

TUNG-SOL

SUPER CONTROL RF AMPLIFIER PENTODE

MIDGET TYPE

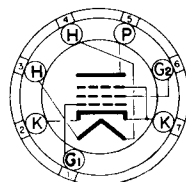
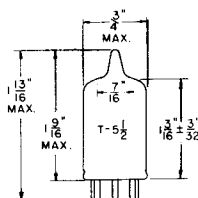
COATED UNIPOTENTIAL CATHODE

HEATER^A6.3 VOLTS 0.15 AMPERE
AC OR DC

GLASS BULB

MINIATURE BUTTON 7 PIN BASE

MOUNTING POSITION - ANY



BOTTOM VIEW

THE 9003 IS A REMOTE CUT-OFF MIDGET TYPE PENTODE INTENDED FOR USE AS AN AMPLIFIER AND MIXER AT ULTRA HIGH FREQUENCIES. ITS CONSTRUCTION, INCLUDING DOUBLE CATHODE LEADS, PERMITS CIRCUITS TO BE DESIGNED WITH EXTREMELY SHORT LEADS AND WITH MINIMUM INTER-CIRCUIT COUPLING. ELECTRICALLY ITS CHARACTERISTICS ARE IDENTICAL WITH TYPE 956.

RATINGS*

MAXIMUM PLATE VOLTAGE	250	VOLTS
MAXIMUM SCREEN VOLTAGE	100	VOLTS
MINIMUM GRID VOLTAGE	-3	VOLTS
MAXIMUM PLATE DISSIPATION	1.7	WATTS
MAXIMUM SCREEN DISSIPATION	0.3	WATT

* INTERPRETED ACCORDING TO RMA STANDARD M8-210

DIRECT INTERELECTRODE CAPACITANCES

MAXIMUM GRID TO PLATE (WITH EXTERNAL SHIELD)	0.01	μf
INPUT (WITH NO EXTERNAL SHIELD)	3.4	μf
OUTPUT (WITH NO EXTERNAL SHIELD)	3.0	μf

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

PLATE VOLTAGE	250	VOLTS
SCREEN VOLTAGE	100	VOLTS
GRID VOLTAGE	-3	VOLTS
PLATE RESISTANCE (APPROX.)	0.7	MEGOHM
TRANSCONDUCTANCE	1800	μMHOS
GRID BIAS FOR TRANSCONDUCTANCE OF 15 μMHOS	-35	VOLTS
GRID BIAS FOR TRANSCONDUCTANCE OF 2 μMHOS	-45	VOLTS
PLATE CURRENT	6.7	MA.
SCREEN CURRENT	2.7	MA.

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MIXER IN SUPERHETERODYNE CIRCUIT

PLATE VOLTAGE	250	VOLTS
SCREEN VOLTAGE	100	VOLTS
GRID VOLTAGE (APPROX.) ^B	-10	VOLTS
CONVERSION TRANSCONDUCTANCE (APPROX.)	600	μMHOS

^A WHEN THE CATHODE IS NOT DIRECTLY CONNECTED TO THE HEATER THE POTENTIAL DIFFERENCE BETWEEN HEATER AND CATHODE SHOULD BE KEPT AS LOW AS POSSIBLE.

^B VALUES INDICATED ARE OPTIMUM. FOR AN OSCILLATOR PEAK VOLTAGE OF 9 VOLTS THE GRID BIAS IS MINIMUM.

TO PROVIDE THE SHORTEST POSSIBLE CIRCUIT RETURNS AND TO PREVENT INTER-STAGE COUPLING AT ULTRA HIGH FREQUENCIES, EACH RF AMPLIFIER STAGE MAY REQUIRE RF BY-PASSING AND SHIELDING. THIS CAN BE ACCOMPLISHED BY PLACING SMALL CONDENSERS CLOSE TO THE TUBE TERMINALS. IN ADDITION RF CHOKES MAY BE REQUIRED IN THE SUPPLY OF RETURN LEADS OF THE TUBE ELEMENTS.

THIS TUBE HAS TWO CATHODE LEADS. IF THE GRID RETURN IS CONNECTED TO ONE CATHODE TERMINAL AND THE PLATE AND SCREEN RETURNS ARE CONNECTED TO THE OTHER CATHODE TERMINAL, THE PLATE AND SCREEN RF CIRCUITS WILL BE COMPLETED WITH A MINIMUM OF INDUCTANCE IN COMMON WITH THE GRID CIRCUITS.