

TYPES 6EC7 - 13EC7*

GENERAL

The 6F18 is a variable-mu HF. Pentode intended for use in AM/FM Receivers having parallel connected heater chains, and is suitable for use on A.C. Mains.

RATING

Heater Voltage (volts)	V _h	6.3
Heater Current (amps)	I _h	0.2
Maximum Anode Voltage (volts)	V _{a(max)}	250
Maximum Screen Voltage (volts)	V _{g2(max)}	250
Maximum Anode Dissipation (watts)	P _a	2.25
Maximum Screen Dissipation (watts)	P _{g2}	0.5
Maximum Heater to Cathode Voltage (Volts D.C.)	V _{h-k(max)}	150

INTER-ELECTRODE CAPACITANCES (pF)

Control Grid/Earth	c _{in}	5.2*	6.5**
Anode/Earth	c _{out}	5.0	6.3
Control Grid/Anode	c _{a-g1}	0.0017	0.0021

"Earth" denotes the remaining earthy potential electrodes, heater and shields connected to cathode.

* Inter-electrode capacity with holder capacity balanced out but with cylindrical screen can.

** Total capacity including Carr Fastener holder type 76/840E/T with radial shield and cylindrical screen. The ca-g1 holder Capacity can be reduced to 0.00004 pF by the insertion of a shield between pins 4 and 5, 9 and 1. If an unscreened holder is used (without can or skirt) the total a to g1 capacity with holder becomes 0.0025 pF.

DIMENSIONS

Maximum Overall length	(mm)	56.0
Maximum Diameter	(mm)	22.2 ^{7/8}
Maximum Seated Height	(mm)	49.0
Approximate Nett Weight	(ozs)	$\frac{1}{4}$
Approximate Packed Weight	(ozs)	$\frac{3}{4}$

MOUNTING POSITION

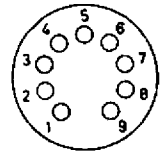
Unrestricted

TYPICAL OPERATION

Anode Voltage (volts)	V _a	175	175
Screen Voltage (volts)	V _{g2}	100	175
Grid Bias Voltage (volts)	V _{g1}	-1.3	
Anode Current (mA)	I _a	12.0	
Screen Current (mA)	I _{g2}	3.5	
Mutual Conductance (mA/V)	g _m	4.4	
Anode Impedance (kΩ)	r _a	220	
Bias to give mutual conductance of 100 μA/V (volts)			-19.5
Input Capacity working (Hot) (pF)	c _{in}	7.1	
Input Capacity change at cut-off (pF)	Δc	1.7	
Input Loss at 38 Mc/s, cathode pins strapped (kΩ)			16

BULB Clear T 6 1/2

BASE Noval (B.9.A.) E 9-1



View from free end of Pins

CONNECTIONS

Pin 1	Cathode	k
Pin 2	Control Grid	g1
Pin 3	Cathode	k
Pin 4	Heater	h
Pin 5	Heater	h
Pin 6	Internal Shield	s
Pin 7	Anode	a
Pin 8	Screen Grid	g2
Pin 9	Suppressor Grid	g3

