

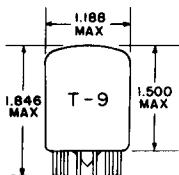
TUNG-SOL

THREE TRIODES

COATED UNIPOTENTIAL CATHODE

FOR SYNC CLIPPER AND
GATED AGC AMPLIFIER
SERVICE IN TV RECEIVERS

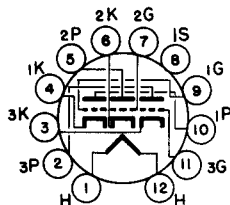
ANY MOUNTING POSITION



BUTTON
12 PIN BASE E12-70

OUTLINE DRAWING
JEDEC 9-56

GLASS BULB



BASING DIAGRAM
JEDEC 12BY

BOTTOM VIEW

THE 6Q11 CONSISTS OF THREE TRIODES IN A 12 PIN COMPACT CONSTRUCTION. TWO OF THE TRIODES HAVE A HIGH MU, THE OTHER HAS A MEDIUM MU. ONE OF THE HIGH MU SECTIONS IS ESPECIALLY SHIELDED FROM THE OTHER SECTIONS. EACH ELEMENT IS BROUGHT OUT TO A SEPARATE BASE PIN. THE 6Q11 IS DESIGNED FOR SYNC CLIPPER AND GATED AGC AMPLIFIER SERVICE IN TV RECEIVERS. THE HEATER MAY BE OPERATED FROM A TRANSFORMER OR IN A SERIES STRING.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

	TRIODE 1	TRIODE 2	TRIODE 3	
GRID TO PLATE	1.8	2.0	2.0	pf
INPUT: G TO (H+K+I.S.)	1.9	1.8	1.8	pf
OUTPUT: P TO (H+K+I.S.)	1.7	0.6	1.7	pf

HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	0.60	AMPS
HEATER WARM-UP TIME ^A		11	SECONDS
HEATER SUPPLY LIMITS:			
VOLTAGE OPERATION (AC OR DC)		6.3±0.6	VOLTS
CURRENT OPERATION (AC OR DC)		0.60±.04	AMPS
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK		200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS

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TUNG-SOL

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MAXIMUM RATINGS

DESIGN MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

	TRIODE 1	TRIODE 2 & 3	
PLATE VOLTAGE	330	330	VOLTS
NEGATIVE DC GRID VOLTAGE	100	100	VOLTS
POSITIVE DC GRID VOLTAGE	0	0	VOLTS
POSITIVE TRANSIENT GRID VOLTAGE	60	----	VOLTS
POSITIVE STEADY STATE PULSE VOLTAGE ^B	5	---	VOLTS
PLATE DISSIPATION, EACH	3	1.2	WATTS
GRID RESISTANCE	5.0	5.0	MEGOHM

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

	TRIODE 1	TRIODE 2 & 3 EACH		
PLATE VOLTAGE	150	100	250	VOLTS
GRID VOLTAGE	0	-1	-2	VOLTS
PLATE CURRENT	22	.5	1.2	MA.
TRANSCONDUCTANCE	2500	1250	1600	μMHOS
AMPLIFICATION FACTOR	18	100	100	
PLATE RESISTANCE	7000	8000	62500	OHMS
GRID VOLTAGE FOR I _b = 10 μA (APPROX.)	-13	---	-4.5	VOLTS

PULSE AMPLIFIER^B

PLATE VOLTAGE	30	---	VOLTS
GRID VOLTAGE	30	---	VOLTS
PEAK CATHODE CURRENT	200	---	MA.
RATIO PLATE CURRENT TO GRID CURRENT	1.0	---	

A

HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

B

THE DURATION OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE HORIZONTAL SCANNING CYCLE. IN A 525-LINE, 30-FRAME SYSTEM, 15% OF ONE HORIZONTAL SCANNING CYCLE IS 10 MICROSECONDS.