

July 1, 1963

SHARP-CUTOFF PENTODE TYPE 8425

The 8425 is a 7-pin miniature, sharp-cutoff pentode type designed for service in wide band IF and RF amplifiers. It is operationally similar to type 6AU6 but has a higher transconductance-to-plate-current ratio.

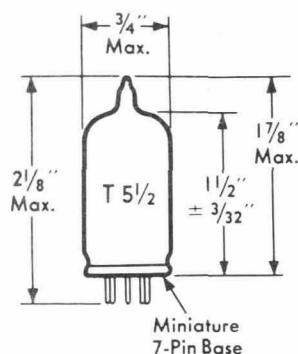
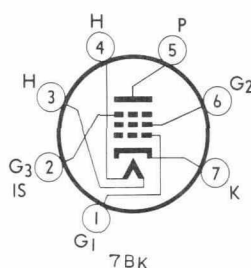
The 8425 features cathode materials and cathode coatings controlled for interface-free long life in industrial applications.

ELECTRICAL

Cathode	Coated Unipotential
Heater:	
Voltage (ac or dc)	6.3 ± 10% Volts
Current	0.30 Ampere
Direct Interelectrode Capacitances:	
Pentode Connection:	Unshielded
Grid to Plate (Max.)	0.0030 pf
Input	5.9 pf
Output	5.1 pf
Triode Connection (Note 1):	
Grid to Plate	2.5 pf
Input	3.6 pf
Output	1.1 pf

MECHANICAL

Bulb	T-5½
Base	Miniature 7-Pin (JEDEC E7-1)
Outline	5-2
Basing	7BK
Mounting Position	Any



MAXIMUM RATINGS

Design Maximum Values

	Triode Connection	Pentode Connection	
Plate Voltage	275	330	max. Volts
Grid 2 Supply Voltage	(Note 1)	330	max. Volts
Grid 2 Voltage	(Note 1)	See Grid 2 Input	
		Rating Chart	
Plate Dissipation	3.5	3.5	max. Watts
Grid 2 Dissipation	—	0.75	max. Watts
Grid 1 Voltage, Positive			
Bias Value	0	0	max. Volts
Heater-Cathode Voltage:			
Heater Negative with Respect to Cathode			
Total DC + Peak		200	max. Volts
Heater Positive with Respect to Cathode			
DC Component		100	max. Volts
DC + Peak		200	max. Volts
Cathode Interface Impedance after 1000			
Hour Life Test (Note 2)		5	max. Ohms

AMPLIFIER - CLASS A

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	100	250	250	Volts
Grid 2 Voltage	100	125	150	Volts
Grid 3 Voltage	Connected to Cathode			
Cathode Resistor	150	100	68	Ohms
Transconductance	4500	5500	6200	μmhos
Plate Resistance	0.6	1.3	1.1	Megohm
Grid 1 Cutoff Bias (Note 3)	-4.1	-4.9	-5.8	Volts
Plate Current	4.8	7.4	10.5	Ma.
Grid 2 Current	1.9	2.8	4.1	Ma.

CHARACTERISTICS (Triode Connected)

