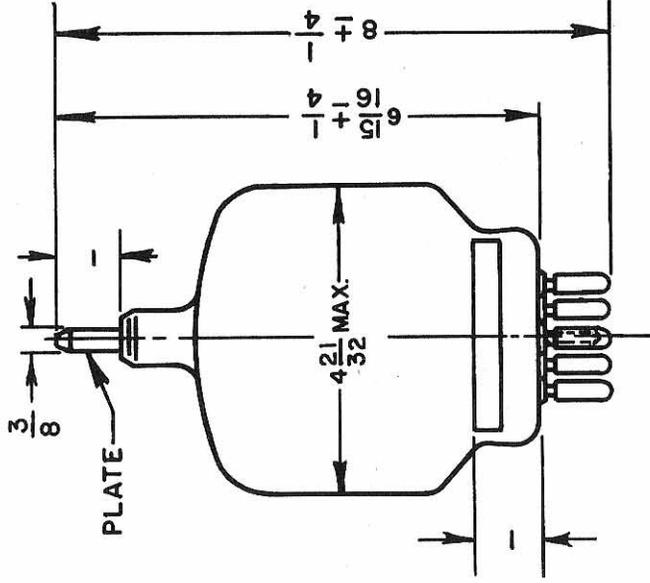
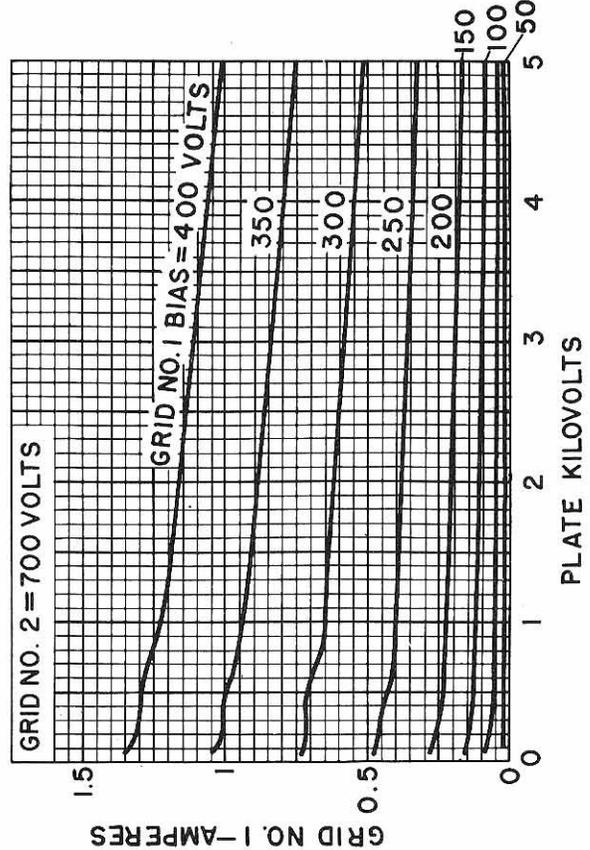
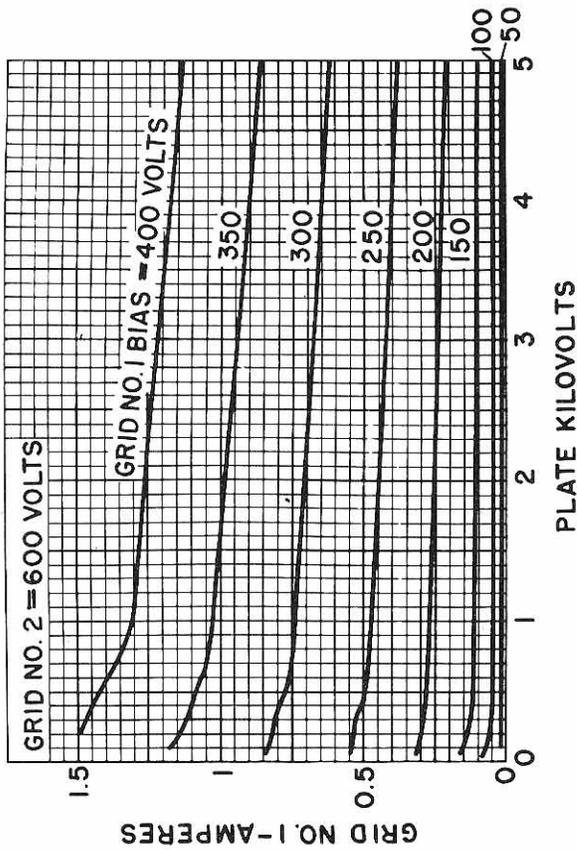
Plate Connector	Amperex #S-3702
Socket	Amperex #S-3703
Net Weight (approx.)	1 lb.

