

# Low-Cost Transesophageal Echocardiogram (TEE) Leakage Tester for Electrical Safety Test (EST) in Biomedical Application

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## ABSTRACT

A transesophageal echocardiogram (TEE) is used in biomedical applications to test the image creation of the heart. TEE uses high-frequency sound waves (ultrasounds) to make detailed pictures of your heart and the arteries that go in and out of your heart. Unlike a standard echocardiogram, the echo transducer that produces sound waves for TEE is attached to a thin tube that runs through your mouth and down your throat into your esophagus. Because the esophagus is very close to the upper chamber of the heart, very clear images of these heart structures and valves can be obtained. Electrical Safety Test (EST) is The TEE leakage tester is intended for use by biomedical engineers and technicians who perform routine testing of TEE transducers in hospital. In addition to the patient safety concerns associated with microseismic hazards, leakage current testing of diagnostic ultrasound transducers can identify faults in shielding, indicating to the user the need for less costly repairs. There are variety of leakage tester in the market. TEE leakage tester is used to detect the leakage Most of the TEE leakage tester are expensive. The main purpose of this innovation is to invent a new low-cost TEE leakage tester for electrical safety test.

*Keyword:* Transesophageal Echocardiogram, Electrical Safety Test, Heart, Tester, Transducer