



6DT6

# SHARP-CUTOFF PENTODE

7-PIN MINIATURE TYPE

For FM detector service

6DT6

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC) . . . . .	6.3 ± 10%	volts
Current . . . . .	0.3	amp

Direct Interelectrode Capacitances (Approx.):<sup>0</sup>

Grid No.1 to plate. . . . .	0.02	μf
Grid No.1 to cathode & internal shield, grid No.3, grid No.2, and heater. . . . .	5.8	μf
Grid No.3 to plate. . . . .	1.4	μf
Grid No.1 to grid No.3. . . . .	0.1	μf
Grid No.3 to cathode & internal shield, plate, grid No.2, grid No.1, and heater. . . . .	6.1	μf

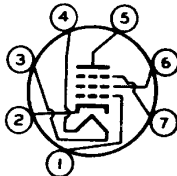
### Characteristics, Class A<sub>1</sub> Amplifier:

Plate Supply Voltage. . . . .	150	volts
Grid-No.3 Supply Voltage. . . . .	0	volts
Grid-No.2 Supply Voltage. . . . .	100	volts
Cathode Resistor. . . . .	560	ohms
Plate Resistance (Approx.). . . . .	0.15	megohm
Transconductance, Grid No.1 to Plate. . . . .	800	μmhos
Transconductance, Grid No.3 to Plate. . . . .	515	μmhos
Plate Current . . . . .	1.1	ma
Grid-No.2 Current . . . . .	2.1	ma
Grid-No.1 Voltage (Approx.) for plate μa = 10 . . . . .	-4.5	volts
Grid-No.3 Voltage (Approx.) for plate μa = 10 . . . . .	-3.5	volts

### Mechanical:

Operating Position. . . . .	Any
Maximum Overall Length. . . . .	2-1/8"
Maximum Seated Length . . . . .	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-1/2" ± 3/32"
Diameter. . . . .	0.650" to 0.750"
Dimensional Outline . . . . .	See General Section
Bulb. . . . .	T5-1/2
Base. . . . .	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW. . . . .	7EN

Pin 1-Grid No.1  
 Pin 2-Cathode,  
 Internal  
 Shield  
 Pin 3-Heater



Pin 4-Heater  
 Pin 5-Plate  
 Pin 6-Grid No.2  
 Pin 7-Grid No.3

← Indicates a change.

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### SHARP-CUTOFF PENTODE

#### FM DETECTOR SERVICE

→ **Maximum Ratings, Design-Maximum Values:**

PLATE VOLTAGE. . . . .	330 max.	volts
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE. . . . .	28 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE . . . . .	330 max.	volts
GRID-No.2 VOLTAGE. . . . .	<i>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</i>	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value. . . . .	0 max.	volts
GRID-No.2 INPUT:		
For grid-No.2 voltages up to 165 volts . . . . .	1.1	watts
For grid-No.2 voltages between 165 and 330 volts. . . . .	<i>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</i>	
PLATE DISSIPATION. . . . .	1.7 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode. . . . .	200 max.	volts
Heater positive with respect to cathode. . . . .	200 <sup>▲</sup> max.	volts

**Maximum Circuit Values:**

Grid-No.1-Circuit Resistance:		
For fixed-bias operation . . . . .	0.25 max.	megohm
For cathode-bias operation . . . . .	0.5 max.	megohm

<sup>o</sup> With external shield JEDEC No.316 connected to cathode.  
<sup>▲</sup> The dc component must not exceed 100 volts.

