



engineering data service

8431

ADVANCE DATA

MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-2
Basing	9AJ
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS

Average Characteristics

Parallel Operation

Heater Voltage ¹	12.6	Volts
Heater Current	180	Ma

Ratings (Design Maximum Values)

Min.-Max.

Heater Voltage ²	11.4-13.8	Volts
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts
Heater Positive with Respect to Cathode		
DC	100	Volts
Total DC and Peak	200	Volts

DIRECT INTERELECTRODE CAPACITANCES (Each Section)

Shielded Unshielded

Grid to Plate	1.4	1.4	pf
Input: g to (h+k)	3.3	3.3	pf
Output: p to (h+k)	2.5	1.8	pf
Grid to Grid (Max.)	.005	.005	pf
Plate to Plate (Max.)	.015	.045	pf

RATINGS (Design Maximum Values)

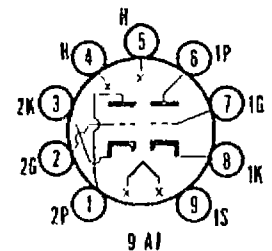
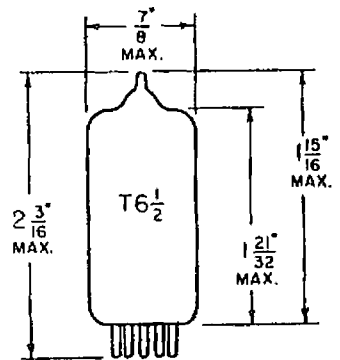
Continuous Class C Service at 175 Mc⁴

Plate Voltage	200	Volts	Max.
Plate Dissipation (Each Plate)	3.5	Watts	Max.
Plate Dissipation (Both Plates)	7.0	Watts	Max.
Plate Input (Each Plate)	5.5	Watts	Max.
Cathode Current (Each Cathode)	30	mA dc	Max.
Grid Current (Each Grid)	2.5	mA dc	Max.
Negative Grid Voltage	75	Volts	Max.
Grid Circuit Resistance			
Fixed Bias	0.1	Megohm	Max.
Cathode Bias	0.5	Megohm	Max.

QUICK REFERENCE DATA

The Sylvania Type 8431 is a T-6½ medium mu double triode designed for Continuous Class C Amplifier Service in the 200 megacycle range.

The rating values apply specifically to Sonobuoy and other battery applications where considerations of power output are paramount, and considerations of long life are of lesser importance.



SYLVANIA ELECTRONIC TUBES

A Division of
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RECEIVING TUBE OPERATIONS EMPORIUM, PA.

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CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage	90	Volts
Grid Voltage	-1.3	Volts
Plate Current	15	Ma
Transconductance	12,500	μmhos
Amplification Factor	33	

