

DIODES AND VARISTORS

IDENTIFICATION

1.00 INTRODUCTION

1.01 This section identifies diodes and varistors used in station apparatus. It is reissued to:

- Add information on diodes which are being included in this section for the first time.
- Add information on new varistors.
- Change the Section title from Varistors to Diodes and Varistors.

1.02 Due to extensive changes, marginal arrows have been omitted.

2.00 GENERAL

2.01 Diode and varistor numbering is as follows:

- Varistors start numbering with 1 and end with 317.
- Diodes start numbering with 400 and continue numbering higher.
- Varistors formerly numbered in the 400 series are now called diodes. They will keep the same numbering.

2.02 For diode and varistor connection information, see the sections covering the type of apparatus in which they are used.

2.03 Diode and varistor definitions and precautions to be taken while working on them can be found in C Section entitled Procedures To

Be Followed When Working on Circuits Containing Diodes, Varistors, or Transistors.

2.04 For a complete list of all types of diodes and varistors with their description, see the Western Electric Company Apparatus Card Catalog.

3.00 IDENTIFICATION

3.01 There are two types of mountings:

- Nonterminal: No electrical conductor is used to mount the diode or varistor.
- Terminal: One or more of the electrical conductors is used for mounting the diode or varistor.

3.02 This section does not identify diodes and varistors which form component parts of station apparatus. Component parts of station apparatus normally cannot be ordered separately.

3.03 Diodes used in station apparatus are described in Table A and shown in Fig. 1 and 2. The table gives typical uses of the diodes, but does not give all the uses.

3.04 Table B describes varistors used in station apparatus. The table gives typical uses of the varistors, but does not give all the uses. (See Fig. 3, 4, and 5.)

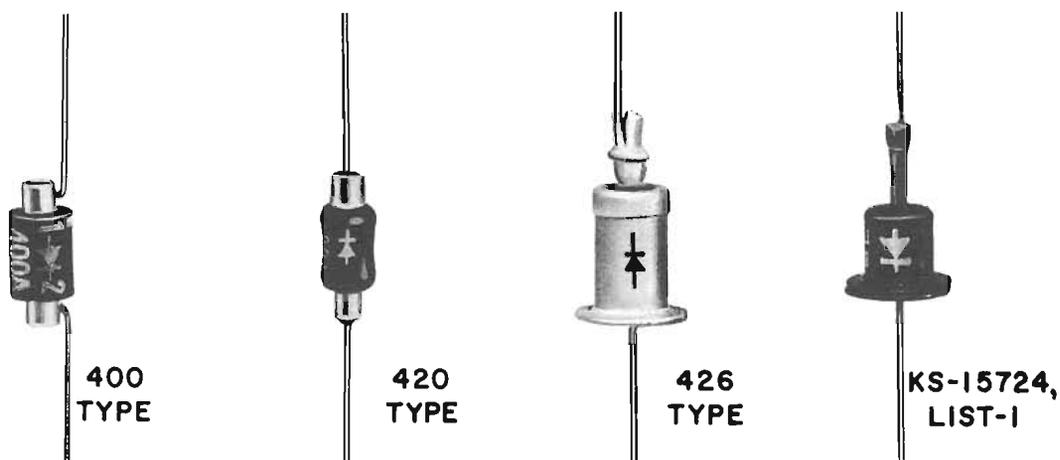


Fig. 1 – Diodes

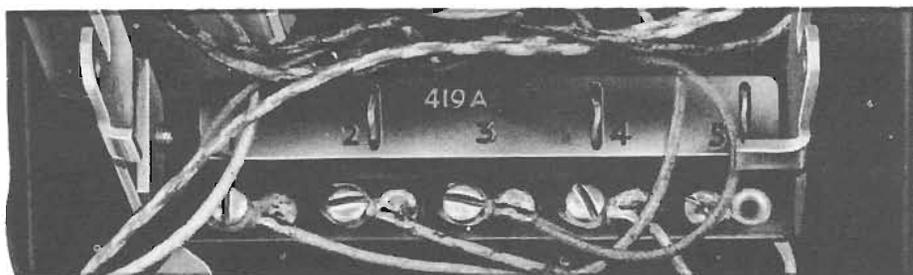


Fig. 2 – 419A Diode

TABLE A
DIODES

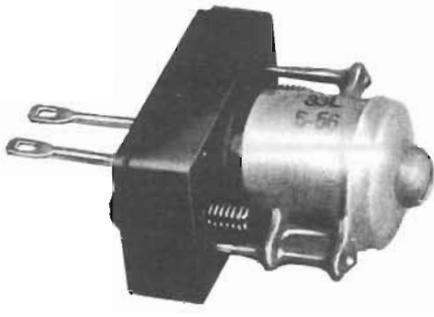
Type	Description	Use
400A	Germanium crystal rectifier with wire terminals	Key telephone units 55A control unit
400E		Ringup circuit, key telephone unit 1B telephone answering set
419A	Four germanium crystal rectifiers wired to terminal block	Polarizing network for 151A amplifier used in telephone sets
420B	Hermetically sealed silicon alloy with wire terminals	Dial restriction on multikey sets
420G		570-type telephone set
426E	Silicon diode in metal case with wire terminals	Surge protector in 8A and 9A announcement systems
KS-15724, List 1	Germanium rectifier in metal case with wire terminals	Busy lamp circuit, 1A1 key telephone system 55A control unit

