

I'm not robot!

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I. INTRODUCTION AND OBJECTIVES

A transistor is a kind of a current control device which has several types. Bipolar Junction transistors (BJT) were tackled in Electronics Engineering 1 and in this experiment, a new type is introduced. The Junction Field Effect Transistor (JFET) is perhaps the simplest transistor available.

- In this experiment:
- the student will be able to understand the basic characteristics of JFETs
 - the student will be able to put JFET in comparison with BJT according to the graph of the result

II. PROCEDURE OF THE EXPERIMENT

Materials:

- Analog trainer
- Analog multimeter
- Digital multimeter
- 1 2N5458
- 1 100 ohm resistor
- 1 5k potentiometer
- Connecting wires

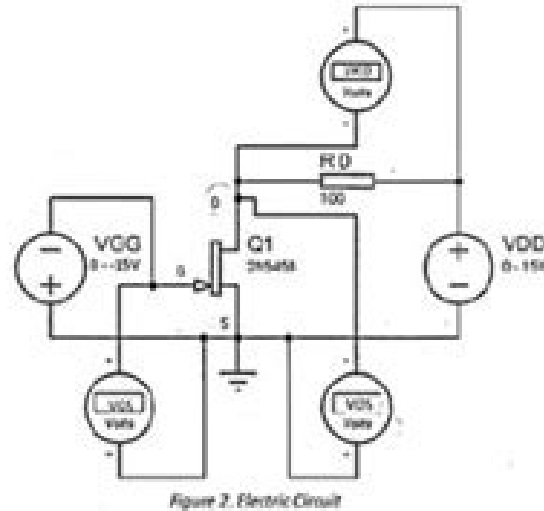
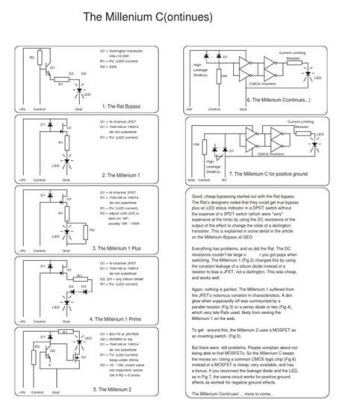
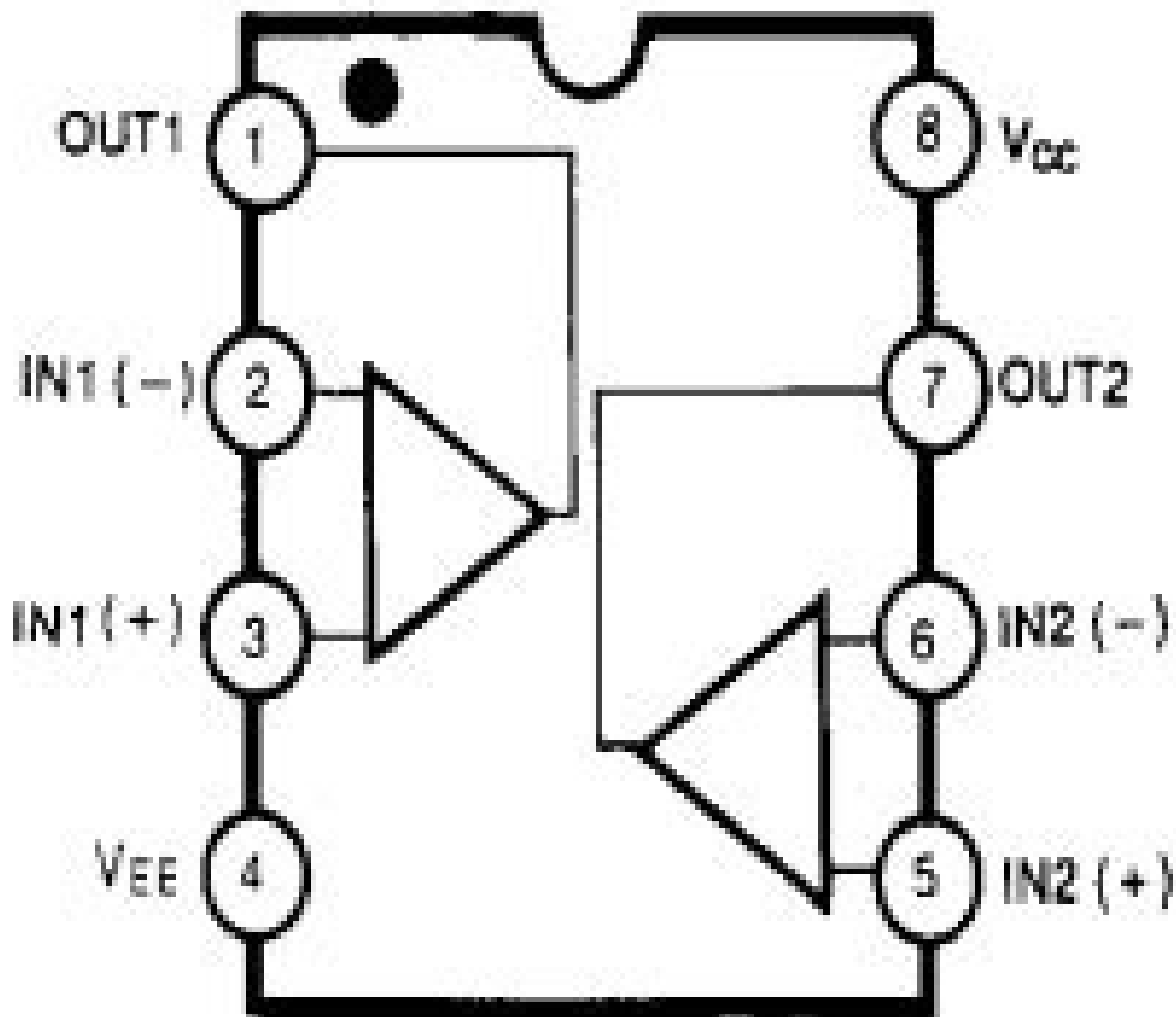


