Osram

Made in England.

Maximum Dimensions :

Overall length (including pins) 115 m/m.

Diameter of bulb 50 m/m.

GASFILLED RELAY

TYPE GT1A.

ARGON FILLED GRID-CONTROLLED RECTIFIER

(Indirectly Heated Cathode)

The OSRAM GT1A Gasfilled Relay comprises an indirectly heated cathode, an anode, and a control grid, and is enclosed in a bulb filled with argon.

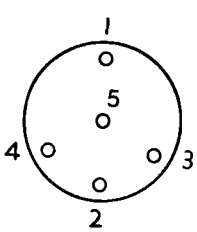
Current is carried through the Relay by the passage of electrons from Cathode to Anode, under the influence of a positive anode potential. By application of a sufficiently large negative grid bias, the flow of anode current will be withheld until either the anode voltage is increased, or the negative grid voltage reduced to a critical ratio. Once the discharge has been produced the grid has normally no longer any power to control it.

The use of a permanent gas filling such as argon in place of mercury vapour ensures a practically constant characteristic under normal variations of room temperature.

CHARACTERISTICS :

Heater Voltage	4.0 volts minimum
Heater Current	1.3 amp. approx.
Maximum Safe Anode Voltage	300 volts (peak value)
Maximum Safe Anode Current	0.6 amp. (peak value) .3 amp. (R.M.S. value) .2 amp. (measured on moving coil meter)
Anode-Cathode Voltage Drop	15 volts
Grid Control Ratio	20
Cathode heating time..	30 seconds minimum

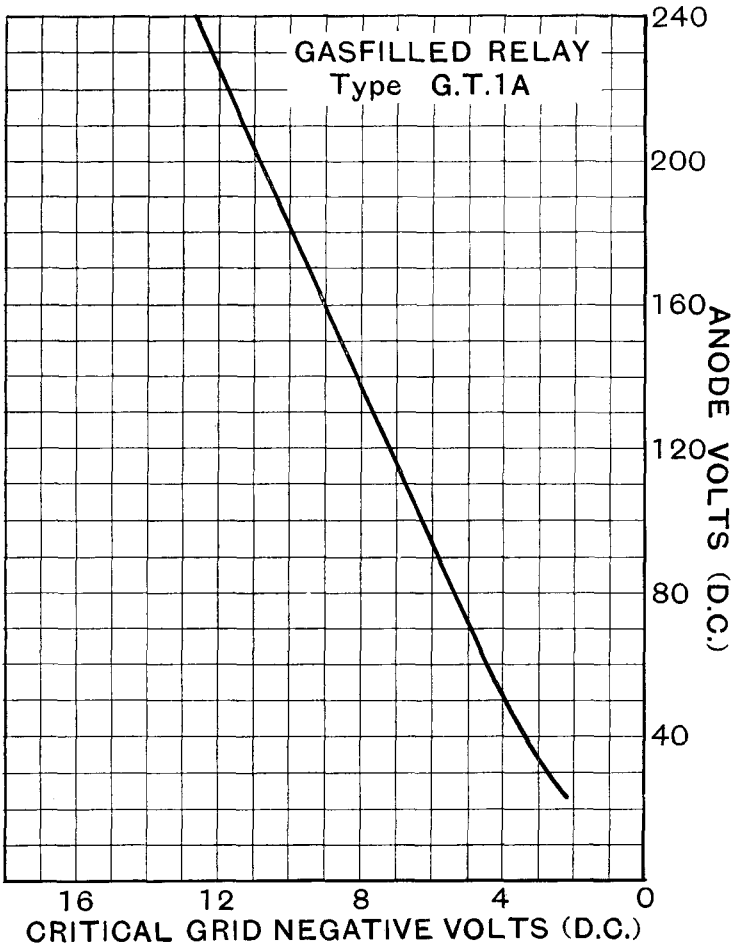
For prices see pages 126-129.



View looking on erside of base.

BASE, 5-pin.
Pin 1 : Anode
2 : Grid
3 : Heater
4 : Heater
5 : Cathode

TYPE GT1A.



CHARACTERISTIC CURVE OF AVERAGE VALVE.

OPERATING CONDITIONS :

It is essential that the cathode [should be allowed at least 30 seconds to reach full operating temperature before any anode current is allowed to flow. Disregard of this precaution will cause cumulative destruction of the cathode, and change of characteristics due to clean-up of the gaseous filling.

It is also essential that the anode current shall never, even momentarily, exceed the ratio peak current of 0.6 ampere. This requires particular attention in circuits where condensers may charge or discharge through the gasfilled relay.

A large voltage difference between heater and cathode should be avoided. A floating heater circuit tends to cause irregularity of control. A resistance of at least 1,000 ohms should be included in the grid circuit in order to prevent excessive grid currents. It is recommended that the total impedance of the grid circuit be kept below 100,000 ohms.