WESTERN ELECTRIC 6028 *ELECTRON TUBE

TYPE DESIGNATION REGISTRATION

DESCRIPTION

The 6028* is miniature type pentode having an indirectly heated cathode. It is designed for use in amplifier circuits at high and ultra high frequencies.

MECHANICAL DATA

Cathode	Coated Unipotential
Outline	5-1
Bulb	T 5-1/2
Base	E7-1 miniature button 7-pin
Mounting positions	Any
Maximum bulb diameter	3/4 inch
Maximum overall length	1-3/4 inch
Maximum seated height	1-1/2 inch
Pin connections	Basing No. 7BD

Pin #1 Grid #1
Pin #2 Cathode, grid #3 & internal shield
Pins #3 & #4 Heater
Pin #5 Plate
Pin #6 Grid #2
Pin #7 Cathode, Grid #3 & internal shield

ELECTRICAL DATA

Heater voltage	20 volts
Heater current	50 milliamperes

Direct interelectrode capacitances	without external shield	with external shield #316(a)
Grid to plate (g1 to p) maximum	.03	.02 uuf
Input: g1 to (h+k+g2+g3+i.s.)	4.0	4.0 uuf
Output: p to (h+k+g2+g3+i.s.)	2.1	2.8 uuf

(a) External shield #316 connected to pins #2 and #7

MAXIMUM RATINGS, DESIGN CENTER VALUES

Plate voltage	180 volts
Grid #2 voltage	See J5-C4
Grid #2 supply voltage	180 volts
Positive d-c grid #1 voltage	0 volts
Heater cathode voltage	75 volts
Cathode current	18 milliamperes
Plate dissipation	1.7 watts
Grid #2 dissipation	0.5 watt

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from RTMA releases #990, June 28, 1951 & 990A, Aug. 30, 1951

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS, CLASS A1 AMPLIFIER

Plate voltage	120 volts
Grid #2 voltage	120 volts
Grid bias resistor	180 ohms
Plate resistance (approx.)	0.30 megohm
Transconductance	5000 umhos
Plate current	7.5 milliamperes
Grid #2 current	2.5 milliamperes
Grid #1 voltage for I_b = 10 ua	−8.5 volts

*6028/408A

May 21, 1951

JETEC DATA
JOINT ELECTRON TUBE ENGINEERING COUNCIL
COMMITTEE ON RECEIVING TUBES

JETEC TYPE 6028

PENTODE

MECHANICAL DATA

Coated unipotential cathode

Outline drawing	5-1	Bulb	T-5-1/2
Base	E7-1 miniature button 7-pin		
Maximum diameter	3/4"		
Maximum overall length	1-3/4"		
Maximum seated height	1-1/2"		
Pin connections	Basing 7BD		

Pin 1 - Grid #1
Pin 2 - Cathode, grid #3, internal shield
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid #2
Pin 7 - Cathode, grid #3, internal shield

Mounting position . . . . . any

ELECTRICAL DATA

Direct Interelectrode Capacitances	Without Shield	With Shield*	
Grid to plate: (g1 to p) max.	0.03	0.02	μμf
Input: g1 to (h+k+g2+g3+i.s.)	4.0	4.0	μμf
Output: p to (h+k+g2+g3+i.s.)	2.1	2.8	μμf

*External shield #316 connected to pins 2 and 7.

Ratings

Heater voltage	20	volts
Maximum heater-cathode voltage	75	volts
Maximum plate voltage	180	volts
Maximum grid #2 voltage	See J5-C4	
Maximum grid #2 supply voltage	180	volts
Maximum plate dissipation	1.7	watts
Maximum positive dc grid #1 voltage	0	volts
Maximum cathode current	18	ma
Maximum Grid #2 dissipation	0.5	watts

Typical Operating Conditions and Characteristics, Class A1 Amplifier

Heater voltage	20	volts
Heater current	50	ma
Plate voltage	120	volts
Grid #2 voltage	120	volts
Cathode resistor	180	ohms
Plate resistance (approx.)	0.3	megohm
Transconductance	5000	μmhos
Plate current	7.5	ma
Grid #2 current	2.5	ma
Grid #1 voltage (approx.) for Ib = 10 μa	-8.5	volts

Refer to "Interpretation of Receiving Tube Ratings"