

ELECTRONIC TUBE REFERENCE

6ES6

Voltage Pentode - Remote Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

Variable-transconductance pentode for RF or IF amplification and mixer service in automobile radios. Its remote-control characteristic permits gain regulation while low-voltage operation suits car-radio circuitry.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	50000 Ω
TRANSCONDUCTANCE	0.0021 S
MAXIMUM PLATE VOLTAGE	50 V
MAXIMUM SCREEN VOLTAGE	50 V
MAXIMUM PLATE DISSIPATION	0.5 W
MAXIMUM SCREEN DISSIPATION	0.5 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Rogers 6ES6 variable-transconductance/remote-cutoff seven-pin 7EN miniature pentode for RF/IF amplifying and mixer service in storage-battery car radios; heater 6.3 V 0.3 A. Design-center limits: plate 50 V, screen grid-2 50 V, plate 0.5 W, screen 0.5 W, cathode current 15 mA. At V_a 25 V, V_{g2} 6.3 V, g_3 0 V, grid-1 approximately -0.7 V: anode current ~ 3.3 mA, screen current 0.95 mA, gm 2100 μmhos (0.0021 S), plate resistance 0.05 MΩ (50 kΩ), equivalent noise resistance $\sim 5000 \Omega$. Alternate low-voltage operating points have different gm/rp. Gain-control bias reduces gm to 1/10 near -3.5 V, confirming variable-μ behavior. Mixer conversion conductance about 600 μmhos under separate oscillator injection is NOT intrinsic gm and must not overwrite section transconductance. Capacitances published input ~ 6.5 pF/output 4.0 pF/grid-to-plate 0.015 pF.</i>	

Variable-transconductance pentode for RF/IF amplifier or mixer service in car radios.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1959 Rogers

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1959 ROGERS

Section 1 · Pentode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cutoff characteristic	Variable transconductance	—

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	RF / IF amplifier / mixer	—