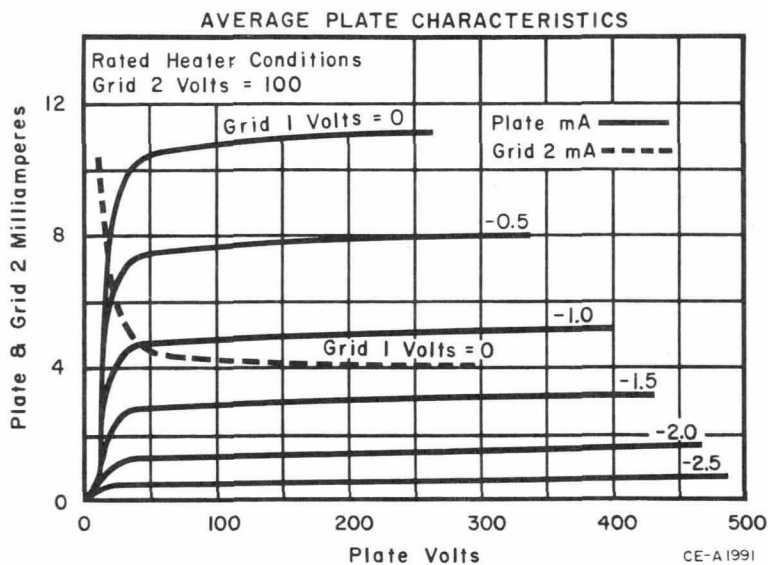
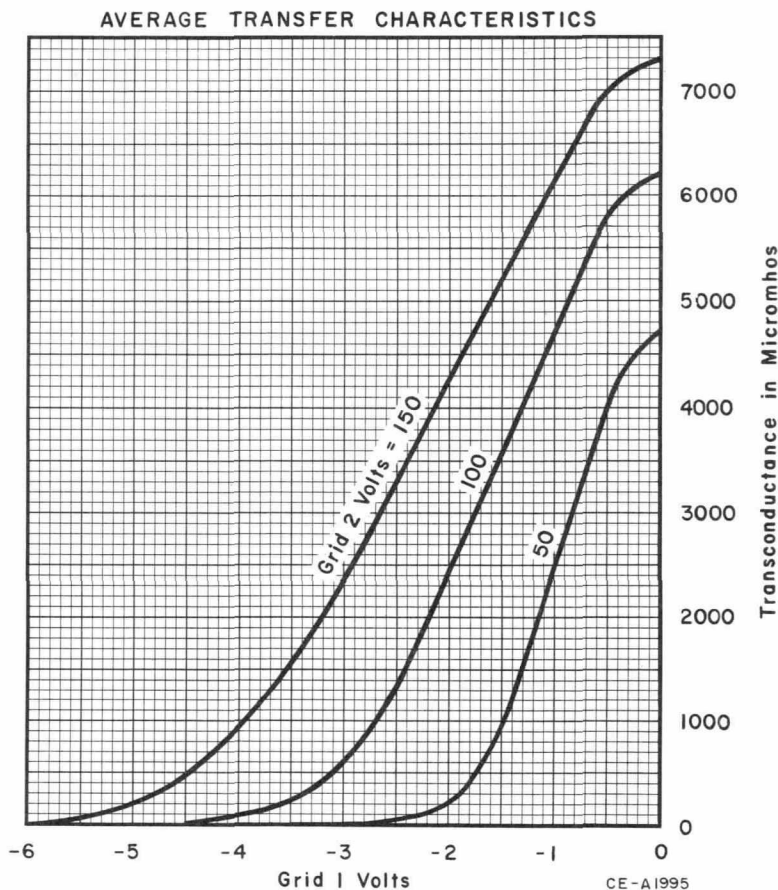
Plate Voltage	250	Volts
Cathode Resistor	330	Ohms
Amplification Factor	41	—
Transconductance	6000	μmhos
Plate Current	11.2	Ma.

