DATA SHEET

NEC

Traveling Wave Tube CW Amplifier
(Tentative Data Sheet)

LD - 637

The LD-637 is a coaxial-type CW traveling-wave amplifier for operation over the frequency range of 1.7 to 2.3 kMc. This tube type has an average small signal gain of 30 db and a saturated output power of about 20 watts. The construction of the tube is of the conventional helical line type employing input and output N type coaxial connections. The LD-637 uses integral periodic permanent magnet focusing, and operates with a depressed collector electrode voltage. The latter feature produces a significant improvement in the operating efficiency. The design, construction and long life expectancy of the tube make it exceptionally well suited for use with transistorized communication equipments.

FEATURES

- o Depressed Collector Operation for Improved Efficiency
- o PPM Focused
- o Long Life

CHARACTERISTICS

ELECTRICAL

Maximum Ratings

Accelerating Voltage ... 2700V

Accelerating Anode Current ..... 1 mA

Helix Voltage ..... 3000 V

Helix Current ..... 3 mA

PHYSICAL

General

Dimensions ..... See Outline

Weight ..... 11 lbs

Mounting

Position ....., Any

Nippon Electric Company Limited
P.O. Box 1, Takanawa, Tokyo, Japan

PRINTED IN JAPAN

Revised on 18 Oct. 1963

Collector Voltage, min. 1900V

Collector Current ..... 60 mA

Collector Dissipation ..... 120 W

Focusing Electrode Voltage .. -70 V

Ambient Temperature ..... 55°C

Ambient Temperature, min. ... -55°C

Collector Seal Temperature .. 180°C

Cathode ..... Oxide coated, unipotential

Connections

RF Input and Output ... Coaxial type N female connectors

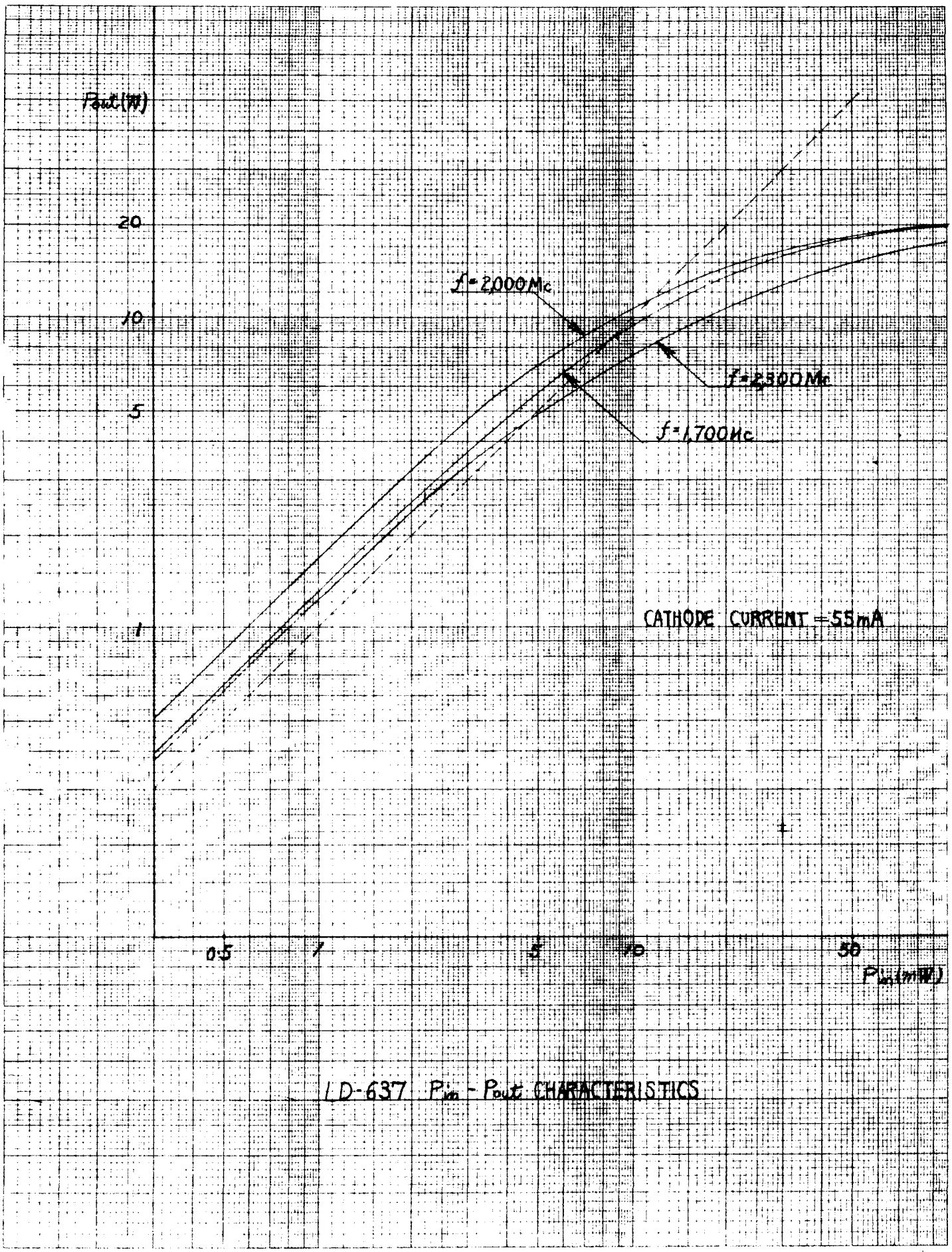
Cooling

Forced air (18 CFM)

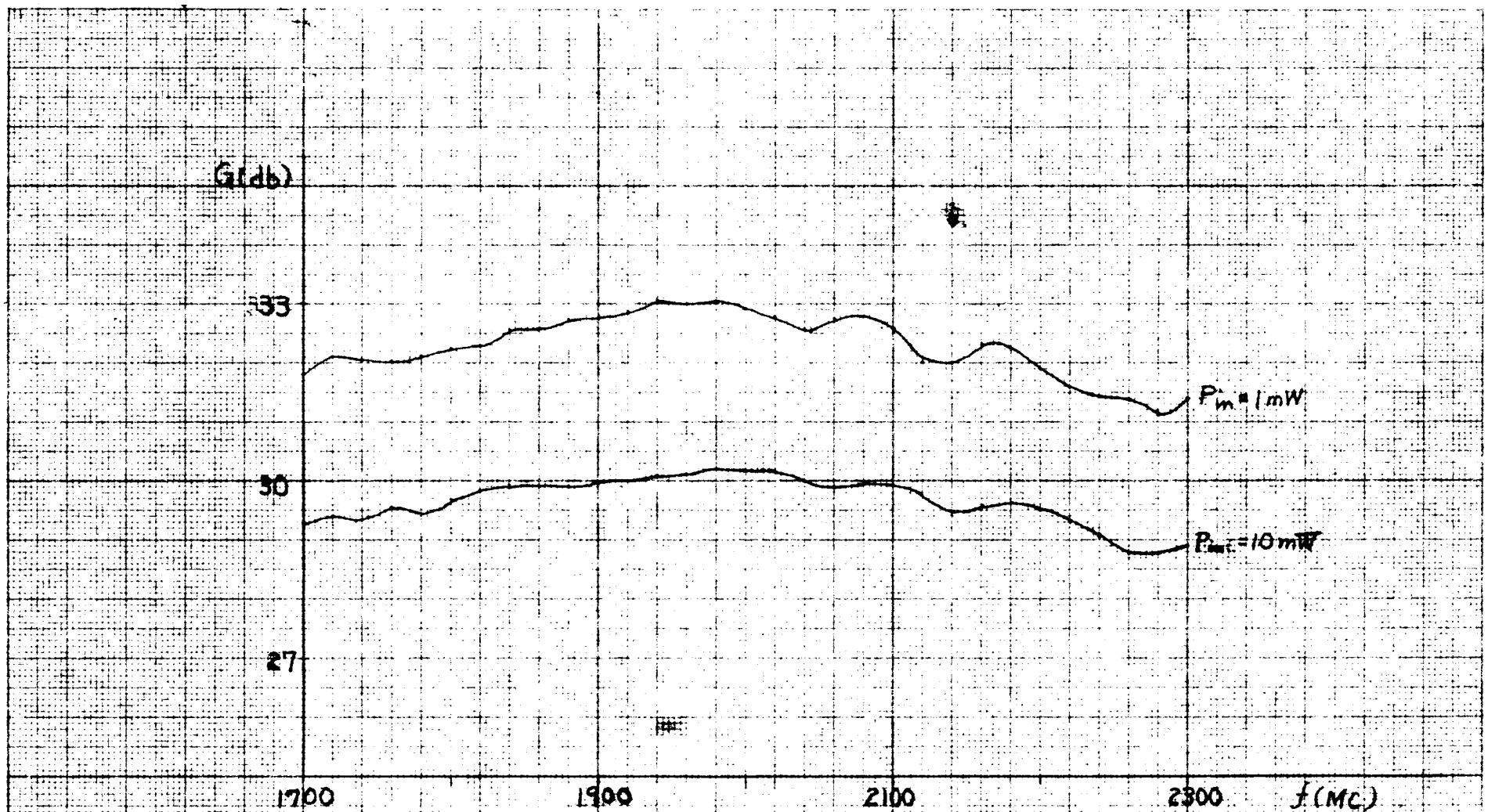
OPERATION

Heater Voltage = 6.3V; Heater Current at 6.3V = 1.0A

Frequency	1.7	2.0	2.3	kMc
Accelerating Anode Voltage	2500	2500	2500	V
Helix Voltage	2700	2550	2400	V
Helix Current	0.5	0.5	0.5	mA
Collector Voltage	2000	2000	2000	V
Collector Current	55	55	55	mA
RF Output (10mW input level)	9.5	10	7.5	W
RF Saturated Output	19.5	20	17.5	W
Noise Figure (small signal)	27	27	27	db
Small Signal Gain	31	32	31	db

