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EIA RS-377

***Metallized Dielectric Capacitors
in Metallic and Non-Metallic Cases
for Direct Current Application***

RS-377



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Engineering Department

ELECTRONIC INDUSTRIES ASSOCIATION

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METALLIZED DIELECTRIC CAPACITORS IN METALLIC AND NON-METALLIC CASES FOR DIRECT CURRENT APPLICATION

(From Standards Proposal No. 1045, formulated under the cognizance of EIA Working Group P-2.2 on Film, Paper and Plastic Dielectric Capacitors.)

1. SCOPE

1.1 This standard covers the general requirements for direct current (D.C.) metallized electrode, film and/or paper dielectric fixed capacitors in metallic and non-metallic cases. Capacitors listed in this standard are used primarily for filtering, bypass, coupling and blocking purposes where D.C. voltages predominate. They are characterized by small size (compared to metal foil electrode capacitors) and by the ability to "clear", or resume functioning, within specification limits, following momentary breakdowns. Applications using capacitors described in this standard should be those where high values of insulation resistance are not essential and where momentary breakdowns can be tolerated. A.C. application information is given in paragraph 5.0.

1.2 Portions of EIA Standards RS-186 and RS-178, when specified form a part of this standard.

2. STANDARD DESIGNATION AND STYLES

2.1 The EIA Standard designation shall consist of eight constituent parts as illustrated below.

<u>377C</u>	<u>26</u>	<u>A</u>	<u>1</u>	<u>L</u>	<u>B</u>	<u>104</u>	<u>K</u>
Class	Style	Terminal	Circuit	Characteristic	Voltage	Capacitance	Tolerance
2.1.1	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7	2.1.8

2.1.1 Class Designation

2.1.1.1 Class designation signifies the component is a capacitor made to the requirements of EIA Standard RS-377.

2.1.2 Style Designation

2.1.2.1 Style designation distinguishes the configuration and construction features. A detailed parts specification with pertinent data on each listed style is contained in the appendices of this Standard.

2.1.2.1.1 Style 08 is a hermetically sealed, metal cased tubular capacitor with axial leads and uninsulated case.

2.1.2.1.2 Style 09 is a hermetically sealed, metal cased tubular capacitor with axial leads and insulated case.

2.1.2.1.3 Style 24 is a round, plastic film wrapped capacitor with plastic end seals and radial leads.

2.1.2.1.4 Style 25 is a round, plastic film wrapped capacitor with plastic end seals and axial leads.

2.1.2.1.5 Style 26 is a flat oval, plastic film wrapped capacitor with plastic end seals and axial leads.

2.1.2.1.6 Style 27 is a flat oval, plastic film wrapped capacitor with plastic end seals and radial leads.

2.1.2.1.7 Style 30 is a round, plastic tube cased capacitor with plastic end seals and axial leads.

2.1.2.1.8 Style 31 is a pre-molded, plastic cased, rectangular capacitor with plastic end seals and axial leads.

2.1.2.1.9 Style 32 is a pre-molded, plastic cased, rectangular capacitor with plastic end seals and radial leads.

2.1.2.1.10 Style 40 is a plastic pre-molded or fully molded, round capacitor with axial leads.

2.1.2.1.11 Style 42 is a plastic molded, flat oval capacitor with radial leads and standoff feet.

2.1.2.1.12 Style 50 is a dip coated or plastic cased, round capacitor with radial leads.

2.1.2.1.13 Style 52 is a dip coated or plastic cased, flat oval capacitor with radial leads.

2.1.2.1.14 Style 53 is a hermetically sealed, metallic cased rectangular bathtub capacitor with mounting feet and side terminals.

2.1.2.1.15 Style 72 is a hermetically sealed, drawn metallic cased, rectangular capacitor with solder lug or pillar terminals.

2.1.3 Terminal Style

2.1.3.1 Terminal Style shall be designated as follows:

A. — Axial wire lead.

B. — Non-removable solder lug.

E. — Pillar insulator with threaded stud.

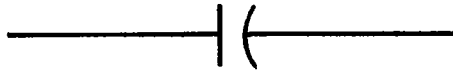
L. — Pillar insulator with non-removable solder lug.

R. — Radial wire lead.

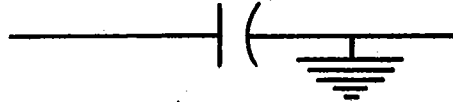
2.1.4 Schematic Circuit

2.1.4.1 The schematic diagram shall be designated by a number as follows:

Circuit 1 — Both terminals insulated from case



Circuit 3 — One terminal connected to case. (Metal cases only)



2.1.5 Characteristic

2.1.5.1 The characteristic letter designates the pertinent electrical parameters and operating temperature range as shown in Table I.

2.1.6 Voltage Rating

2.1.6.1 The voltage rating is designated by the following descriptive letter.

<u>Voltage Letter</u>	<u>Rating</u>
A	50
Y	75
B	100
V	150
C	200
E	400
F	600

2.1.7 Capacitance Value

2.1.7.1 The nominal capacitance value is described by three digits; the first and second digits are the first and second significant figures of the nominal capacitance expressed in picofarads (pF.). The third digit states the number of zeros following the two significant figures.

Example: 5 6 2

5 6 0 0 pF. or .0056uF.

TABLE I
CHARACTERISTIC*

Characteristic Letter	Maximum Operating Temp.	Maximum Dissipation Factor		Maximum Capacitance Change		
		At 25°C	At Hi-Temp.	At -55°C	At 85°C	At Hi-Temp.
B	125°C	0.6%	0.6%	±3%	±2%	±2%
K	125°C	1.5%	2.0%	-10%	+10%	+15%
L	125°C	1.0%	2.5%	-10%	+10%	+20%
N	125°C	1.25%	2.0%	-10%	+10%	+15%
Q	85°C	0.1%	0.2%	+1.5%	-1.0%	
S	85°C	2.5%	2.5%	-12%	+6%	
R	170°C	0.25%	0.5%	+2%	-1%	-3%

***NOTE:** Insulation resistance variation with temperature is shown in detailed parts specifications in appendices of this standard.

- B defines Metallized Polycarbonate or equal.
- K defines Metallized Paper or equal.
- L defines Metallized Polyethylene Terephthalate or equal.
- N defines Metallized Paper and Polyester Film Combination or equal.
- Q defines Metallized Polystyrene or equal.
- S defines Metallized Cellulose Acetate or equal.
- R defines Metallized Polyfluoroethylene or equal.