¹Represents maximum usable cathode current for any condition of operation.

²To keep the temperature of the seals below these values, it may be necessary to direct an air flow of sufficient velocity to the seals.

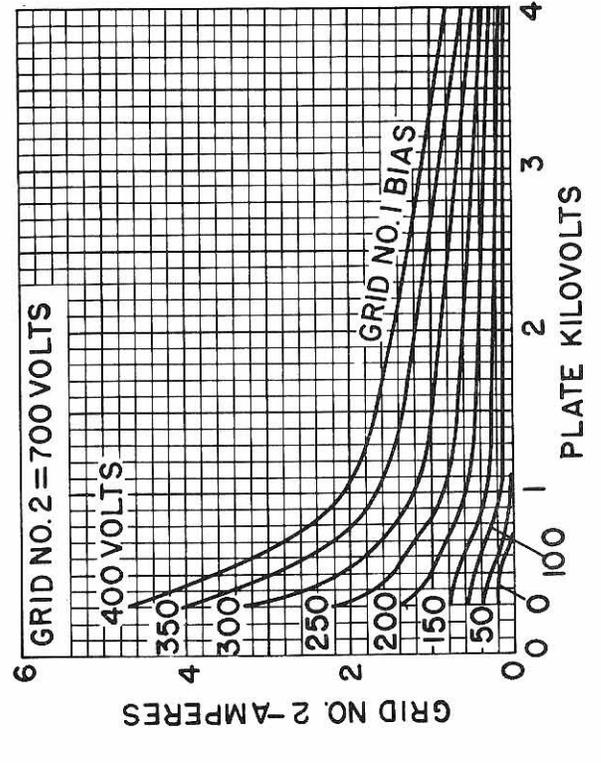
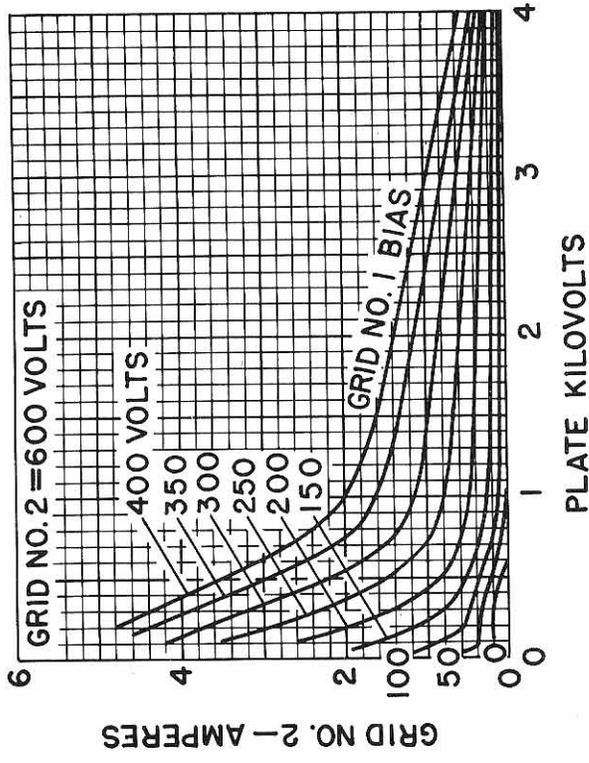
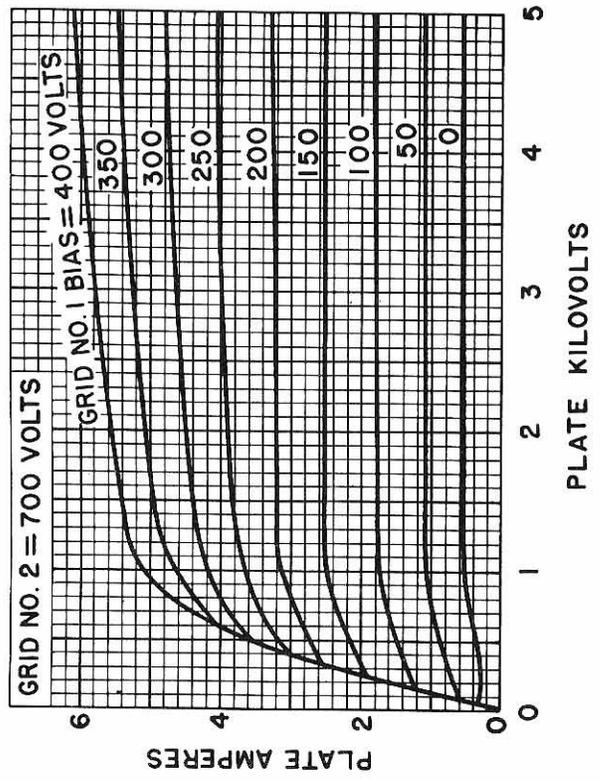
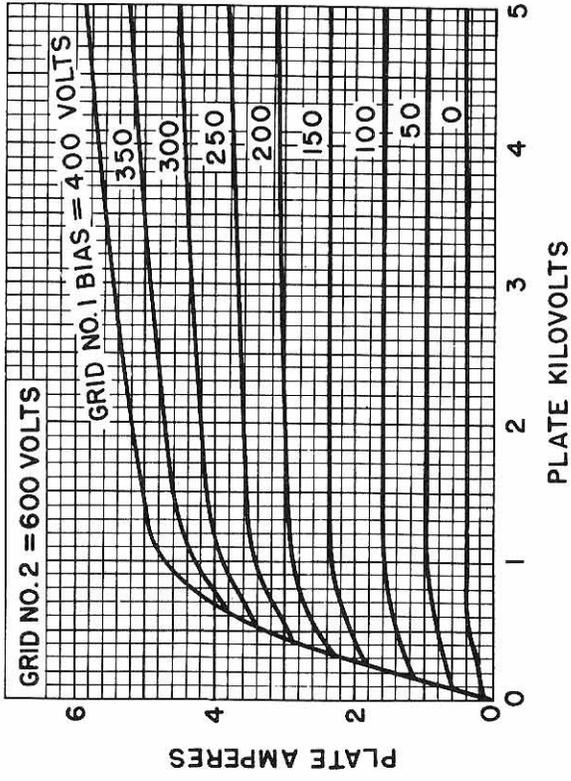
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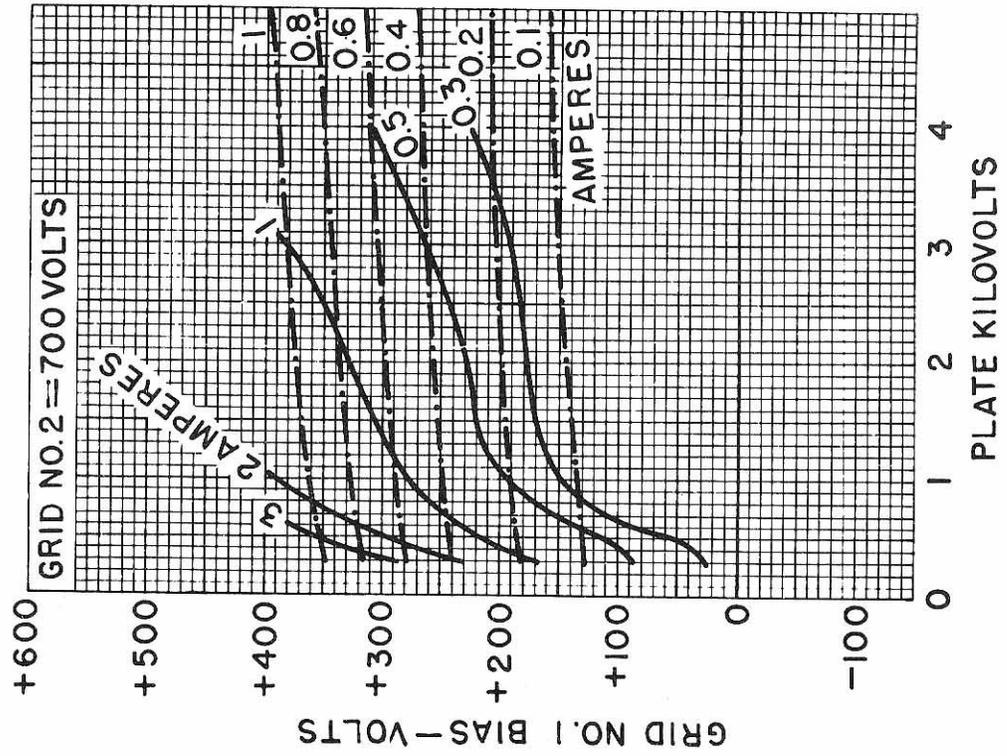