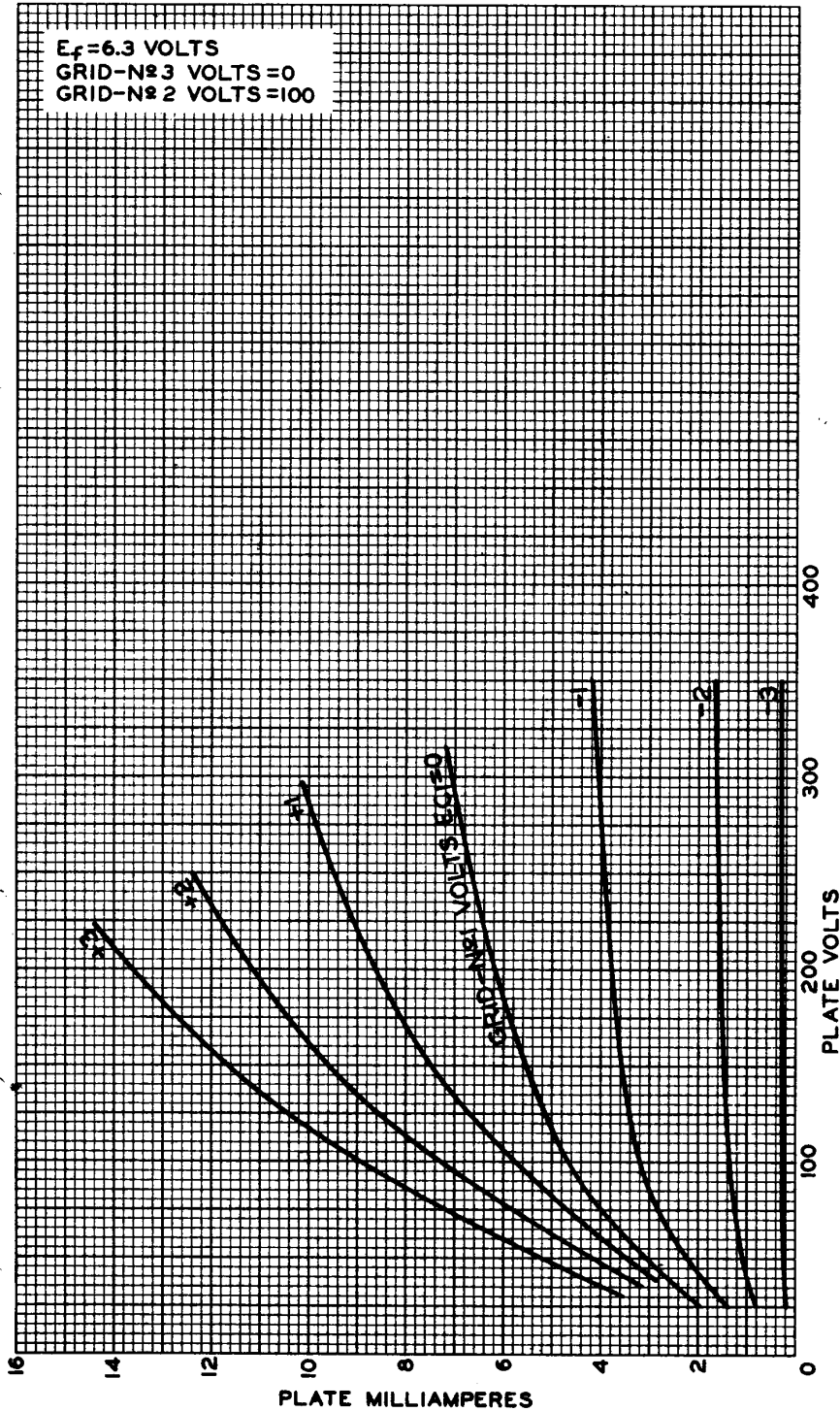
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### AVERAGE PLATE CHARACTERISTICS