Class C RF Frequency Multiplier

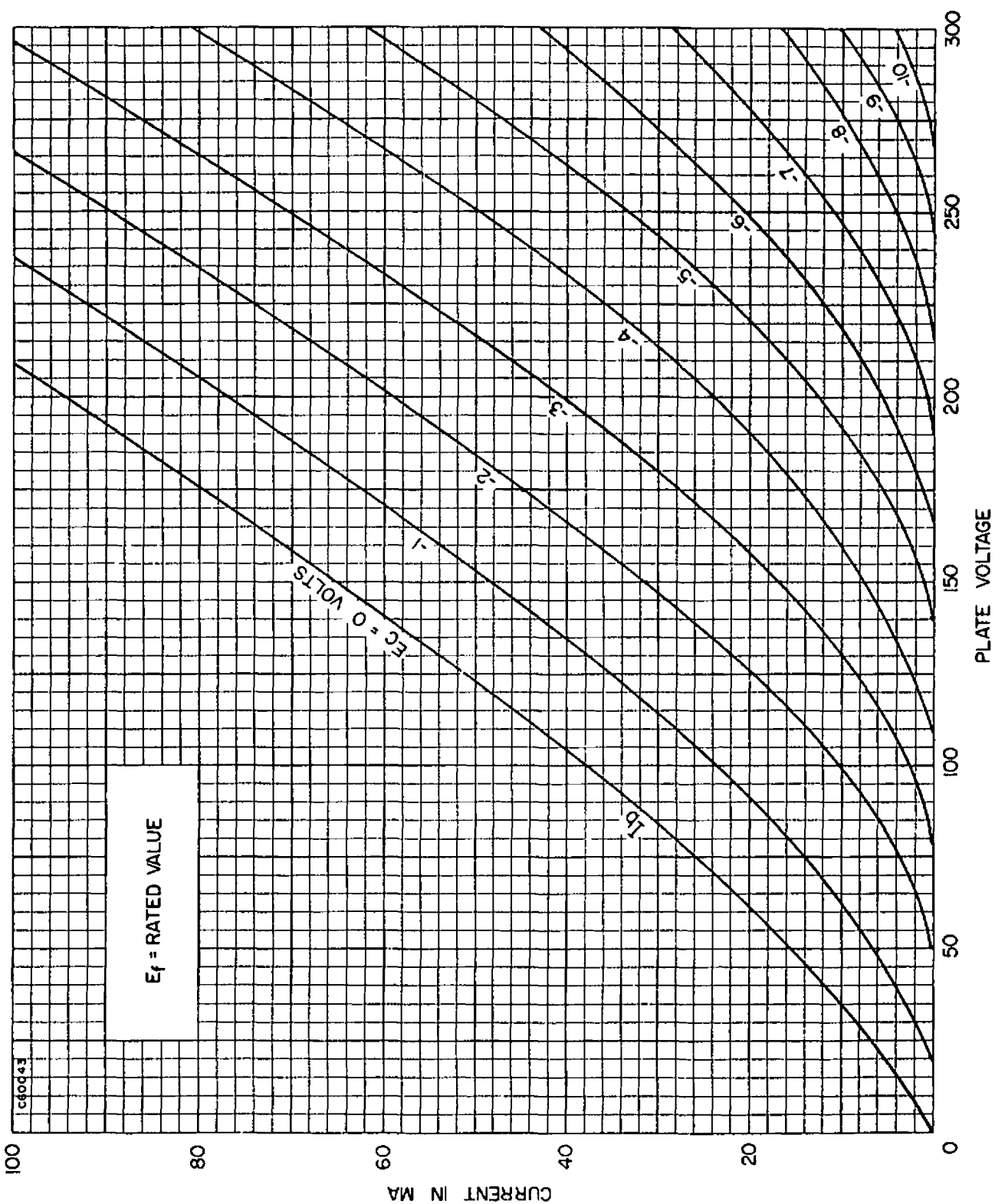
Doubler to 175 Mc

Plate Voltage	160	Volts
For Grid Voltage	-70	Volts
Use Grid Resistor	33,000	Ohms
Peak RF Grid Voltage	77	Volts
Grid Current	2.5	Ma
Plate Current	26	Ma
Power Output ⁵ (Approx.)	1.0	Watt