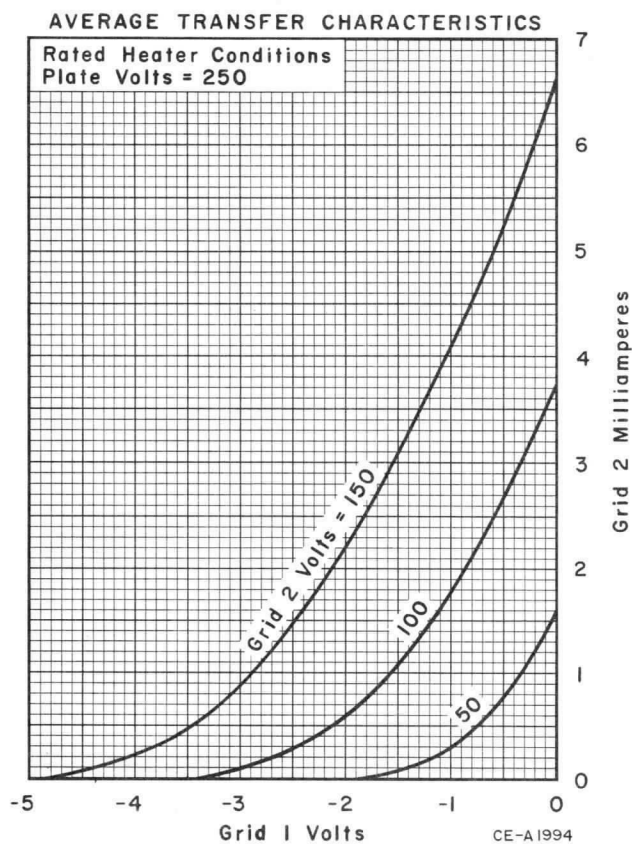
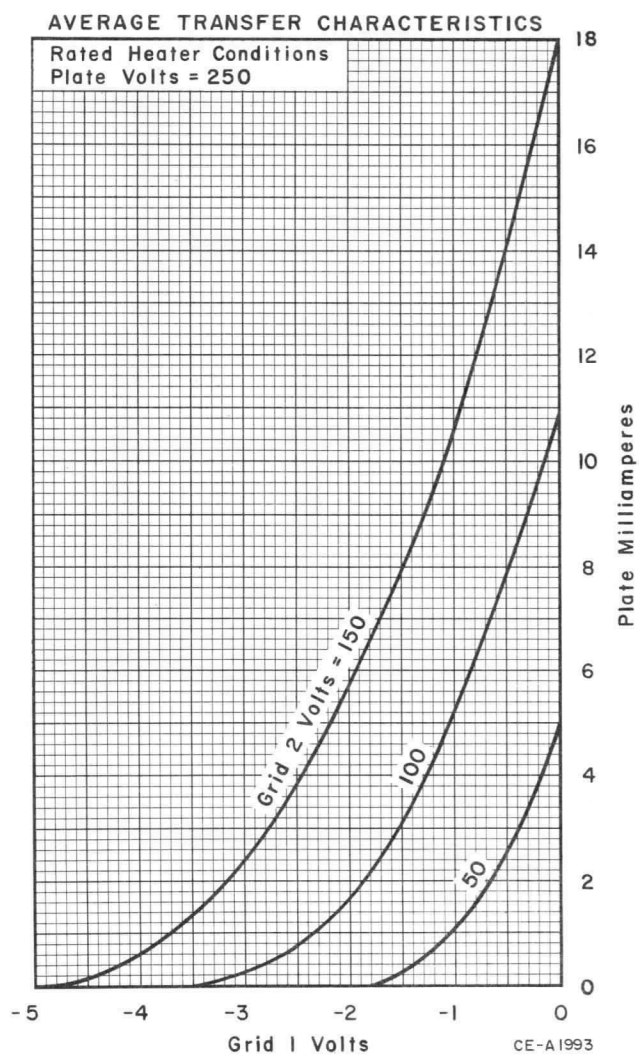
NOTES

