



TYPE 6693-3L/3R RF-DC ISOLATOR NETWORK

Application Information

FOR INSERTION LOSS TEST OF EMI FILTERS WITH D.C. CURRENT FLOWING THROUGH THE FILTER

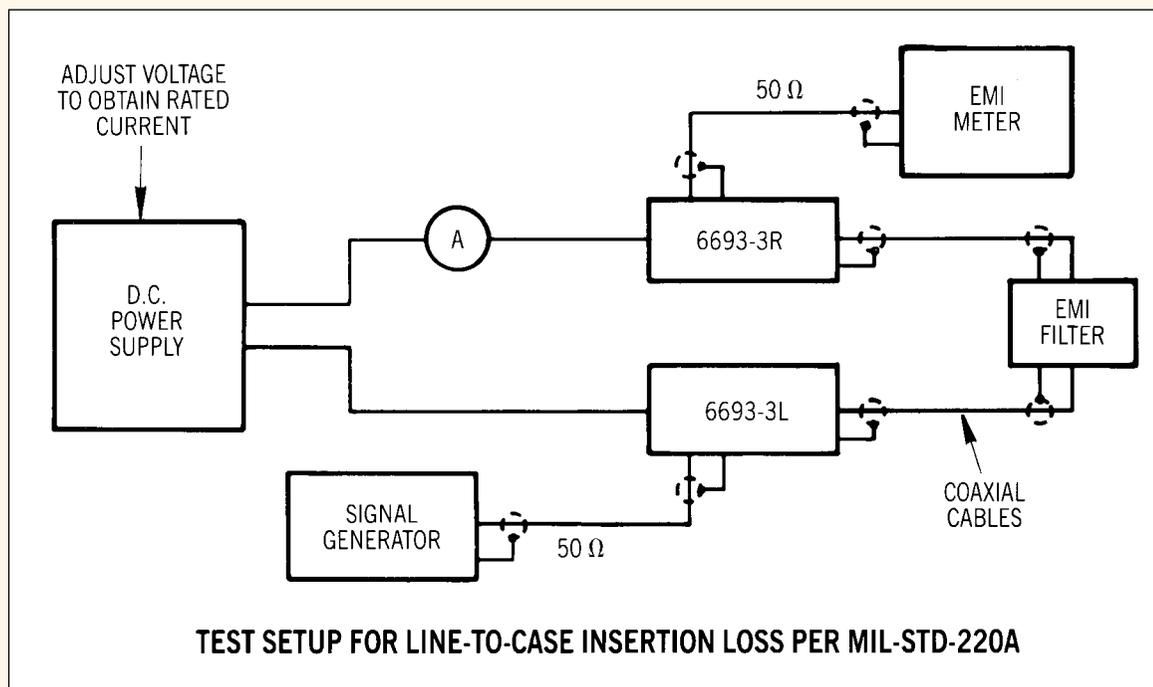


The **Type 6693-3L/3R RF-DC Isolator Network** consists of two units used as “buffer” networks in performing insertion loss tests on EMI filters while power current is flowing through the filter. The networks provide a high impedance in series with the power source so that r.f. signals will not be deteriorated by the low impedance of the power source.

MIL-STD-220A requires insertion loss measurements using this method up to 20 MHz. The **Type 6693-3L/3R Isolator Networks** are usable at frequencies from 150 KHz to several hundred megahertz. The loss isn't bad up to 500 MHz. Standing waves give it some irregularity from 500 MHz to 1,000 MHz. This is measured in a 50 ohm circuit as required by MIL-STD-220A.

The wide range of frequencies is made possible by a special coil design and a transmission line connection from r.f. input to output. Unfortunately, the coil design does not lend itself to large amounts of power current. These units are rated at 15 amperes d.c. maximum.

Two styles are used in the test setup as shown in the diagram on this page. The two units, 6693-3L and 6693-3R, are identical except that one is physically the mirror image of the other for convenience in making the test setup. Although the jack on one side of one is marked SIGNAL GENERATOR and the jack on the opposite side of the other unit is marked R.F. VOLTMETER, these two connections can be interchanged if it makes your setup easier to use.



The shielded cable connection between the connector marked TO FILTER UNDER TEST and the filter is a matter which must be arranged to fit the

particular terminal or connector on the filter. There are many different configurations and no “standard” is possible. Ideally, the shield should terminate in a metallic fitting which completely shrouds the filter terminal, to avoid inadvertent coupling at the higher frequencies.



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