

 **TUNG-SOL**

ELECTRON TUBE DATA

BEAM POWER PENTODE

The Tung-Sol 16KA6 is a T-12 compactron beam-power pentode primarily designed for use as a horizontal deflection amplifier in television receivers. A separate connection is provided for grid 3 (beam plates) in order to minimize "snivets".

MECHANICAL DATA

Cathode	Coated unipotential
Outline drawing	JEDEC 12-79
Maximum diameter	1.563 inches
Maximum seated height	3.250 inches
Minimum seated height	3.000 inches
Maximum overall length	3.625 inches
Bulb	T-12 glass
Base	Button 12 pin
Top cap	Skirted miniature
Pin connections	Basing diagram 12GH
Pin 1 - heater	Pin 7 - internal connection
Pin 2 - no connection	Pin 8 - no connection
Pin 3 - grid 2	Pin 9 - internal connection
Pin 4 - grid 3	Pin 10 - cathode
Pin 5 - grid 1	Pin 11 - internal connection
Pin 6 - no connection	Pin 12 - heater
Top cap - plate	
Mounting position	Any

ELECTRICAL DATAHeater Characteristics and Ratings - Design Maximum System

See EIA Standard RS-239

Average characteristics	15.8 volts	0.60	amps
Heater warm-up time		11	seconds
Limits of supplied current	0.60 ± 0.04		amp.
Maximum heater-cathode voltage			
Heater negative with respect to cathode			
Total DC and peak		200	volts
Heater positive with respect to cathode			
DC component		100	volts
Total DC and peak		200	volts

Formerly DT-979B

11/17/64

**TUNG-SOL ELECTRIC INC.**

ONE SUMMER AVENUE NEWARK 4, NEW JERSEY

Direct Interelectrode Capacitances - without external shield.

Grid 1 to plate	0.6	pf
Input (g1 to h+k+g2+g3)	23.0	pf
Output (p to h+k+g2+g3)	8.5	pf

Maximum Ratings - Design Maximum System - See EIA Standard RS-239

Horizontal-Deflection Amplifier Service

DC plate supply voltage (Boost & dc power supply)	770	volts
Peak positive pulse	6500	volts
Peak negative pulse	1500	volts
Grid 2 voltage	220	volts
Positive dc grid 3 voltage	70	volts
Negative grid 1 voltage	55	volts
Peak negative grid 1 voltage	330	volts
Plate dissipation	18	watts
Grid 2 dissipation	3.5	watts
DC cathode current	230	ma
Peak cathode current	800	ma
Grid 1 circuit resistance	1	megohm
Bulb temperature at hottest point	220	OC

Average Characteristics

Plate voltage	5000	60	60	130	volts
Grid 3 voltage	0	0	+25	0	volts
Grid 2 voltage	130	130	130	130	volts
Grid 1 voltage		0Δ	0Δ	-20	volts
Plate current		410	410	50	ma
Grid 3 current		-	2	-	ma
Grid 2 current		24	23	1.75	ma
Plate resistance (approx.)				11000	ohms
Transconductance				9,100	μmhos
Grid 1 voltage for					
$I_b = 1$ ma (approx.)	-66			-33	volts
Triode amplification factor				4.7	

Positive grid 3 voltage has little effect on the currents flowing under the above conditions of zero bias. It does effect a change in the shape of the plate voltage versus plate current curve, resulting in a smoothing of the knee characteristic and a slight lowering of the knee voltage.

Note:

- Δ The tube should be operated with a duty cycle such that the maximum dissipation ratings are not exceeded.