



10 μ F Feed-Thru Capacitors for RFI/EMI test setups



DESCRIPTION



APPLICATION

Starting with the **Solar Type 6512-106R Feed-Thru Capacitor**, Solar Electronics has a series of 10 μ F feed-thru capacitors which are specially designed to be used in RFI/EMI test setups such as MIL-STD-461A/462A. Many other specifications, such as RTCA DO-160G, now call for their use. In this application the capacitor provides a low RF impedance across the power source so that EMI currents produced by the equipment under test can be accurately measured with a current probe.

The feed-thru capacitor is used for added filtering in conjunction with line impedance stabilization networks. The 10 μ F feed-thru capacitor can also be used as a power-line filter installed in the wall of a shielded enclosure or equipment cabinet. The capacitor provides adequate insertion loss without suffering the power current saturation limitation of conventional filters which employ toroidal inductors.

DESCRIPTION

Solar feed-thru capacitors are highly reliable and ruggedly constructed units for general use in screen rooms and other environments. The metal case with four husky threaded inserts lends itself to convenient installation with minimal effort.

The threaded feed-thru stud will accommodate power current of the listed rating without heating or voltage loss. Table 2 indicates available current and voltage ratings of the various **Solar 10 μ F Feed-Thru Capacitors**. All have low dissipation factors, high temperature ratings, high insulation resistance, doubly rated dielectric strength, and long life characteristics. To satisfy safety requirements, a bleeder resistor is included within the capacitors, which serves to discharge the capacitors when applied voltage is removed.

FEATURES

- High insulation resistance over a wide temperature range
- Excellent stability with long life
- Built-in discharge resistor for safety
- Designed for bulkhead or bench mounting



SPECIFICATIONS



Capacitance: 10 μ F

Tolerance: $\pm 10\%$

Temperature: -55°C to +70°C @ rated voltage +105°C @ 50% of rated voltage

Dissipation factor: Less than 1% at 25°C

Dielectric strength: Twice the rated VDC @ 25°C for two minutes

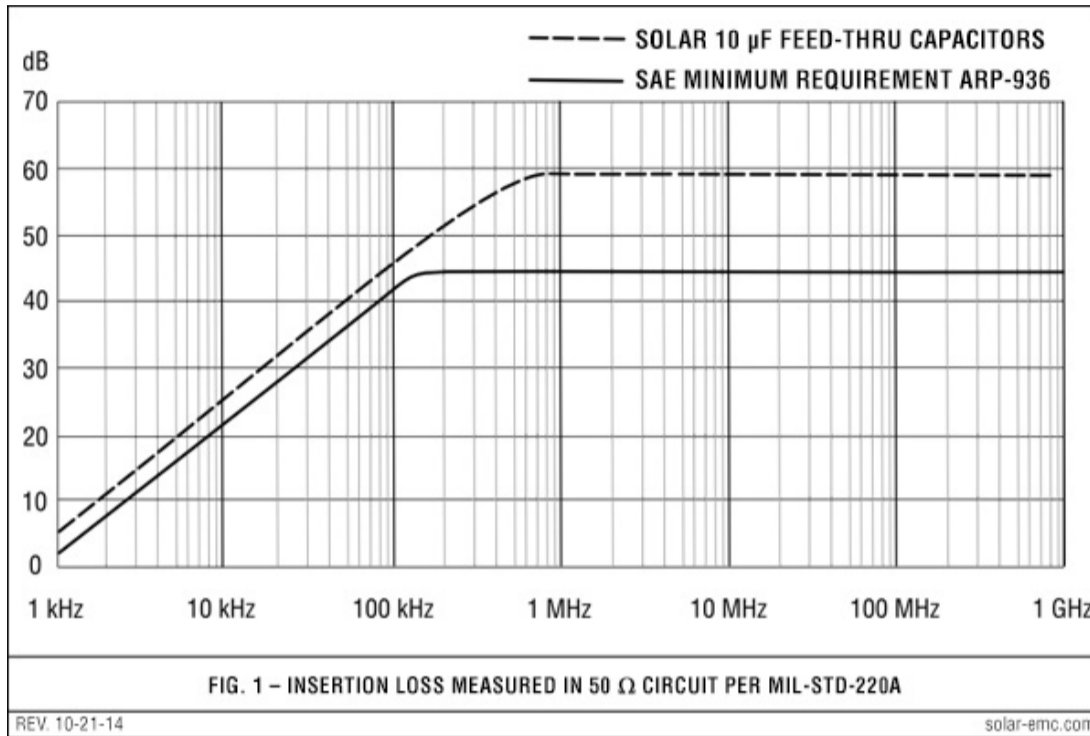
Insulation resistance: 2500 MΩ @ 25°C rated voltage for two minutes.
(Insulation resistance greater than 500 kΩ cannot be measured due to the internal bleeder resistor)

Bleeder resistor: A minimum 500 kΩ resistor included as specified in SAE document ARP-936

Life test: Will withstand the rated DC voltage @ 85°C for 250 hours

Construction: Extended foil coaxial winding protected with a thin polyester film

FIGURES



TYPE NUMBER	A	60 Hz	400 Hz	VDC
6512-106R	100	275	250	600
7314-106R	100	300	277	800
2714-106R	500	500	270	1200
2812-106R	175	500	270	1200
2814-106R	240	600	500	1200

TABLE 1 – CURRENT AND VOLTAGE RATINGS

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