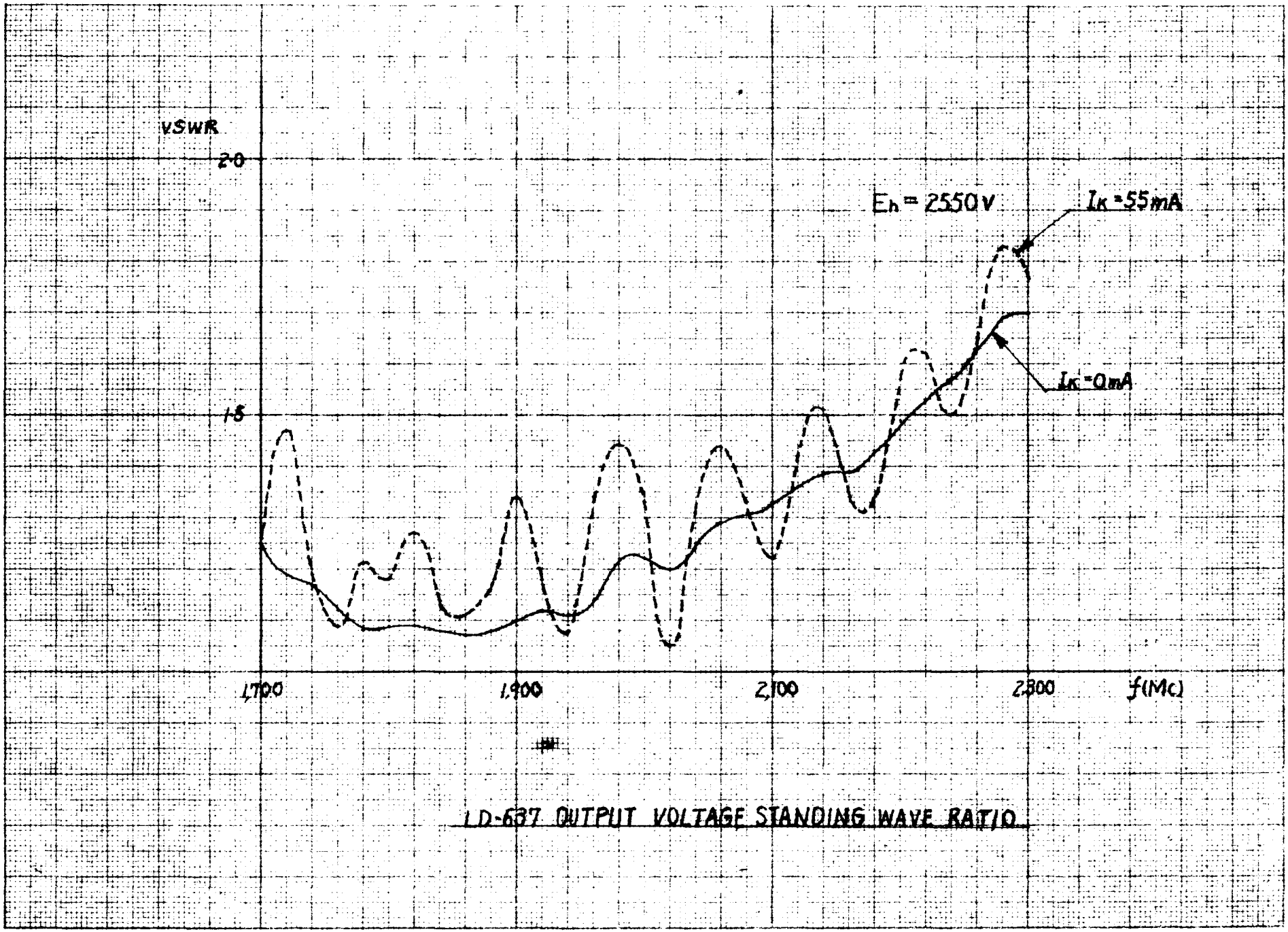


LD-637 Pin - Pout CHARACTERISTICS