9AQ

NOTES

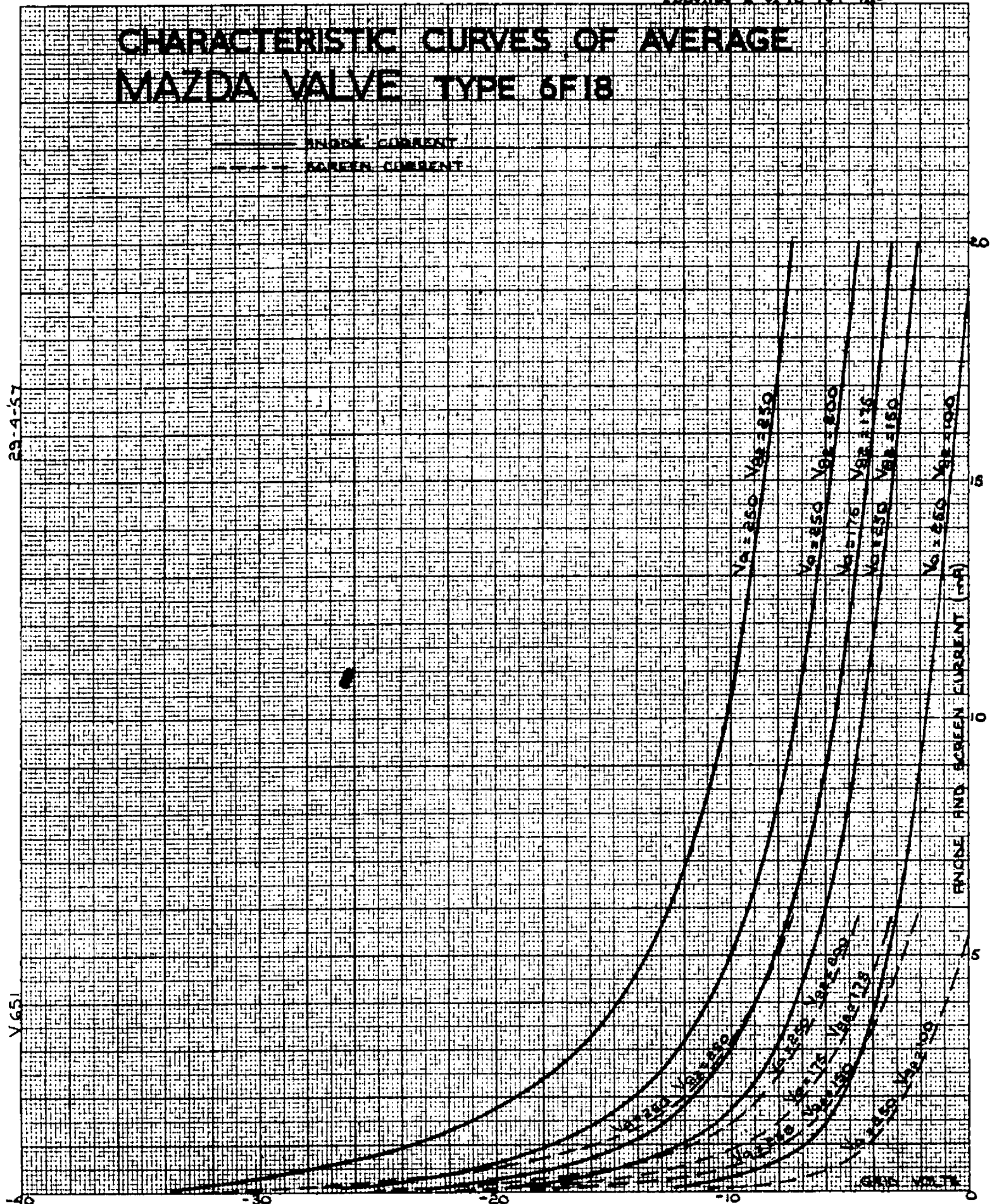
If only one cathode pin is required it is recommended that Pin 3 be used.

SIEMENS EDISON SWAN LIMITED

*The type 13EC7 is identical to the 6EC7, except for heater ratings of 13 volts @ 100 ma.

