

Table of Contents

KEYNOTES	9
REFLOW SOLDERING OF COMPLEX BOARDS.....	10
COMPLEX BOARDS: A CHALLENGE FOR SMT STENCIL COMPONENT DIVERSITY – THE CHALLENGE IN STENCIL PRINTING	14
INNOVATIVE DISPENSING SOLUTIONS: RAISING EFFICIENCY AT HIGH-MIX-LOW-VOLUME PRODUCTION	17
ASSEMBLY CLEANING – UNWANTED, BUT VERY IMPORTANT PROCESS STEP CLEANING PROCESS CAPACITY INVESTIGATION	19
CAPACITORS AND PASSIVE COMPONENTS FOR MODERN ELECTRONICS	21
APPLICATION OF 3D PRINTING IN ELECTRONICS	29
THERMAL CHARACTERIZATION OF SEMICONDUCTOR POWER STRUCTURES	33
ELECTRONICS MANUFACTURING TECHNOLOGY FOR SPACE APPLICATIONS	36
EXTENDED ABSTRACTS	41
REFLOW SOLDERING IN VAPOUR PHASE SYSTEMS	42
TEMPERATURE STABLE SOLDER PASTES – PROPERTIES AND RELIABILITY	44
THE VISCOSITY THERMAL DEPENDENCE OF PASTE MATERIAL FOR ELECTRONICS	46
INFLUENCE OF REFLOW TEMPERATURE PROFILE ON THE MECHANICAL PROPERTIES OF SOLDER JOINTS	48
SIMULATION OF COOLING METHODS VIA CHANNELS IN LTCC SUBSTRATES FOR POWER ELECTRONIC DEVICES.....	50
THE QUALITY OF BGA SOLDER JOINT WITH UNDERFILL	52
THICK FILM PLANAR FILTER SIMULATION.....	54
THE ANALYSIS OF SMD RESISTOR ARRAYS SOLDERED BY Sn96 Ag3,5 Cu 0,5 AND Sn42 Bi57,6 Ag0,4 IN SURFACE MOUNT ASSEMBLY	56
LIQUID ANALYZER	58
SCREEN PRINTED METALLIZATION ON P^+ EMITTERS OF N-TYPE SILICON SOLAR CELLS.....	60
BOOTLOADER FOR SCI-TRACE	62
A CHIP BASED ON MICROELECTRODE ARRAYS FOR THE FABRICATION OF SINGLE NANOWIRE SYSTEMS VIA DIELECTROPHORESIS EFFECT	64
TWO TYPES OF ACTIVE SUBSTRATES WITH SILVER NANOSTRUCTURED SURFACE FOR SURFACE ENHANCED RAMAN SPECTROSCOPY (SERS)	66
THE EFFECT OF SPONTANEOUS AND PIEZOELECTRIC POLARIZATION ON I-V CHARACTERISTICS OF METAL/GAN/ALGAN/GAN HETEROSTRUCTURES	68
MAGNETICALLY LEVITATED AND GUIDED SYSTEMS	70
LOW VOLTAGE CONVERTER FOR ENERGY HARVESTING.....	72
GRAPHENE GROWTH BY CHEMICAL VAPOR DEPOSITION PROCESS	74
TRANSFER-FREE CHEMICAL VAPOUR DEPOSITION PROCESS FOR GRAPHENE PREPARATION.....	76
USAGE OF NANOGENERATORS AS ACTIVE SENSORS IN IOT	78

WORKSHOPS	81
ERSA VOIDLESS TECHNOLOGY – REWORK STATIONS	82
INSPECTION TECHNOLOGY FROM VISION ENGINEERING	83