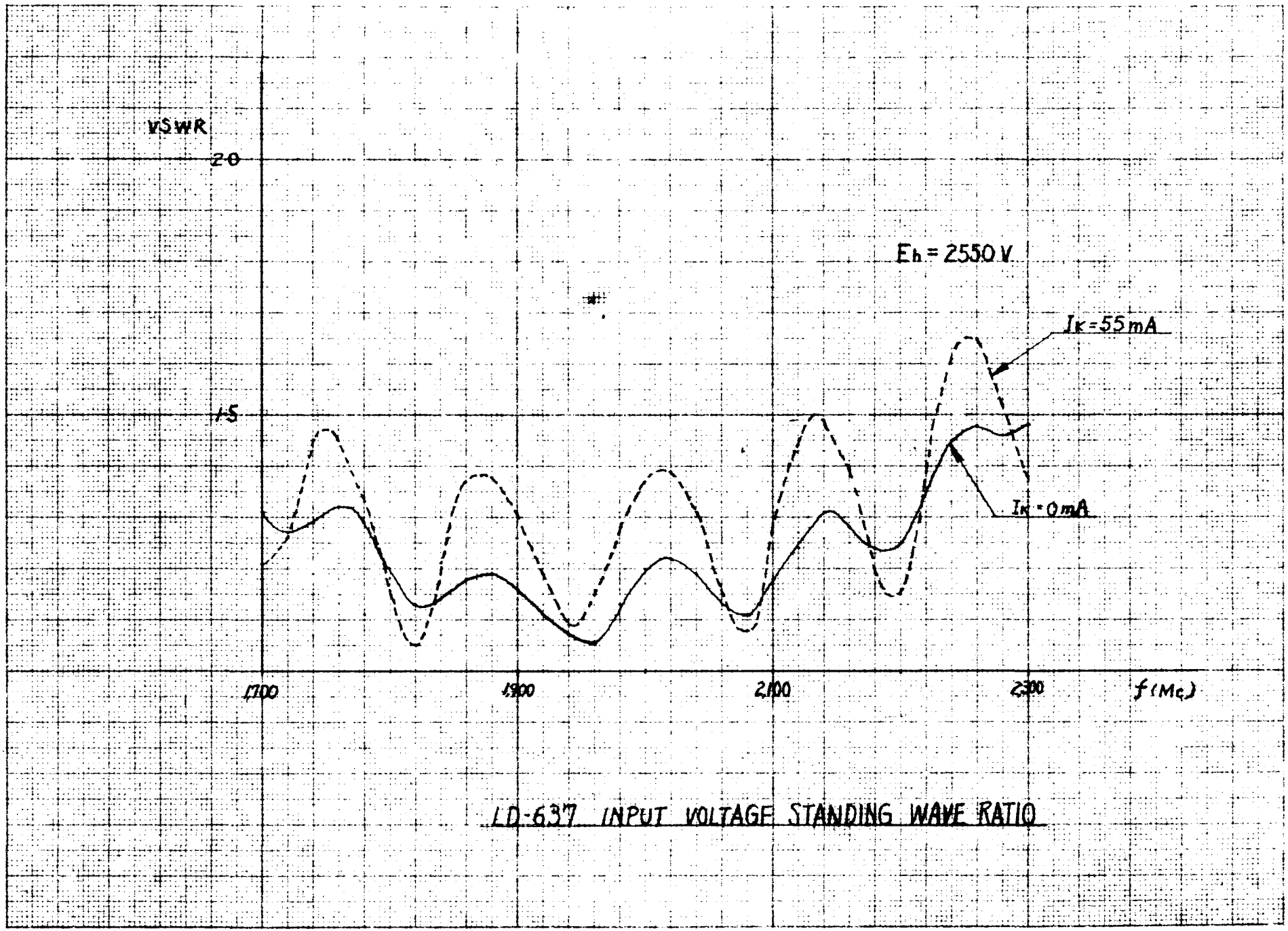


LD-637 GAIN - FREQUENCY CHARACTERISTICS