CHARACTERISTIC CURVES OF AVERAGE MAZDA VALVE TYPE 6F18

— ANODE CURRENT
- - - - - SCREEN CURRENT



29-4-57

V651

6

6

5

5

0

0

5

5

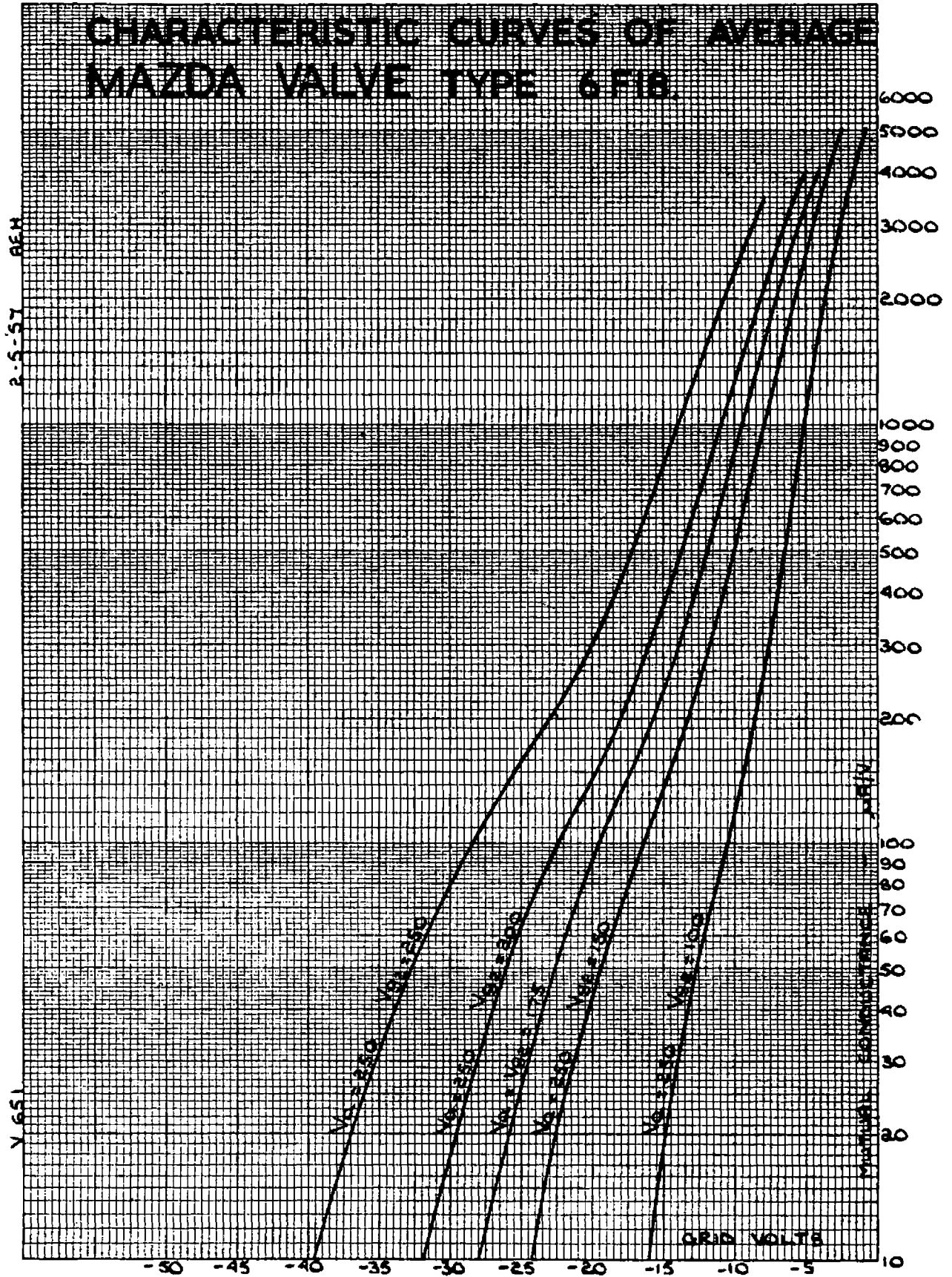
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ANODE AND SCREEN CURRENT (mA)

TYPES 6EC7 - 13EC7

TDS-No. 2-6F18-103-1A.