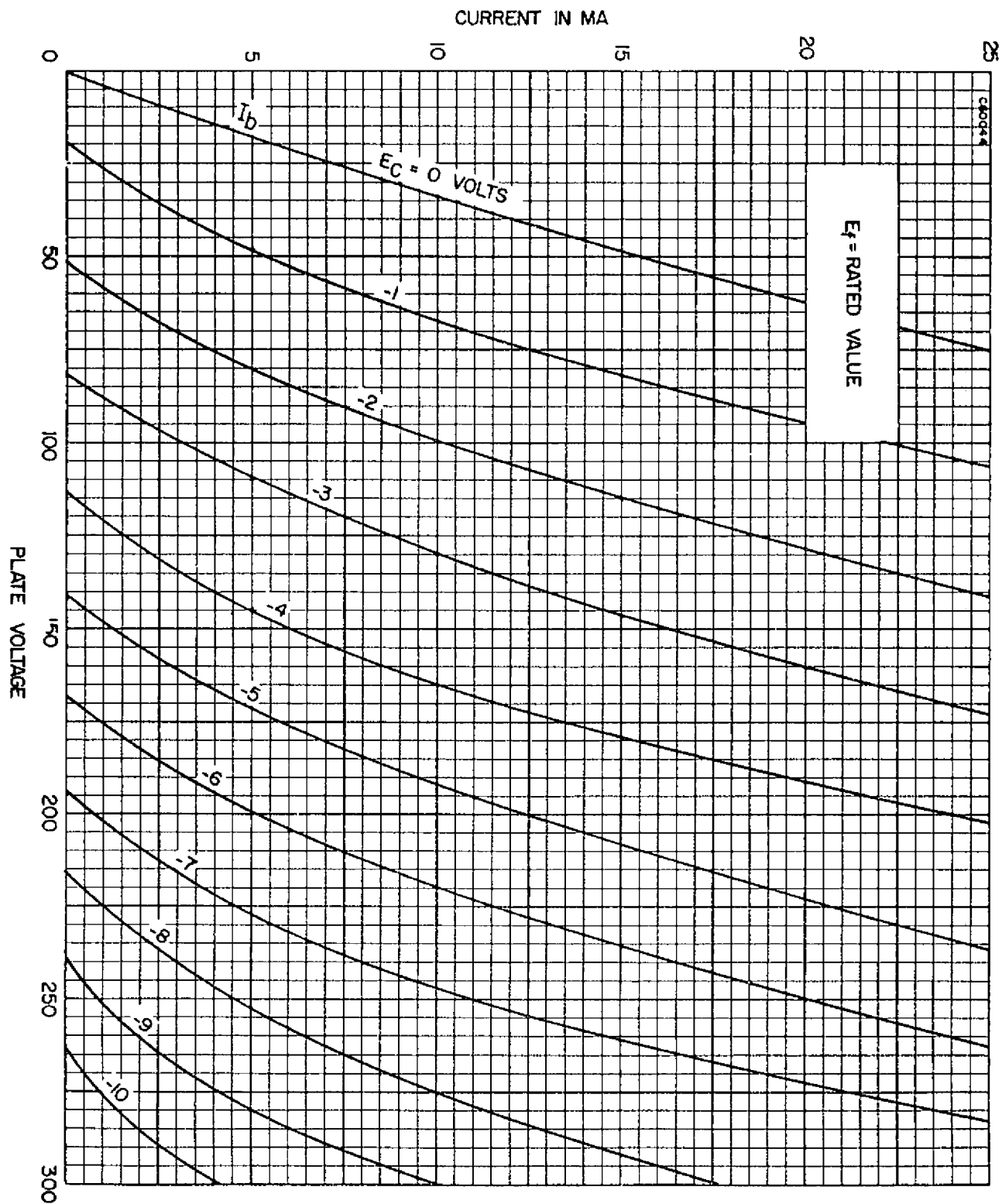
NOTES:

1. For parallel operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater voltage.
2. Heater voltage supply variations shall be restricted to maintain heater voltage within the specified values.
3. Shield No. 315.
4. The rating values apply specifically to Sonobuoy and other battery applications where considerations of power output are paramount, and considerations of long life are of lesser importance.
5. These values are for useful power and are as measured at the load of the output circuit.
6. To insure satisfactory operation in Sonobuoy applications Type 8431 is subjected to and must successfully pass an impact acceleration test at an acceleration level of 500 G.