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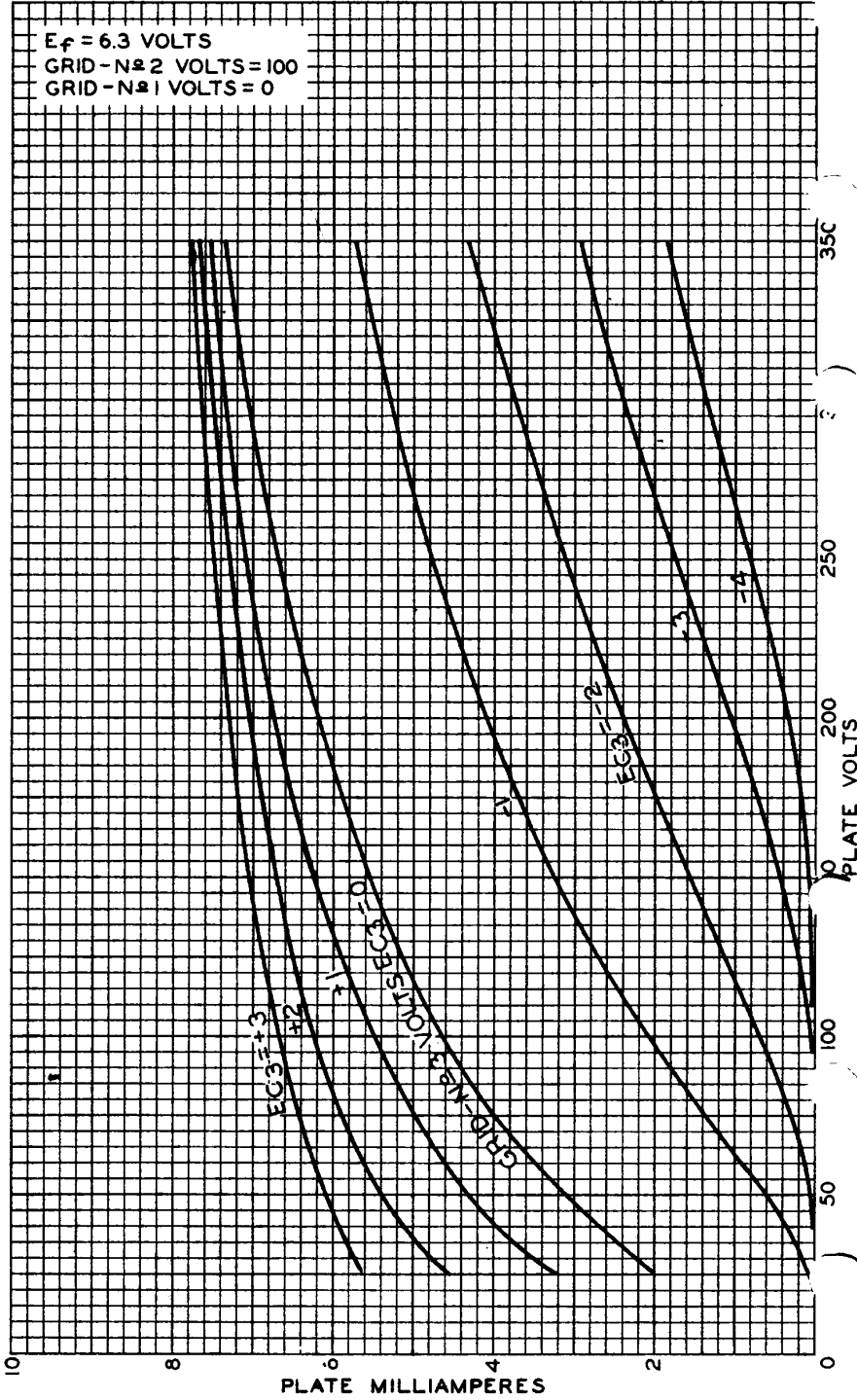
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### AVERAGE PLATE CHARACTERISTICS

