COMPACTRON

TECHNICAL DATA

GENERAL ELECTRIC COMPANY, OWENSBORO, KENTUCKY

from JEDEC release #2906,
Aug. 1, 1960

6C10

TRIPLE TRIODE

The 6C10 is a compactron containing three high-mu triodes. Features of the device include separate pin connections for all three cathodes, grids, and plates, a button base, and a compact glass envelope. The 6C10 is especially suited for use in resistance-coupled voltage amplifiers, phase inverters, and numerous industrial-control circuits when high voltage-gain is desired.

GENERAL

Electrical

Cathode - Coated Unipotential		
Heater Voltage, AC or DC	6.3±10%	Volts
Heater Current	0.45	Amperes
Direct Interelectrode Capacitances*		
Grid to Plate, Each Section	1.7	μμf
Input, Each Section	1.6	μμf
Output, Section 1	0.30	μμf
Output, Section 2	0.24	μμf
Output, Section 3	0.34	μμf

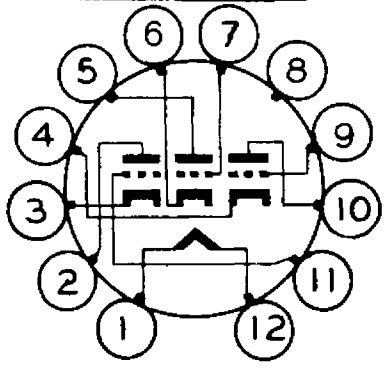
Mechanical

Mounting Position - Any		
Envelope - T-9, Glass		
Base - E12-70, Button 12-Pin		
Outline Drawing - EIA 9-62		
Maximum Diameter	1.188	Inches
Maximum Over-all Length	1.938	Inches
Maximum Seated Height	1.500	Inches

TERMINAL CONNECTIONS

Pin 1 - Heater
Pin 2 - Plate (Section 3)
Pin 3 - Cathode (Section 3)
Pin 4 - Cathode (Section 1)
Pin 5 - Plate (Section 2)
Pin 6 - Cathode (Section 2)
Pin 7 - Grid (Section 2)
Pin 8 - Internal Connection
Pin 9 - Grid (Section 1)
Pin 10 - Plate (Section 1)
Pin 11 - Grid (Section 3)
Pin 12 - Heater

BASING DIAGRAM



EIA 12BQ

CLIFTON, N. J. 200 E. Main Avenue (Clifton) GRegory 3-6387 (NYC) Wisconsin 7-4065, 6, 7, 8
NEWTONVILLE, MASS. 701 Washington St. WOodward 9-9420
WASHINGTON, D. C. 777—14th St., N.W. EXecutive 3-3600
CHICAGO, ILL. 3800 N. Milwaukee SPring 7-1600
DALLAS, TEXAS 3200 Maple Avenue Riverside 7-4296
SAN MATEO, CALIF. 442 Peninsular Ave. Diamond 2-7201
LOS ANGELES, CALIF. 11840 W. Olympic GRanite 9-7765 BRadshaw 2-8566

MAXIMUM RATINGS

Design-Maximum Values, Each Section

Plate Voltage	330	Volts
Positive DC Grid Voltage	0	Volts
Negative DC Grid Voltage	50	Volts
Plate Dissipation, Each Plate	1.0	Watts
Total Plate Dissipation, All Plates	3.0	Watts
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component	100	Volts
Total DC and Peak	200	Volts
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron device of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

These values are chosen by the device manufacturer to provide acceptable serviceability of the device, taking responsibility for the effects of changes in operating conditions due to variations in the characteristics of the electron device under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, variation in characteristics of all other devices in the equipment, equipment control adjustment, load variation, signal variation, and environmental conditions.

CHARACTERISTICS AND TYPICAL OPERATION

Class A_1 Amplifier, Each Section

Plate Voltage	100	250	Volts
Grid Voltage	-1.0	-2.0	Volts
Amplification Factor	100	100	
Plate Resistance, approximate	80000	62500	Ohms
Transconductance	1250	1600	Micromhos
Plate Current	0.5	1.2	Milliamperes

* Without external shield.

Nov. 28, 1960

Release No. 2906A
Type 6C10

As Registered

Heater Voltage, AC or DC	6.3 ± 10% Volts
Heater Current	0.45 Amperes

As Proposed

Heater Characteristics and Ratings (Design-Maximum Rating System)

	Series Heater Operation*	Parallel Heater Operation*
Heater Voltage, AC or DC	6.3≠	6.3 ± 0.6 Volts
Heater Current	0.6 ± 0.04	0.6 Amperes #
Heater Warm-up Time**	11	--- Seconds

* For parallel heater operation, the equipment designer shall design the equipment so that the heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance. For series heater operation, the equipment designer shall design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.

≠ Heater voltage at bogey heater current.

\# Heater current at bogey heater voltage.

** The time required for the voltage across the heater to reach 80 percent of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the rated heater voltage divided by the rated heater current.