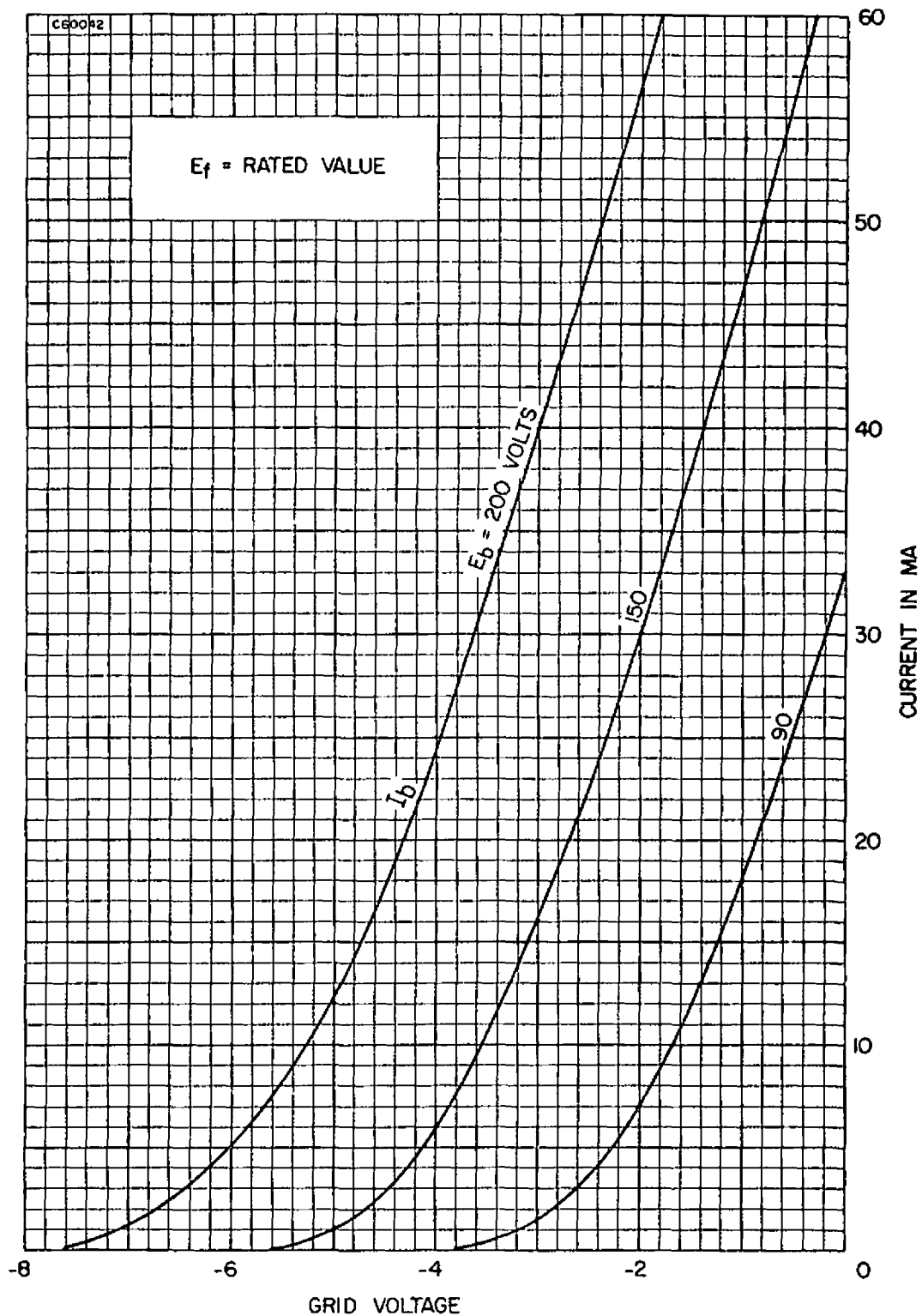
AVERAGE PLATE CHARACTERISTICS



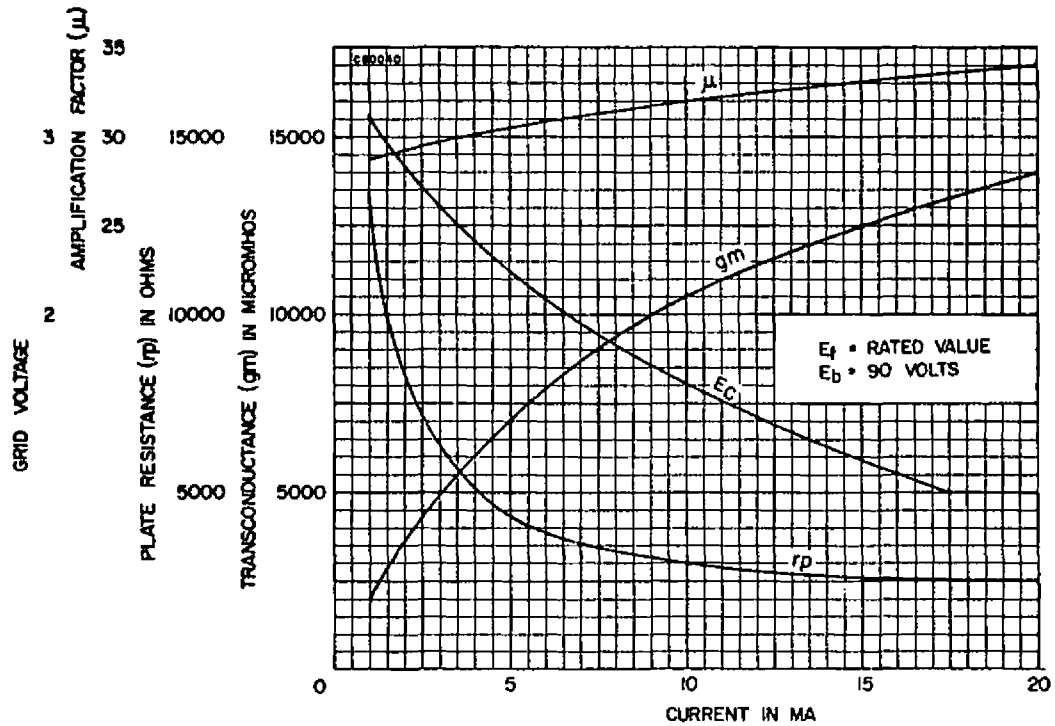
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



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