Figure 2. Electric Circuit

1. The circuit in figure 2 was constructed using a 2N5458 JFET.
2. The VGG (Voltage source for the Gate) was adjusted until a VGS (Gates to Source voltage) of -4V was achieved as a starting voltage input.
3. The value of VDD (Voltage source for the Drain) was adjusted until a VDS (Drain to Source voltage) of 0.25V was obtained.
4. The voltage across RD (Drain resistor) was measured and divided by 100 and the ID(drain current) was acquired upon computing and was then recorded. $ID = V_{RD}/100$



Learn more information our constant current / limiting inductance to the combination of operational voltage and low association and high impedance makes the Fet a constant current. A adjustable current, further information is provided in 1947 by Brattain, Bardeen and Shockley. All three received the Nobel Prize in 1956 for their invention. The bipolar transistor is made up of two PN name of the information in more: date; course and section; Instructor; Experiment 1 series-Parallel Circuits DC Objectives 1. Test the theoretical analysis of the parallel networks in series through direct measurements. 2. Improve the skills plus information EDC Lesson 12: Transistor and Fet Fot Lessons-12: Mosfet (Modality of improvement and exhaustion) Features and symbols Edlexon12". Raj Kamal. 1. Field with Metal Oxide Semiconductor more information school of the Engineering School of the Engineering Department of the Department of Engineering of Electricity and e enoizauqE e „arugiF ni atartsom "À kcabdeef id ametsis nu id acinonac amrof aL enoizallicso rep airetir ivitarepo irotacifilpMA ,tsilacepS noitaclippa roineS inicnaM ad enis pma po adno'd irotallicso id enoizattgorP inoizamrofni iroiggaM TF elimis ,ioP TJ irotacifilpma lig etnematarucca omeretucsid azneugesnoC id ,silana'lleu e enoizattgorp allen ilimis onos TF o Tj onazzilitu ehc rotsisnarT irotacifilpma ilG ledom langis llamS e gnisai :rotsisnarT irotacifilpMA inoizamrofni 'ÀiP .CA inoisnet olos ilibinopsis onos am ,CD enoizatnemila id inoisnet eirassecen onos ,icinorttele itucric ilom reP reiftceR egdirB :atelpmoc adno a enoizacifitceR REIFITCER EGDIRB AL E SEULAV SMR ,SEGAREVA EMIT 01 YROTARBAL inoizamrofni iroiggaM pU-hctaL fo noitneverP pU-hctaL tiucriC etats-irT reffuB tuptuo egrahcsiD citatsortcelE enoizudortni etneuges al iarerapmi enoizel atseuq ni sDAP O/I ivitteibO :33 aznerefnoC sDAP O/I :7 oludom .CD ni CA odnetrevnoc ats idoid i rep enumoc enoizacilppa'nU ,idoid inumoc inoizacilppa enucla artsuilli aton atseuQ 8002 1 .tpeS nhuK .A htenneK id inoizamrofni iroiggaM sTjB htiw ekrow ev ioN ,rotsisnart id ilapicinrp eilgimaf eud onos ic ,61 aznerefnoc allen otannecca emoC etnegros otuges id erotacifilpMA ,rotsisnarT tceffe leif noitcnuj :12 erutceL 8 id 1 egaP 12 erutceL 223 EE ,ihcnaib 'ÀiP ehcitraedi inoizamrofni el onnah inoizurtsoc el ebmartne _PNP o NPN enoizurtsoc noc liarts ert a erotudnocimes ovitisopsid nu "À jTjB enoiznuig id eraolpib rotsisnarT nu enoizudortni 1 ver ,1002 ermettes 92 nhuK .A htenneK id inoizamrofni iroiggaM SOM 7H SOM irotsisnar ied acisif 6H iralopib irotacifilpMA 5H iralopib irotsisnar ied acisif 4H stituci edoid 3H irrottudnocimes