

12AJ7 is a 9-pin miniature type triode-heptode designed for use as a frequency converter, IF and RF amplifier of transformer-less AM/FM receivers.

BASE E9-1 Small Button Noval 9-Pin

MOUNTING POSITION—Any

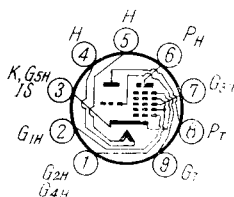
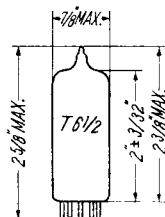
HEATER

Voltage12.6 (V)

Current0.15 (A)

DIRECT INTERELECTRODE CAPACITANCES

(Without Shield)	Triode Unit	Heptode Unit	
Grid No. 1 to Plate	1.0	0.006 max.	(pF)
Input	2.6	4.8	(pF)
Output	2.1	7.9	(pF)
Grid No. 3 to All	—	6.0	(pF)
Plate to Plate	0.2		(pF)



MAXIMUM RATINGS (Design Center Values)				TYPICAL OPERATION			
	Triode Unit	Heptode Unit			Heptode Unit (Con- verter)	RF/IF Amp.	Triode Unit (Class A ₁ Amp.)
Plate Voltage	250	240	(V)	Plate Voltage	100	100	100 (V)
Grid No. 2 Supply				Grid No. 3 Voltage			
Voltage	—	125	(V)			0	(V)
Plate Dissipation	0.8	1.7	(W)	Grid No. 2 & No. 4			
Grid No. 2 Dissipation	—	1.0	(W)	Voltage	63	60	(V)
Total Cathode Current	6.5	12.5	(mA)	Grid No. 1 Voltage			
Peak Heater—Cathode Voltage					—1.1	—1.1	0 (V)
Heater negative with				Grid No. 3 & Triode			
respect to cathode		100	(V)	Grid Resistor	47	—	(kΩ)
Heater positive with				Plate Current	1.7	3.4	13.5 (mA)
respect to cathode		100	(V)	Grid No. 3+Triode			
Grid No. 1 Circuit				Grid Current	115		(μA)
Resistance	3.0	3.0	(MΩ)	Grid No. 2+No. 4			
				Current	3.7	2.2	(mA)
				Transconductance			
						2,000	3,700 (μS)
				Conversion Trans-			
				conductance	620		(μS)
				Plate Resistance			
				(Approx.)	800	450	(kΩ)
				Amplification Factor			
							22
				Grid No. 1 Voltage (Approx.)			
				$G_m = 20 \mu S$	—	—16.5	(V)
				$G_r = 6.2 \mu S$	—14.5	—	(V)

TYPICAL CIRCUIT