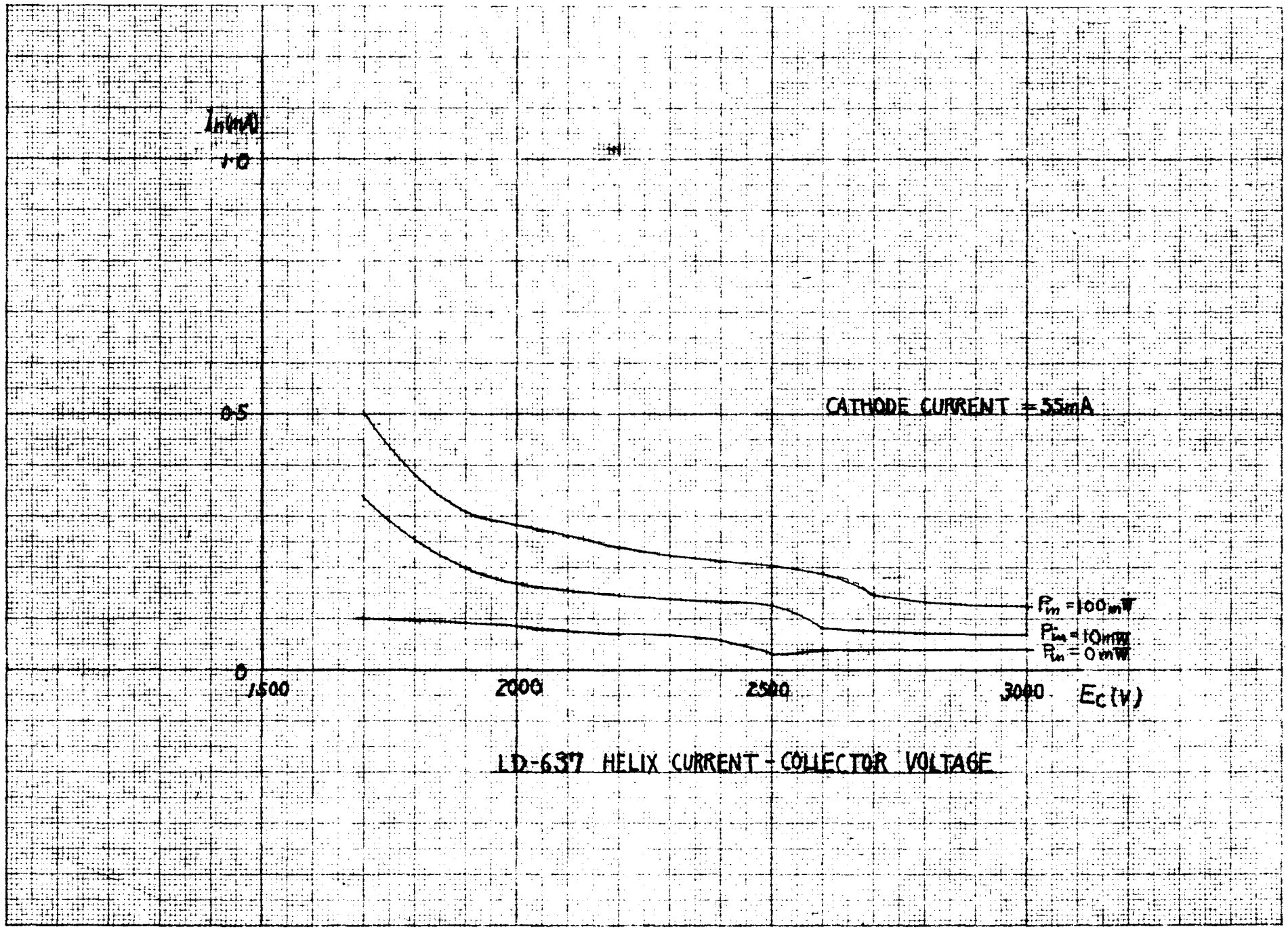
(HELIX VOLTAGE IS OPTIMIZED AT EACH FREQUENCY)