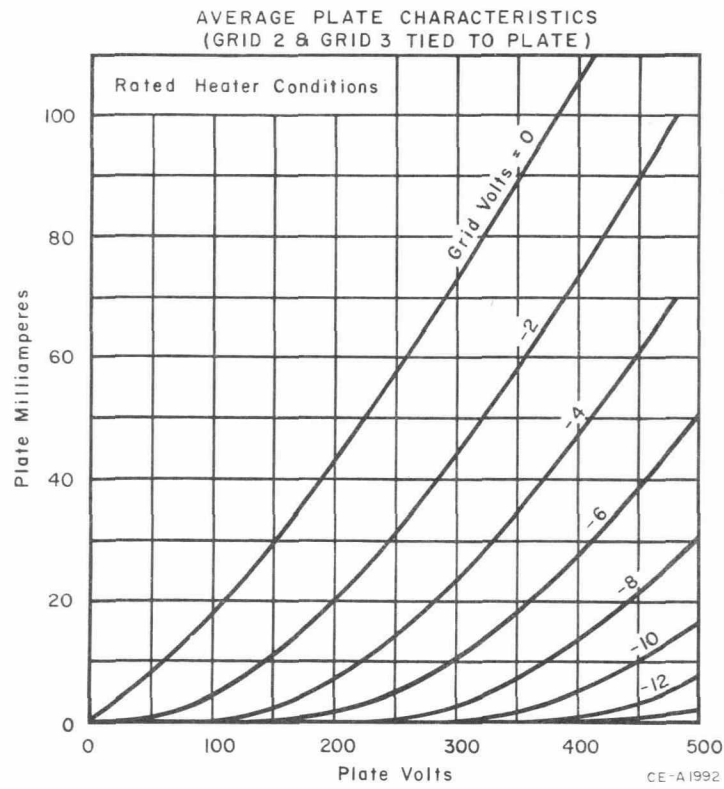
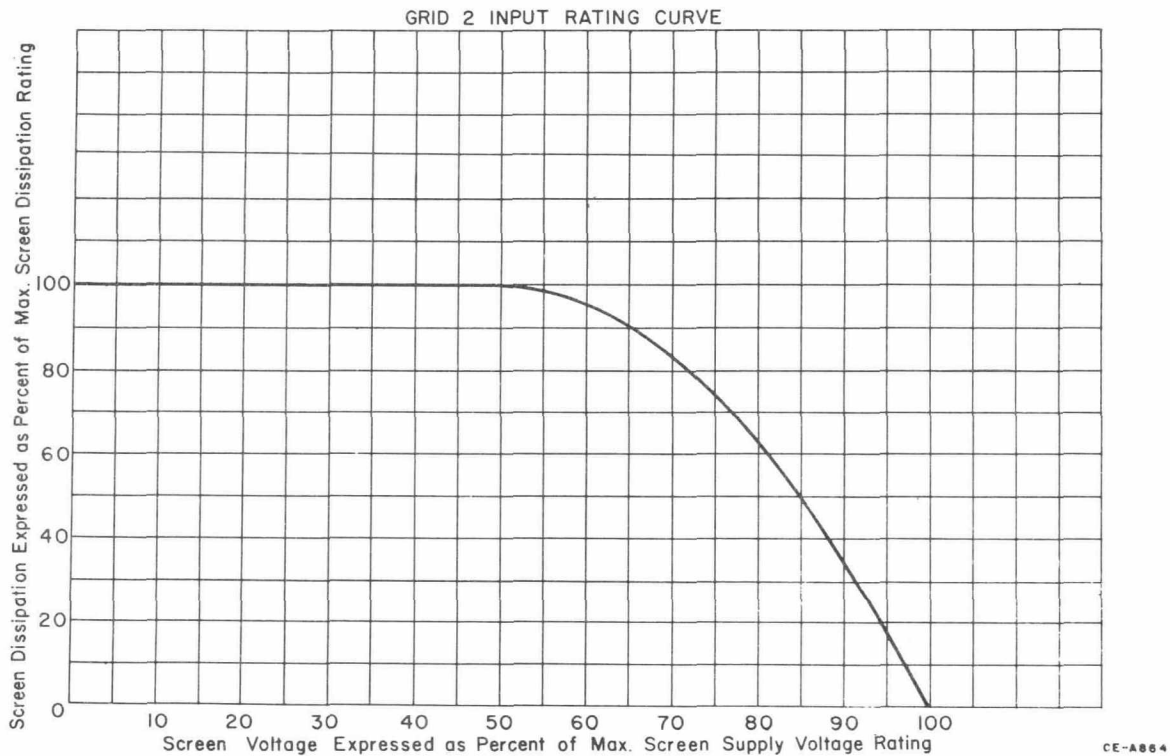
- Grids 2 and 3 connected to plate.
- Life Test Conditions:

Filament Volts = 6.5	Grid 1 Volts = -4.0
Plate Volts = 250	Grid 3 Volts = 0
Grid 2 Volts = 250	Cathode ohms = 0
Grid 1 Resistor = 250K	Heater to Cathode Volts = -200

 Cathode-Interface Impedance Test:
 As detailed in ASTM-F300-6 1T; appendix III
 with Filament Volts = 5.7.







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