



ANSI/EIA-520CAAD-A-1992
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EIA-520CAAD -A

EIA SPECIFICATION

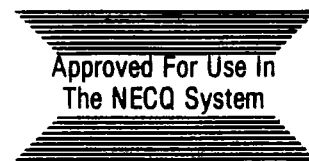
Detail Specification for Sensitive Switches, Single Break Contacts, Sub-subminiature Size 7 A

EIA-520CAAD-A

(Revision of EIA-520CAAD)

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ELECTRONIC INDUSTRIES ASSOCIATION
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(From Standards Proposal No. 2236-A formulated under the cognizance of P-13.3 Subcommittee on Sensitive, Pushbutton & Keyboard Switches)

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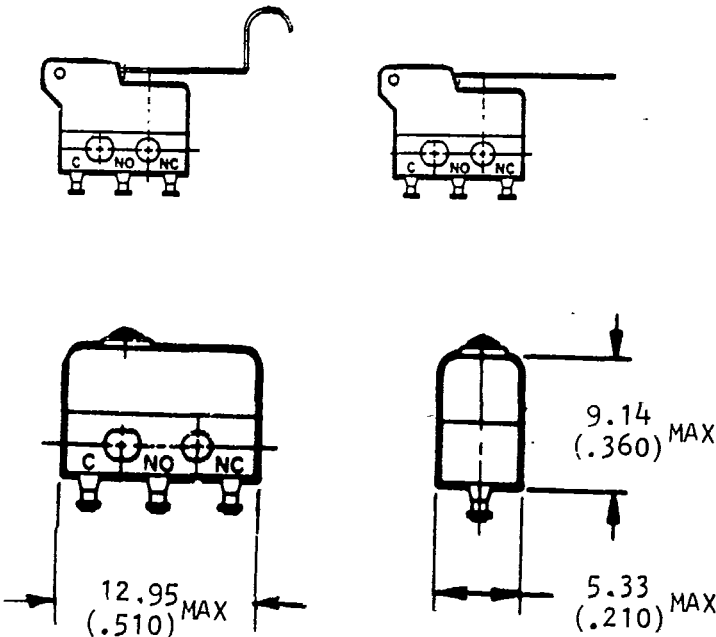
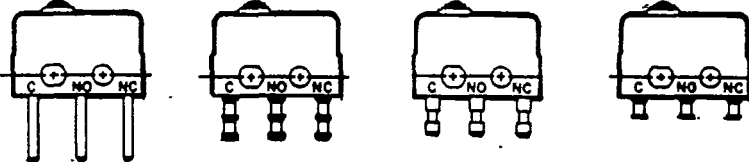
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National standards Organization Electronic Industries Association 2001 Eye Street N. W. Washington, D.C. 20006	Detail Specification Number EIA 520CAAD-A
Generic Specification Number Electronic components of assessed quality in accordance with EIA-5200000	Blank Detail Specification EIA 520CA00
Outline Drawings - Maximum envelope   SEE FIGURES 1 THRU 3 FOR DETAIL DIMENSIONS	Product Description - sensitive switches - single break switches - sub-subminiature size - single pole - 7 A max. current rating - 250 Vac Max. voltage rating - logic level ratings - 7 types of actuators - 7 types of terminals Electrical Circuit momentary action Form C: double throw contacts Typical Construction housing - plastic actuator: pin plunger - plastic lever - metal Application/Assessment Level Electrical or electronic equipment

Information on the availability of components
 qualified to this specification is given in
 the Qualified Products List



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SECTION ONE - GENERAL DATA**1.0 General data****1.1 Dimensional Parameters****1.1.1 Mounting Dimensions**

The mounting dimensions shall be in accordance with Figure 1 and are common to all switches covered by this detail specification. The configuration is optional within the specified dimensions. The original dimensions are in inches.

1.1.2 Actuator Dimensions

The actuator dimensions shall be in accordance with Figure 1 for pin plunger actuators and Figure 2 for other integral actuator styles.