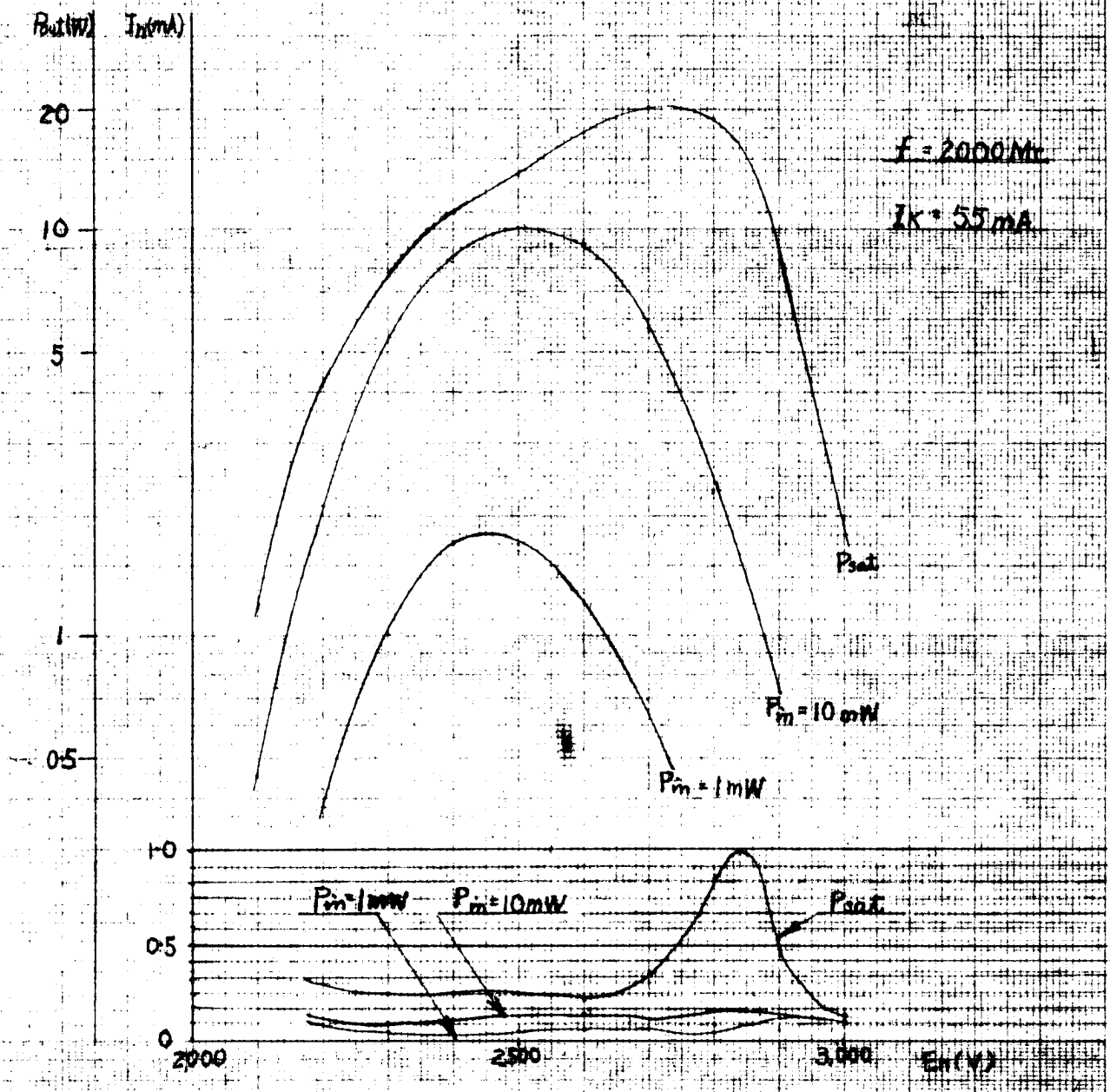
LD-637 OUTPUT VOLTAGE STANDING WAVE RATIO