CHARACTERISTIC CURVES OF AVERAGE MAZDA VALVE TYPE 6F18

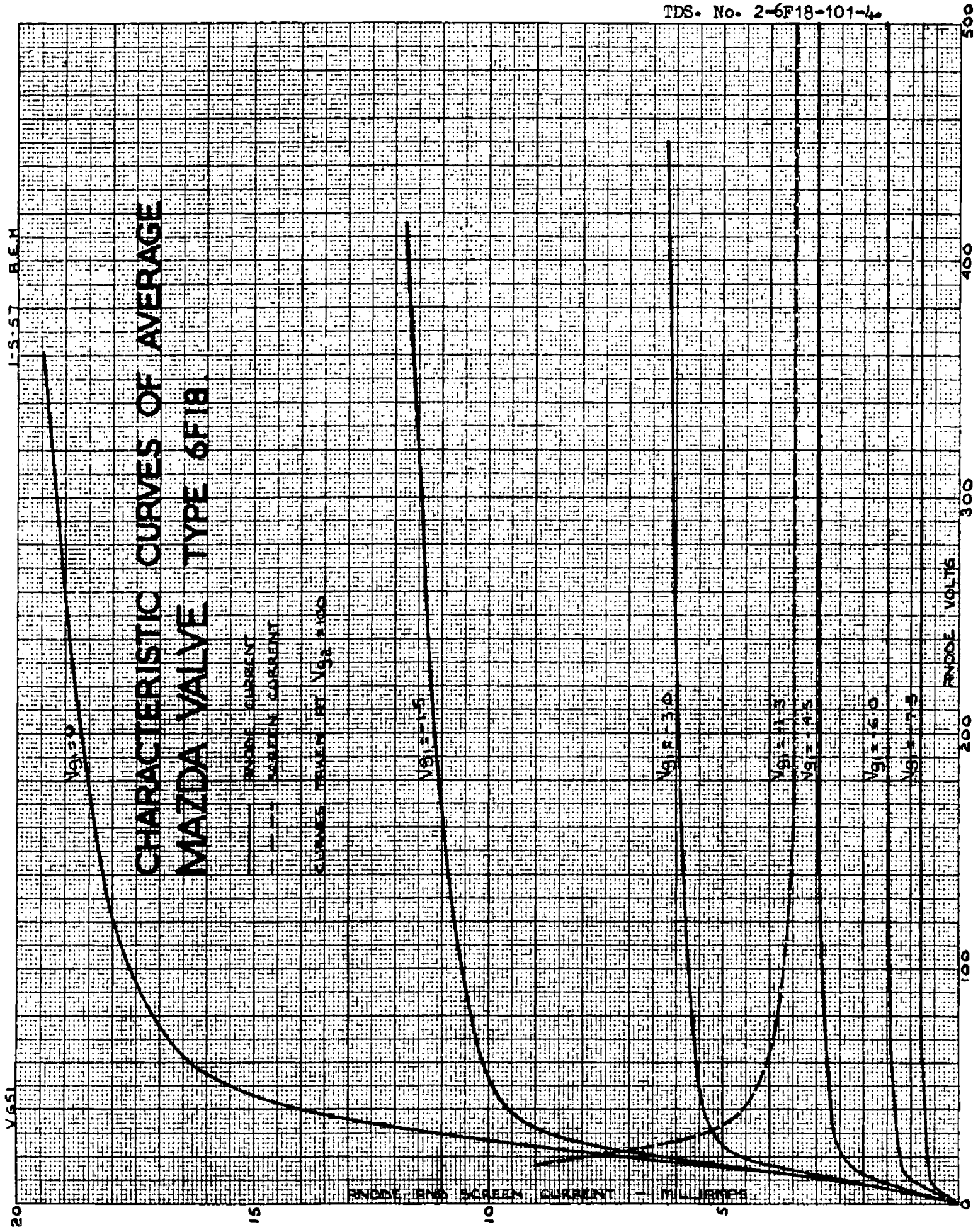


PLATE CURRENT
GRID 1 CURRENT

CURVES TAKEN AT 150 MA

ANODE VOLTAGE (V) SCREEN CURRENT (mA)

I-S-57 B.E.H.

ANODE VOLTS