



## Preferred Series 7189 Pentode – For Power Amplifier Applications

The 7189 is a power amplifier pentode designed for use in audio-frequency power output stages of high fidelity amplifiers, guitar amplifiers, and other radio receivers. The 7189 is interchangeable with EL84 and 6BQ5 tubes. The 7189 differs from EL84 and 6BQ5 tubes in that it has a higher maximum plate wattage, plate voltage, and screen voltage rating.

The 7189 tube is rated for higher power and plate voltage plus longer life making it a premium upgrade for amps with tough operating conditions. The solid construction and heavy glass also minimize microphonics. For the hifi crowd, this tube is the perfect choice for Scott, Eico and Fisher amps. Our Preferred Series 7189 starts life as a NOS (New Old Stock) Russian 6P14P-EV as translated from Cyrillic. It is a military build that meets or exceeds the USA made 7189 specifications.

Preferred Series tubes combine the best of everything that thetubestore.com has to offer. All of our years of experience in testing, rating, listening, and customer knowledge are brought together for the best tube value we can provide. These are tubes that consistently provide us with the most positive customer feedback, have the best build quality, and which we subject to our most exhaustive testing yet.

### Characteristics:

#### Electrical

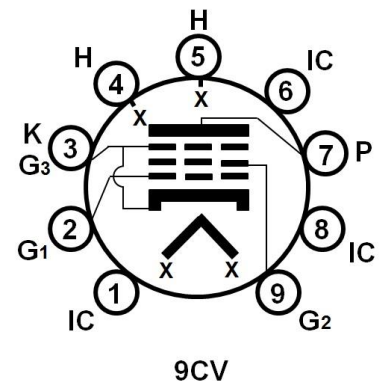
Heater:	Min.	Nom.	Max.
Voltage (AC or DC)	5.7V	6.3V	7.0 V
Current	0.76 A		
Cathode:	Oxide-coated, unipotential		
Cathode-to-heater potential, max.	+200 V		
Direct interelectrode capacitances, max.***			
Grid no.1 to cathode and grid no.3, grid no.2, base sleeve and heater	<10.8 pF		
Plate to cathode and grid no.3, grid no.2, base sleeve and heater	<6.5 pF		
Grid no.1 to plate	<0.50 pF		

#### Mechanical

Operating Position	Any
Basing	Miniature Button, 9CV
Dimensions:	
Height	76 mm
Seated height	70 mm
Diameter	21.65 mm

#### AF Power Amplifier - Maximum ratings

Plate Voltage	440 V
Screen Voltage	400 V
Grid no.1 Circuit Resistance:	
Fixed Bias	0.3 Megaohm Max.
Cathode Bias	1.0 Megaohm Max
DC cathode current	65 mA
Plate dissipation	14 W
Screen dissipation	2.2W



9CV

Bottom View

## Typical Operation

### AF Power Amplifier, Class A1 (single tube)

Plate Voltage	250 V
Screen Voltage	250 V
Grid 1 Voltage	-7.3 V
Peak AF Grid 1 Control Voltage	14 V
Zero Signal Plate Current	48 mA
Maximum Signal Plate Current	49.5 mA
Zero-Signal Grid 2 Screen Current (average)	5 mA
Maximum-Signal Grid 2 Screen Current (average)	10.8 mA
Transconductance (nominal)	11.500 $\mu$ Mhos
Load Resistance	5200 Ohms
Output Power	5.9 W
Total Harmonic Distortion	10%

### AF Power Amplifier, Class AB1 Push-Pull (two tubes)

Plate Voltage	400 V
Screen Voltage	300 V
Grid 1 Voltage*	- 15 V
Peak AF Grid 1 Control Voltage	30 V
Zero Signal Plate Current	15 mA
Maximum Signal Plate Current	105 mA
Zero-Signal Grid 2 Screen Current (average)	1.6 mA
Maximum-Signal Grid 2 Screen Current (average)	25 mA
Transconductance (nominal)	11.300 $\mu$ Mhos
Load Resistance	8000 Ohms
Output Power	24 W
Total Harmonic Distortion	4%

\*Approximate value – set as need for proper operation

### AF Power Amplifier, Class AB1 Ultra-Linear (two tubes)

Plate Voltage	375 V
Screen Voltage	Obtained from screen winding of output transformer
Grid 1 Voltage*	Will vary
Zero Signal Plate Current	70 mA
Maximum Signal Plate Current	80 mA
Zero-Signal Grid 2 Screen Current	not applicable
Maximum-Signal Grid 2 Screen Current	not applicable
Transconductance (nominal)	11.300 $\mu$ Mhos
Load Resistance	11000 Ohms
Output Power	16.5 W
Total Harmonic Distortion	3%

\*Approximate value – set as need for proper operation