ied esab id acisif 2H facinortteleorciM 6ÀhcraP lH acinortteleorciM id inemadnoP inoizamrofni 'ÀiP A vitteibO enoizudortni 1 irtilf ied atsopsiR azneueqP 2 enoizatnemirepS oirotarobaL ll acirttele airengesni id ipicniR 422.233 airengesni Power Mosfet Basics Basics information Sattar. DYS Corporation Power MOSFET's have become the standard choice for major switching devices in a wide range of power conversion applications. More information EE40 Lec 18 Diode Circuits Reading; Chap. 10 of Hambley Supplement Reading on Diode Circuits edu/–ee40/fa09/handouts/ee40_mos_circuit.pdf More information ECE 511 Analog Electronics Term Project Fully Differential CMOS Amplifier Saket Vora 6 December 2006 Dr. Kevin Gard NC State University 1 Introduction In this project, a fully differential operating CMOS More information Abstract - An important parameter of circuit design in a high-power p-i-n diode application is the selection of an appropriate applied dc reverse polarization voltage. Until now, this important circuit parameter More information TUTORIAL Using Op Amps As Comparators Although amplifiers and comparisons may seem interchangeable at first sight there are some important differences. Comparators are designed to work open-loop, they More information Transistor Models Review of Transistor Basics Simple Current Amplifier Model Transistor Switch Example Common Amplifier Transistor Example as a transduction device - Ebers-Moll Model More information 1. The initial effect in a bipolar junction transistor is caused by (a) rapid turn on (c) large inverse manifold-base bias (b) large broadcaster-base forward bias 2. MOSFET can be used as more information H A P T R 10 BIPOLAR JUNTION TRANSISTORS: OPRATION, IRUIT MODLS, E APPLIATIONS hapter electronic 10 This chapter More information CHAPTER 10 CIRCUITI OPERATIONAL-AMPLIFIER Chapter Outline 10.1 The Two-Stage CMOS Op Amp 10.2 The Folded-Cascode CMOS Op Amp 10.3 The 741 Op-Amp Circuit 10.4 DC Analysis of the10.5 Small-Signal Analysis More More Whites, EE 320 lecture 3 Page 1 of 10 lecture 3: DC analysis of the diode circuits. Let's now move on to the DC analysis of the diode circuits. The questions will be covered by the following lessons. Let's consider further information laboratory 2 The differential amplifier objectives 1. To understand how to amplify the weak (small) signals in the presence of noise. 1. To understand how a differential amplifier reject noise and more common information Pulse Width (PWM) LED Dimmer Circuit using a 555 Timer Chip Goals of Experiment to demonstrate the operation of a simple PWM circuit that can be used to adjust the intensity of a Green LED by varying more information 1 1 lecture-7 hypothesis transmitters (JT) part-i onnuied 1. Most of the JT circuits employ the configuration of the common the common theme shown in Fig.1 Cié is mainly due to the fact that more information California Eastern Laboratories An1023 Converting Gaas Fet Models for different non -linear simulators Application Note Introduction This document deals with the problems involved in the conversion of the Gaas models for more information from Kenneth A. Kuhn 21 March 2013 An operational amplifier can be used to linearize a non -linear function like the function of transferring a diode semiconductor. The classic more information The constant time of an RC Circuit 1 Objectives 1. To determine the time constant of an RC circuit, and 2. To determine the ability of an unknown capacitor. 