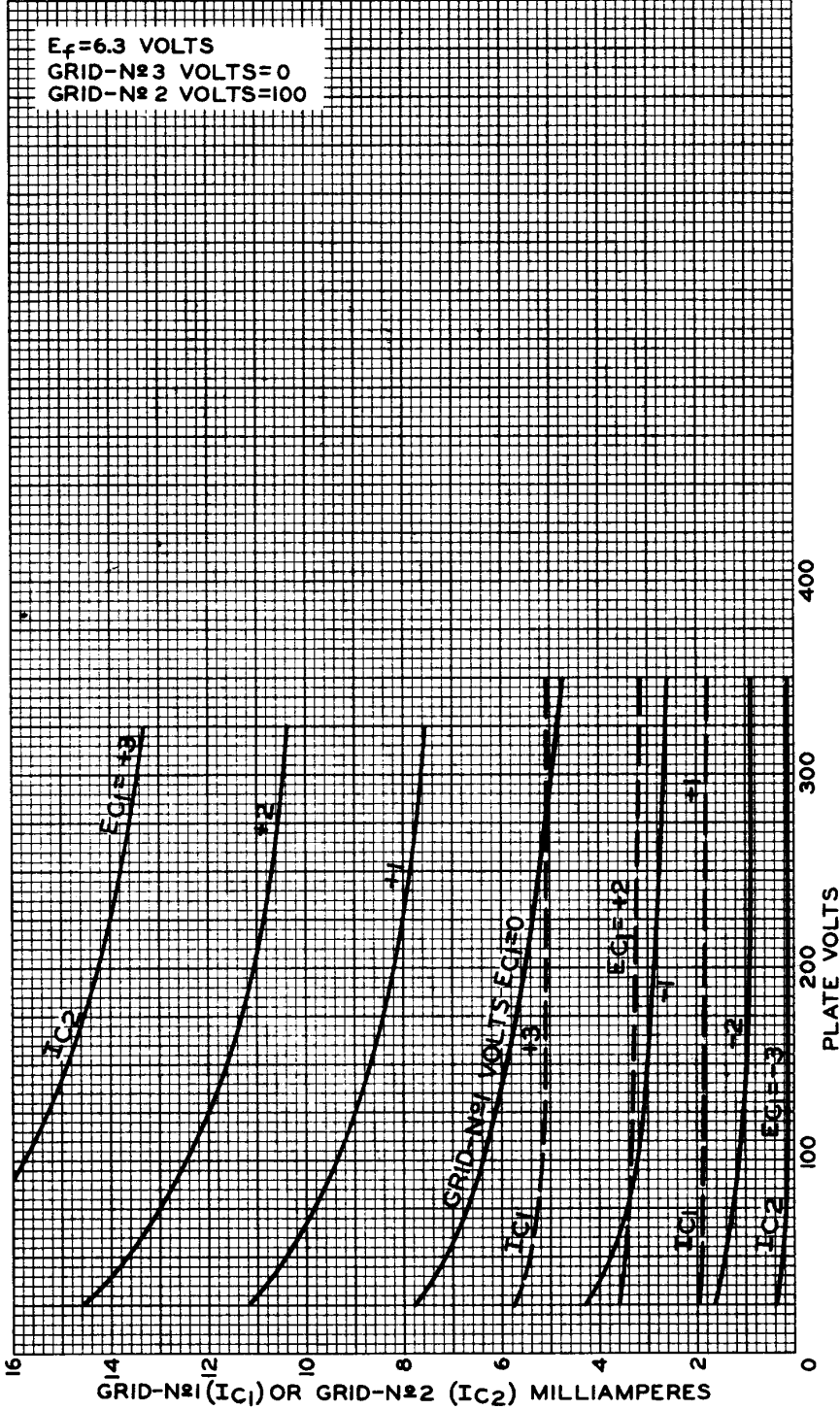




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### AVERAGE CHARACTERISTICS

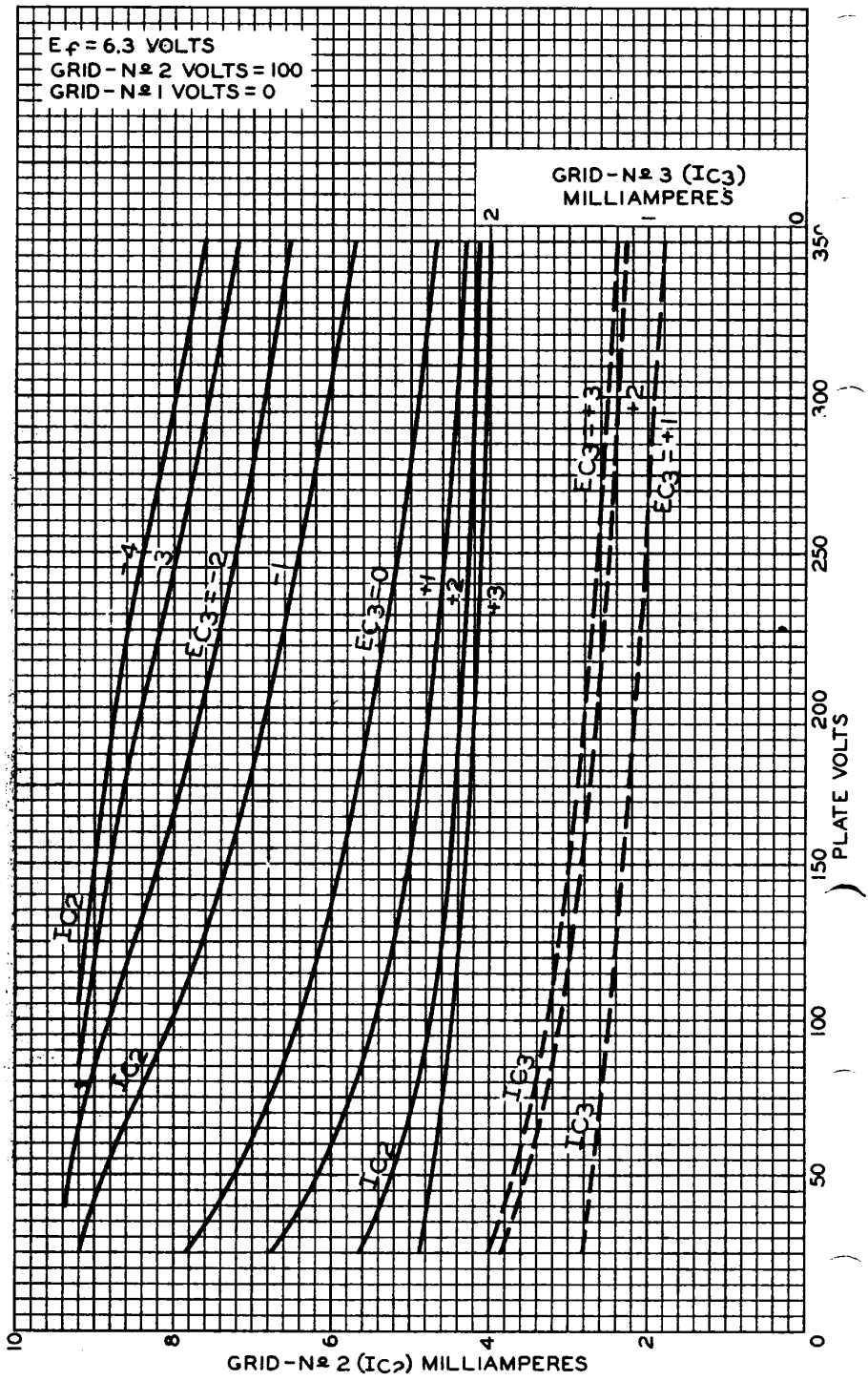


