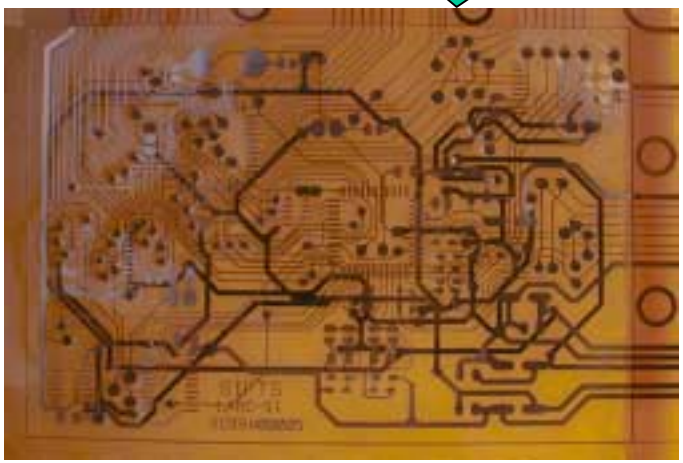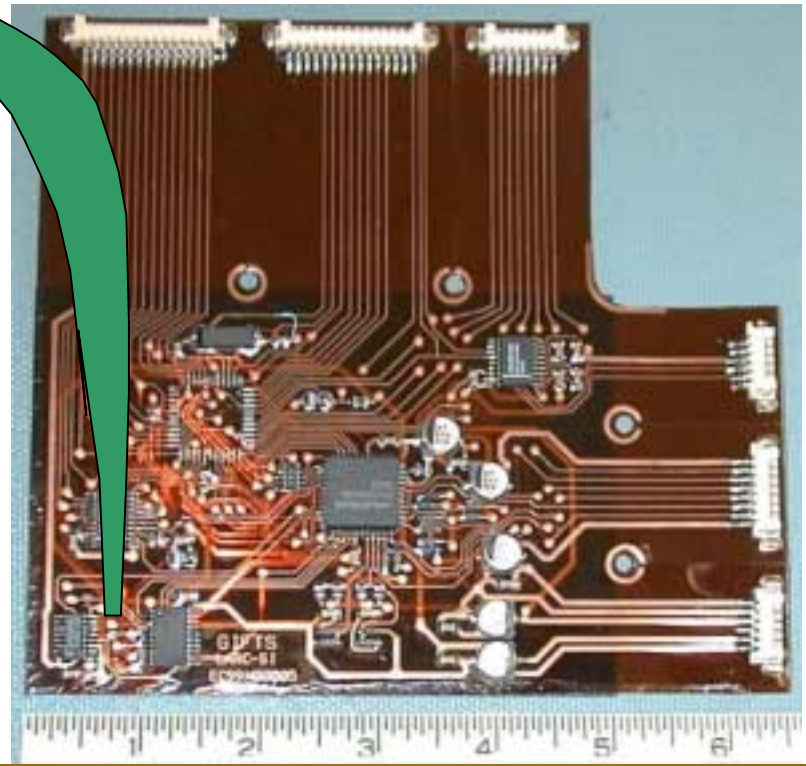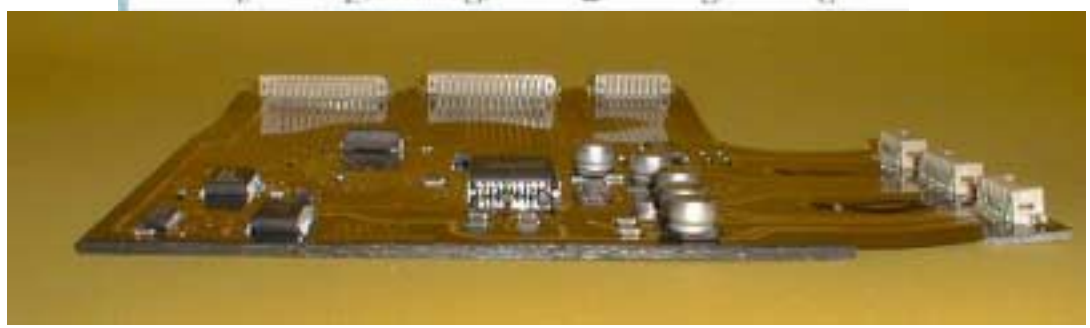GIFTS 5-LAYERED CIRCUIT