

ELECTRONIC TUBE REFERENCE

6509

Specialized - Ignitron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

IGNITRONPOWERSWITCH

Water-cooled mercury-pool ignitron for railroad-locomotive rectifier and auxiliary-power service.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 IgnitronPowerSwitch	
PEAK INVERSE VOLTAGE	2100 V
NOMINAL OUTPUT CURRENT	200 A
PEAK FORWARD CURRENT	1800 A
<i>Special-purpose data not represented by fixed promoted fields are preserved in TUBE_SECTION_PARAMETER. Ignitron/mercury-pool data semantically matching rectifier inverse-voltage and current fields were promoted; remaining grid, ignitor, auxiliary-anode, thermal, and fault ratings are parameters.</i>	

The GL-6509 is a water-cooled mercury-pool ignitron for railroad-locomotive rectifier service, designed for auxiliary power where GL-6504 tubes provide the main supply and also suitable as a main source in multiple-unit car installations.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · IgnitronPowerSwitch

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The GL	6509 C	The GL-6509 is an ignitron for railroad locomotive rectifier service. This tube
the GL	6504 C	The GL-6509 is an ignitron for railroad locomotive rectifier service. This tube
Inlet Water Temperature minimum	30 C	The GL-6509 is an ignitron for railroad locomotive rectifier service. This tube
Water Temperature Rise maximum L	5 C	The GL-6509 is an ignitron for railroad locomotive rectifier service. This tube
Pressure Drop at	3 gal/min	The GL-6509 is an ignitron for railroad locomotive rectifier service. This tube
Maximum Inverse Voltage	5 V	Power-Rectifier Service #, ASA - Continuous Duty
Root Mean Square	15 A	Power-Rectifier Service #, ASA - Continuous Duty
Average	2 A	Power-Rectifier Service #, ASA - Continuous Duty
Maximum Averaging Time	10 s	Power-Rectifier Service #, ASA - Continuous Duty

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

[Catalog](#)
[Tube types](#)
[Full books](#)
[Blog](#)
[Feedback & corrections](#)

© 2026 Tube Tinker