LD-637 INPUT VOLTAGE STANDING WAVE RATIO

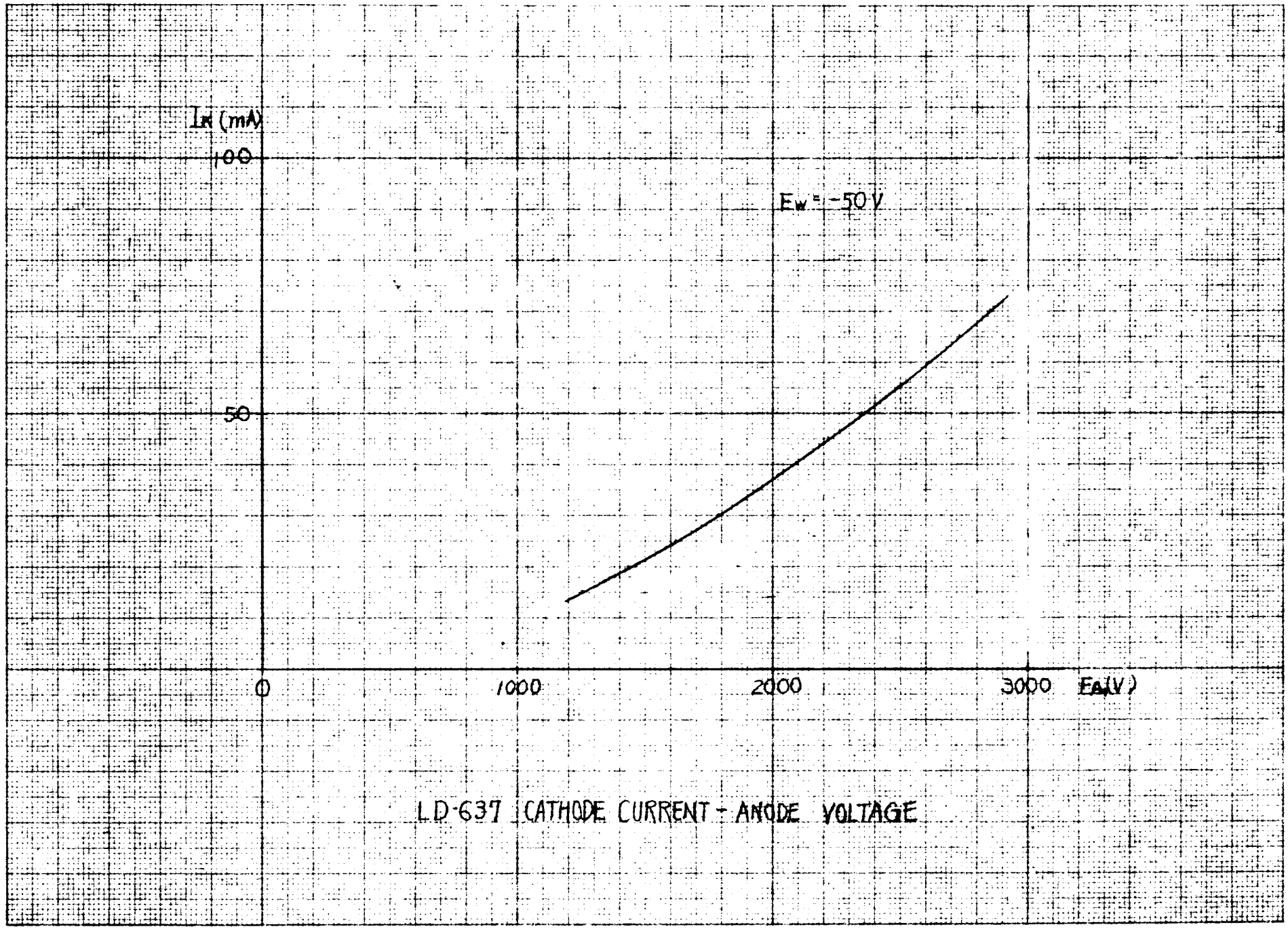


LD-637 HELIX CURRENT - COLLECTOR VOLTAGE

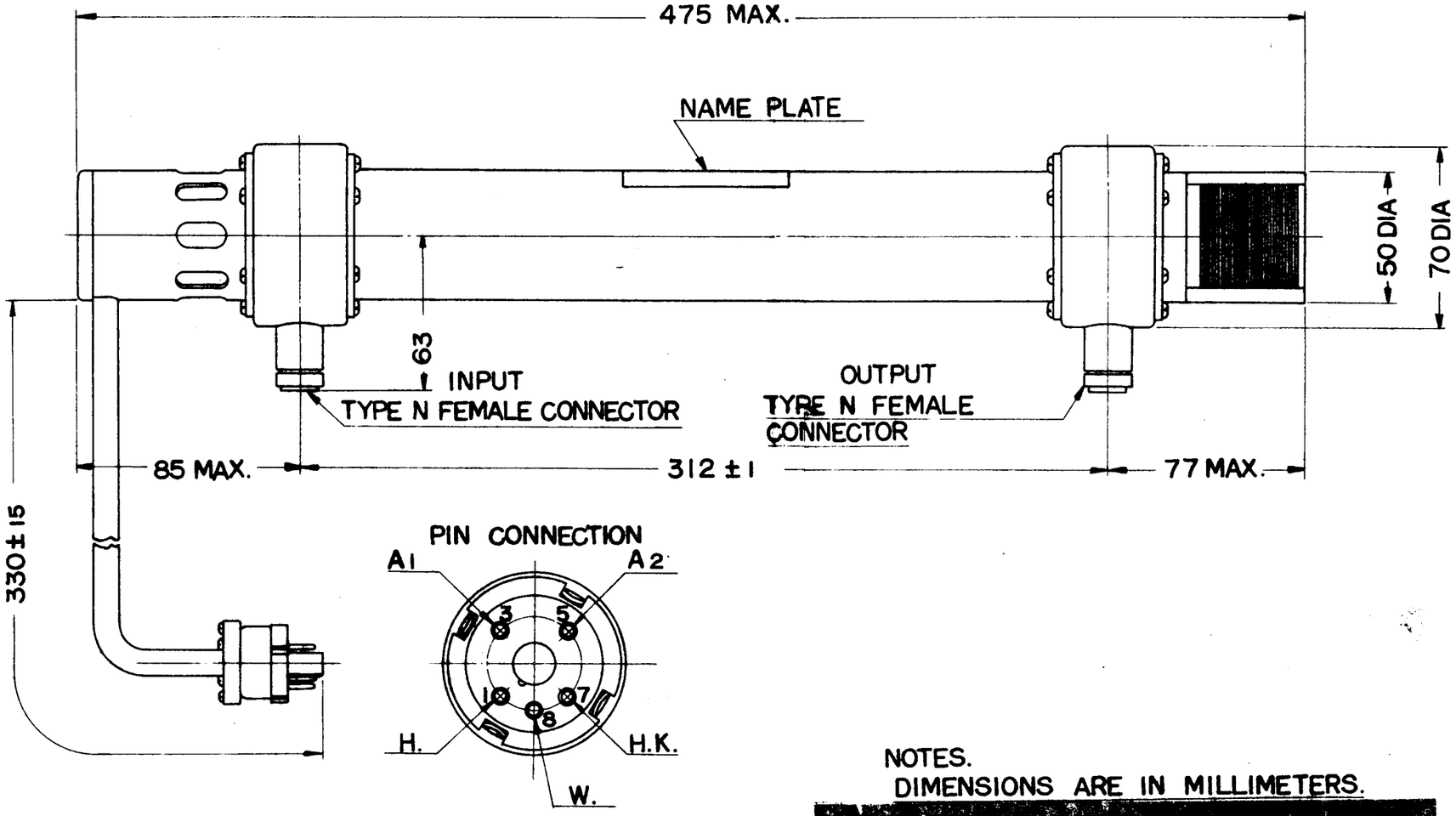


LD-637 OUTPUT POWER – HELIX VOLTAGE

HELIX CURRENT – HELIX VOLTAGE



LD-637 CATHODE CURRENT - ANODE VOLTAGE



NOTES.
DIMENSIONS ARE IN MILLIMETERS.

Collector is internally connected to outer conductor of the RF connectors. Never apply high voltage to the accelerating electrode before applying, earth potential to the connector.