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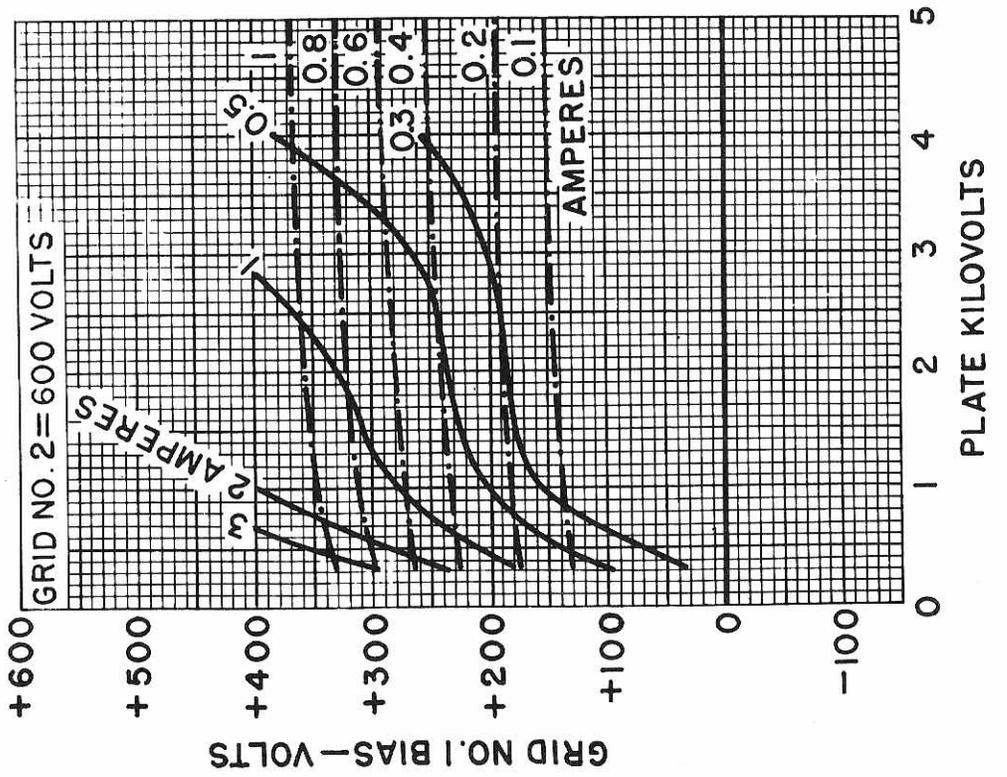
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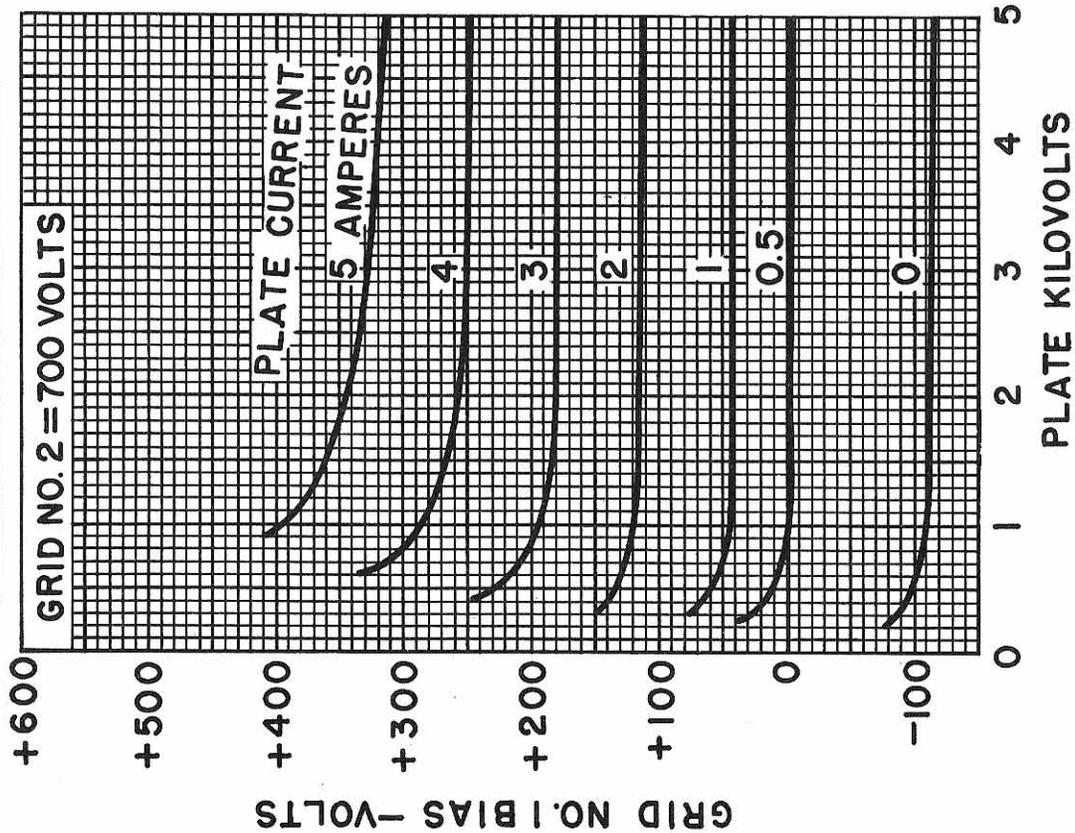
CONSTANT CURRENT CHARACTERISTICS
--- GRID NO.1 CURRENT
— GRID NO.2 CURRENT



CONSTANT CURRENT CHARACTERISTICS
--- GRID NO.1 CURRENT
— GRID NO.2 CURRENT



CONSTANT PLATE CURRENT CHARACTERISTICS



CONSTANT PLATE CURRENT CHARACTERISTICS