1.1.3 Terminal Dimensions

The terminal dimensions shall be in accordance with Figure 3. The dashed lines represent the maximum dimensions within which the terminals must be located. The terminal location within the specified envelope is optional.

1.2 Ratings and Characteristics**1.2.1 Electrical Ratings**

Electrical - power
 - logic level
 - low level

See Table I.
 5 V, 10 mA for rating code G only.
 30 mV, 10 mA for rating code G only.

TABLE I - ELECTRICAL RATING CODES

Rating Codes	sea level			50,000 feet
	125 V ac 60 Hz	250 V ac 60 Hz	28 V dc	28 V dc
M	7 A	---	7 A	4 A
S5	5 A	5 A	5 A	---
S7	7 A	7 A	7 A	---
G	1 A	---	1 A	1 A

1.2.2 Environmental Ratings

Altitude	50,000 feet.
Corrosive gases	Not applicable.
Fluid resistance	Not applicable.
Fungus resistance	Applicable.
Icing	Not applicable.
Moisture Resistance	Applicable.
Random vibration	Not applicable.
Salt spray	96 hours.
Sand and dust	Not applicable.
Shock	
- For Environmental Category "E"	
- Actuator Type 1	100 G's, half-sine.
- all other actuators	50 G's, half-sine. When tested with the leaf or lever actuator in the free position, a mechanical stop shall be used to prevent the actuator from exceeding its maximum free position.
- For Environmental Category "F"	
- Actuator Type 1	100 G's, sawtooth.
- all other actuators	Not applicable.
Temperature (operating)	-55°C to +85°C.
Thermal Shock	-55°C to +85°C.
Vibration	
- For Environmental Category "E"	
- Actuator Type 1	20 G's, 10-2000 Hz.
- all other actuators	10 G's, 10-500 Hz. When tested with the leaf or lever actuator in the free position, a mechanical stop shall be used to prevent the actuator from exceeding its maximum free position.
- For Environmental Category "F"	
- Actuator Type 1	10 G's, 10-500 Hz.
- all other actuators	Not applicable.

1.2.3 Mechanical Characteristics

Effects of soldering	Applicable. See 2.3.
Flammability	Applicable.
Immersion in solvents	Applicable to Terminal Types 4 thru 7 only.
Low temperature operation	Applicable.
Mass	.045 kg (0.1 lb) maximum.
Operating characteristics	See Table V.
Sealing	Not applicable.

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Strength of

- actuator

Type 1 (pin plunger)

Types 2 and 3 (levers)

- mounting bushing

- screw mounting

- termination

Types 1 and 2

Types 3 thru 7

Solderability

4.5 kg (10 lb).

.23 kg (0.5 lb).

Not applicable.

0.1 N-m (0.9 lb-in).

4.0 kg (8.8 lb). Both Type I
and II tests apply.

4.0 kg (8.8 lb).

Applicable to solder terminals
(Type 1, 2 and 4) only.1.2.4 Electrical characteristics

Actuator grounding

Altitude voltage proof

Capacitance

Contact bounce

Endurance

- electrical

- electrical rating code M

- other electrical rating codes

- logic level

- low level

- mechanical

Category E

Category F

Insulation resistance

Overload

Switch resistance

- specified current

- at rated load

Applicable to electrical rating codes S5 and S7.

Temperature rise

Voltage proof

Not applicable.

400 V rms at 50,000 ft.

Not applicable.

6 ms max. for rating code G.

25,000 cycles at +85°C with no
sticks or misses permitted.25,000 cycles at atmospheric
conditions with no sticks or
misses permitted.

25,000 cycles

25,000 cycles

1,000,000 cycles except for
Electrical Rating Code S7 (7A)
which shall be 250,000 cycles.
50,000 cycles.

1,000 megohms.

Applicable.

.050 ohm maximum for electrical
rating code G.1% maximum of the impedance of
the electrical load.

30°C maximum.

1000 V ac



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