TABLE B
VARISTORS

Type	Fig.	Description	Use
3B*	3	Two 3/4-inch-diameter copper-oxide discs on mounting bracket	Reduces clicks in receiver Replaces 3A varistor
20A*	5	Nine 3/4-inch-diameter copper-oxide discs on mounting bolt	531 and 687 subscriber sets
27B*	5	Eight 3/4-inch-diameter copper-oxide discs on insulated base	Ringup relay circuit in key telephone units
30A*	5	Nine 3/4-inch-diameter copper-oxide discs on mounting bracket	
31A†	4	Four 3/16-inch-diameter copper-oxide discs sealed in insulating material	Reduces clicks on postpay coin collectors
33L*	3	Four 3/4-inch-diameter copper-oxide discs on insulated base	Reduces clicks in receiver Replaces 4A and 33A varistors
37A†	4	Two 1/2-inch-diameter copper-oxide discs. One terminal used for mounting	Reduces noise on coin collectors
37B†			Reduces noise on telephone sets which use 101 induction coils
37C†			Reduces noise on D-type hand set mountings
44A†	5	Two 1/2-inch-diameter copper-oxide discs in a metal case	Reduces clicks in U1 and U2 receivers
100A†	5	Two silicon discs encased in resin with wire terminals	Reduces clicks in U1 and U2 receivers 55A control unit
101A†	–	Group of seven 100A varistors	55A control unit
307A*	5	Silicon-carbide disc on mounting bracket	103A key equipment
313B*	5	Silicon-carbide disc on mounting bolt	32A key telephone unit
316A*	5	Two 3/4-inch silicon-carbide discs in a metal case	Prevents false relay operation 1A1 key equipment ringup circuit
317A†	5	A 3/4-inch silicon-carbide disc with a coating of insulating material and wire terminals	Ringup circuit 1A1 key equipment
317B†			Prevents false relay operation 1A1 key equipment ringup circuit

* Nonterminal mounted.

† Terminal mounted.

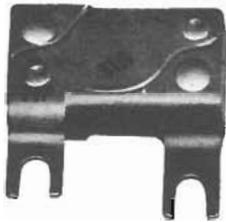


33L

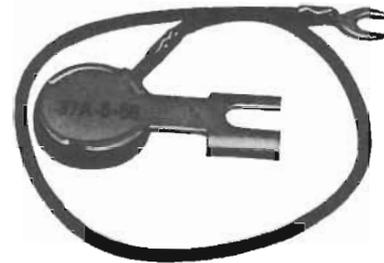


3B

Fig. 3 – Varistors



31A



37A



37B

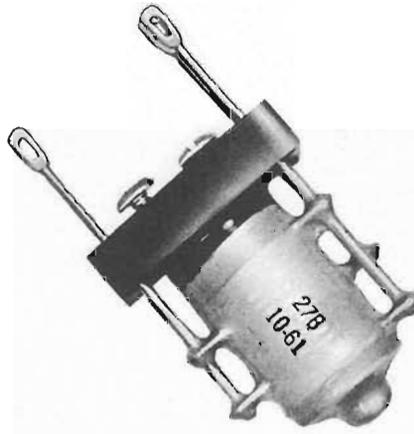


37C

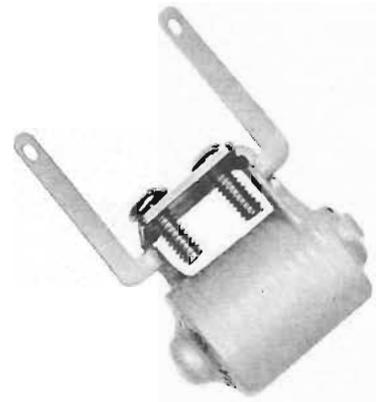
Fig. 4 – Varistors



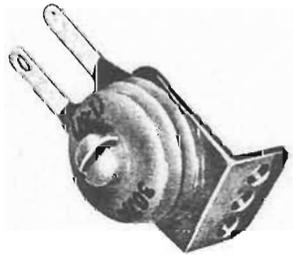
20A



27B



30A



307A



313B



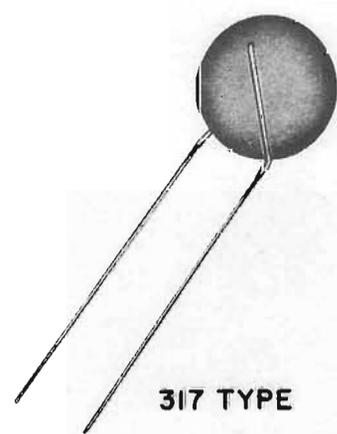
316A



44A



100A



317 TYPE

Fig. 5 — Varistors