

Specifications for 1560/1561 Variable Load Card

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General

This module, intended for the Xitron 1500 series chassis, allows the user to select one of three filament values and a tube load value between 0 and 2046 (1560) or 65024 (1561) ohms in 2 ohm steps up to 1022ohms, 4 ohm steps up to 2044 ohms, 128 ohm steps up to 20352 ohms, 512 ohm steps at 20480 ohms and above, or open circuit may be selected.

Each module physically takes two (1560) or three (1561) slots in the chassis and accommodates one tube load (with both filaments).

The tube load value (except for changes to the open circuit condition) may be performed in the presence of a signal, provided the user limits the current to within 1.5A peak.

Specifications

Open Circuit Voltage	2000Vpk max.
Tube Load Current	Values < 256ohm : <500mArms (continuous) Values 256-510ohm : <360mArms (continuous) Values 512-1022ohm : <300mArms (continuous) Values 1022-2046ohm : <220mArms (continuous) Values 2048-3968ohm : <90mArms (continuous) Values 4096-8064ohms : <45mArms (continuous) Values 8192-16256ohms : <25mArms (continuous) Values 16384-32256ohms : <12mArms (continuous) Values >32256ohms : <8mArms (continuous) All Values : <1.5A peak instantaneous
Tube Load Tolerance	1% + 0.3ohm
Filament Load Tolerance	5% + 0.1ohm
Filament Load Current	<1Arms (continuous), <2A peak instantaneous
Filament Load Power	<4.5W total per filament (average)
Load Capacitance	Values < 128ohm : <30pF ³ Values 128-2046ohm : <40pF ^{1 3} Values 2048-20352ohm : < 40pF ² Values >20352ohm : < 27pF Open Circuit : < 10pF ¹ – Integer increments of 128ohms < 27pF ³ ² – Integer increments of 2048ohms < 27pF ³ – As shown for 1561, 4pF lower for 1560

Filament Load Values

The user may select any three values for filament loads. Since there is no allowance for determining the actual filament load value fitted, the user should not mix filament load selections within a facility.

Programming with the 2574R

The load for each tube is selected using codes 7000 through 9999. The first digit selects one of the three filament load values, the last three digits represent the tube load resistance. The values represented by the last three digits are encoded as follows :-

Codes 000 – 511 : Value = Code x 2

Codes 512 – 767 : Value = ((Code-512) x 4) + 1024

Codes 768 – 911 : Value = ((Code-768) x 128) + 2048

Codes 912 – 999 : Value = ((Code-912) x 512) + 20480

E.G.

1. to select the first filament load value, and a tube load of 100 ohms, the user selects code 7050.
2. to select the first filament load value, and a tube load of 2000 ohms, the user selects code 7756.
3. to select the second filament load value, and a tube load of 20000 ohms, the user selects code 8908. The actual value will be nominally 19968 ohms.

Firmware Support in the 2574R and 1500 Chassis

This module is only supported by 2574R firmware revision 5.0 onwards, and 1500 chassis revision 3.0 onwards.