ABSTRACT

CIRCUIT AND METHOD FOR TESTING A DISK DRIVE HEAD ASSEMBLY WITHOUT PROBING

A preamplifier circuit (10) for a computer data storage system disk drive read/write head (or HSA) (20) includes multiple test modes to enable electrical testing of the preamplifier, the read/write heads, and associated circuitry without physically probing the components or circuitry. Communication between the preamplifier and a host controller (30) provides for test mode selection and test mode enablement within the preamplifier. Testing occurs using only the normal interface connector to the head disk assembly (HDA) in which the preamplifier and HSA are embodied. Properties such as electrical resistance, ESD, preamplifier bond wire connection integrity, head bond wire and solder joint integrity, and connections from the head slider to the preamplifier leads are all tested. Testing occurs without probing to provide efficient, reliable, and cost effective manufacturing and testing benefits of the read/write heads, flex assembly, HSA, and HDA.