版数	年 月 日	承認
1		

特に指定なきは	尺度
普通公差とす	才三角法
部品表	
仕様書番号	
組立図番	

素材名	所要寸度	仕上および処理

技術担当	技術承認	設計製図	査閲	承認
Y. Terazawa	S. Yosuda			

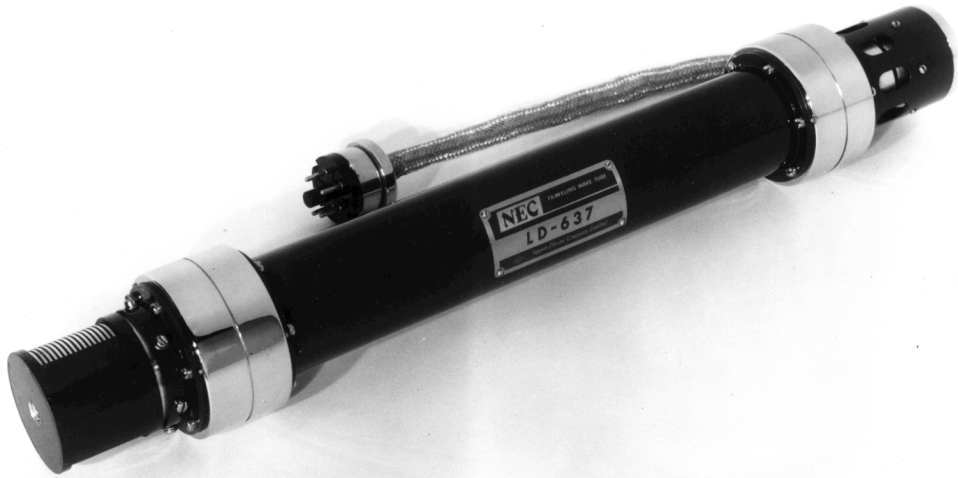
LD-637
OUTLINE DRAWING

SB-67480

JIS A3 (297×420)

配布先

日本電氣株式會社



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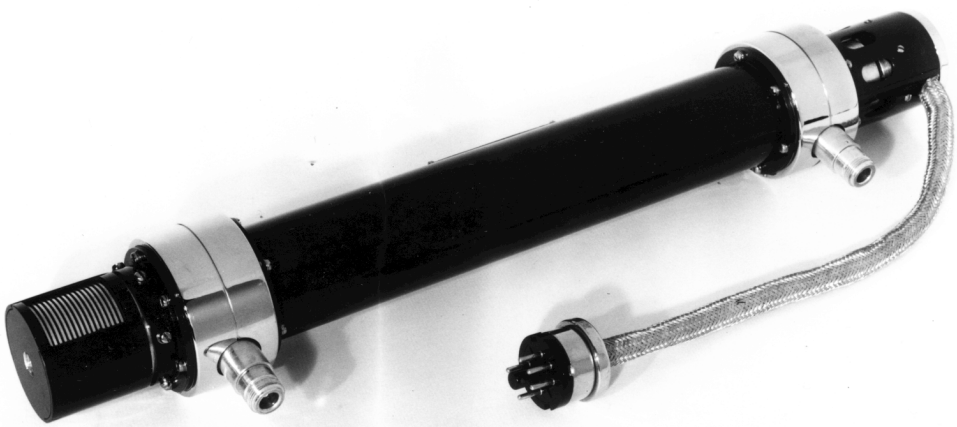

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