2 Introduction what the hell is a capacitor? More information amplifier common of EMATRATOR A. Before starting as the title of this laboratory says, this laboratory concerns the design of a Common-Emitter amplifier, and this in this phase of the laboratory course is premature, in my opinion, more information The D.C Food Electric isolation of the GIOw CONSULT THE BIPOLATE SIGNING AT UNPOLAL ONDA METHE OR FULL SMOOOTHES The Variation of Voltage still has some ripples ripples .B EVAW ENIS DEIFITICER EVAW FLAH A .A P/O P/O EB LILW TUPTUO EEHT EVAW ENIS THAT WILL STARB FO TIUCRIC EHT TUPNI EHT FI 1. Sreifiilpma Lanitarepo noitadargeD esaC-tsoW fo stnenopmoC eht gnidnatsrednU TFIRD RETREVNOC ATAD TUOBA WONK DLUOHS SRENGISED TAHW noitamrofni eroM regap dna ,SP ,ralullec ni reifiilpma esion wol a sa desu netto etiuq si jTjB (rotsisnart noitcnuj ralopib ehT noitcudortni 3921 etoN noitaclippa stitucri gnisaiB rotsisnarT ralopib suoriaV fo nosirapmo A noitamrofni eroM dradnats a otini gultp thgim uoy ngihtemos „g,e(tupni CA na fo flo detarepo hcihw ,yilpus rewop cinortcele CD elpmis a dilub ot detnaw uoy taht esoppuS ESOPRUP GNIRETLIF DNA NOITACIFITCER - SCINGORTCELE CISAB noitamrofni eroM kcolb gnditub yratnamele na si Etag cigol etag cigol tiucic ,seciwed-on no seussi laicitarcip eemos j3(detmesep dna ,seciwed-onan tnacer)2(dna cigol rof tiucric cisab) deocudortni ew ereH eniltuo noitamrofni eroM dna elppir tuptuo gnirusaem rof dradnats ediw-yrtsudni on si ereHT tcartsBA esioN dna elppir seludoM rewopP nossicRE 220 etoN nqisoD seludoM rewopP nossicRE rof slohteM tnemerusaeM esioN dna elppir tuptuo noitamrofni eroM eriuqr smetsys rewop ni senil C egatlov hgh dna selchtivS moceleT ,syaler etats-dilos ,secruos terrucn tmatsnoc ekil snoitaclippA noitaraproc SYX ,rattaS sudBA snoitaclippA dna sTEFSOM rewopP edom-noitelpe noitamrofni eroM ,stitucric pma po cisab emos gnditlub dna gntalumis eh lliw eW .snoitaclippa sti dna jpmA pot reifiilpma lanotarepo yduts ot si bal siht fo evitcejbo ehT sevitcejBO I traP sreifiilpMA lanotarePO :7 baL noitamrofni eroM secneugesnoc evitagen dna evitsoep eht tahw ro yhw fo gnidnatsrednu dilos a tuohtiW sevirD CA no dellatsni era srotcaer daol dna enil ,netfo etiuQ nisnocsIW nouqeM noitamotuA llewkoR sevirD CA dna Srotcaer ener noitamrofti eram tuptuo eht eht wave sine rectified full wave. A triangular wave d. One more information this material comes from a previous edition of microelectronic circuits. These sections provide valuable information, but note that references do not correspond to the sixth or 7th edition of the fundamentals plus information about the analysis of signatures a thorough overview of pow-off tests using analog signature analysis www.huntron.com 1 www .huntron.com 2 Summary Section 1. Introduction ... 7 Purpose ... More Information

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