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### AVERAGE CHARACTERISTICS



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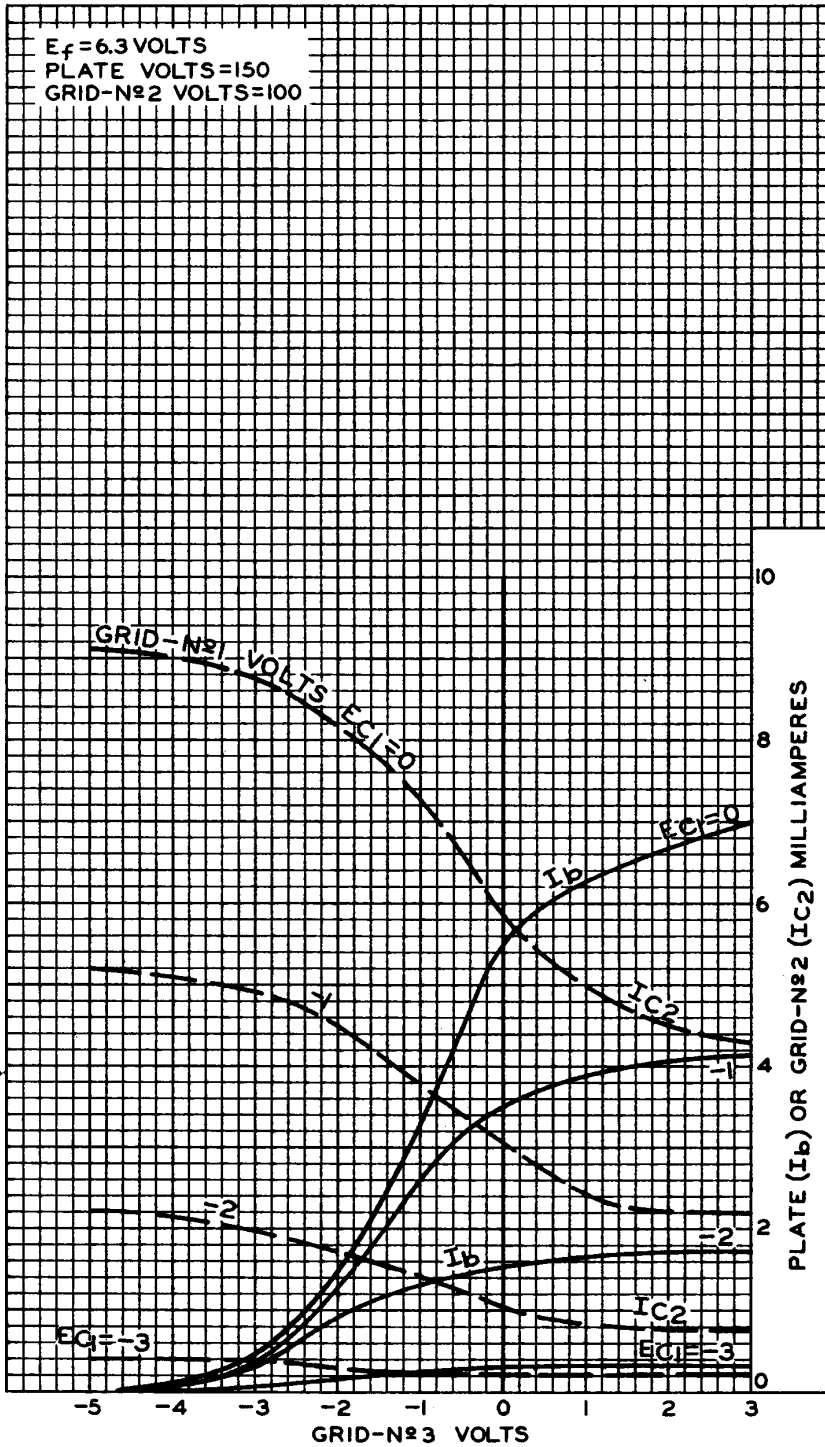
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### AVERAGE CHARACTERISTICS



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### AVERAGE CHARACTERISTICS

