English Language Test Description

MIPR # M9545012MP24797 CDRL F001

for

Unit Under Test

UUT Nomenclature: Power Drive CCA UUT Part Number: 7566394-011

from

LAV-25A2

ATE SYSTEM

AN/USM-657B Third Echelon Test System (TETS)
AN/USM-717 Virtual Instrument Portable Equipment Repair/Test (VIPER/T)

Developed by

U.S. Army RDECOM
Armament Research, Development and Engineering Center
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ELTD REVISION SUMMARY

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1.0 Reference Documents

1.1 Virtual Instrument Portable Equipment Repair/Test (VIPER/T)

IEEE Std 716-1989 IEEE Standard Common

Abbreviated Test Language

for All Systems

TM TBD-CD VIPER/T IETM (Interactive

Electronic Technical Manual)

System Design Document Doc # 7992008 VIPER/T AN/USM-717

VIPER/T P/N 7992021 VIPER/T CPM (Computer

Programming Manual)

1.2 Third Echelon Test System (TETS-B)

TM 10530A-CD TETS IETM (Interactive

Electronic Technical Manual)

System Design Description Third Echelon Test System

(TETS)

Doc # 93006A0018 AN/USM-657

TETS P/N 93006A0026 TETS CPM (Computer

Programming Manual)

1.3 Unit Under Test

UUT P/N: 7566394-011

UUT Nomenclature: Power Drive CCA, A2

UUT Type: SRU

DESCRIPTION Parts List	<u>NUMBER</u> 7566394	<u>REVISION</u> J	<u>DATE</u> 23-Sep-84
LRU QA Specification	ES12869	D	11-27-2007
Circuit Card Assy, Power Drive CCA, A2	7566394	J	23-Sep-84
Schematic Diagram, Power Drive CCA, A2	7566394	K	

1.4 Reference Drawings

Refer to the following schematics when diagnosing connection paths.

ID Schematic



W5 Schematic



2.0 English Language Test Description Steps

2.1 Interface ID

Refer to **Reference Drawings** when diagnosing connection paths.

Step 1

Description:

Connect R111 (324 ohms) to Bus 5. Connect R109 (698 ohms) to Bus 6. R109 and R111 are now in series between Bus 5 and 6. Connect DMM HI to Bus 5. Connect DMM LO to Bus 6. Expected Resistance: 1022 ohms +/- 5%

From ID P20-2 (DMM-HI)	to ID A1P14.49
From ID A1J14.49	to ID A1J8.28
From ID A1P8.28	to ID P10-203 (S503-1)
From ID P10-137 (S503-7)	to ID A1P6.47
From ID A1J6.47	to ID BUS 5
From ID P20-3 (DMM-LO)	to ID A1P14.50
From ID A1J14.50	to ID A1J8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-170 (S503-8)	to ID A1P6.38
From ID A1J6.38	to ID BUS 6
From ID BUS 5	to ID A1J8.47
From ID A1P8.47	to ID P10-73 (S301-48)
From ID P10-7 (S301-47)	to ID A1P7.23
From ID A1J7.23	to ID A1J4.15
From ID A1P4.15	to R111
From ID BUS 6	to ID A1J8.48
From ID A1P8.48	to ID P10-171 (S301-50)
FIUM ID AIFU.40	CO ID FIO I/I (B301 30)

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From ID P10-42 (S301-49) to ID A1P7.24 From ID A1J7.24 to ID A1J4.16 From ID A1P4.16 to R109

2.2 Safe To Turn On

Step 2

Description:

Connect TB1-1 to Bus 1. Connect TB1-3 to Bus 2. Connect DMM Hi to Bus 1. Connect DMM Lo to Bus 2. Verify resistance between TB1-1 and TB1-3. Resistance should be between 835.26 and 912.74 ohms

Connection Path is as follows:

From W5 P2-1 (UUT TB1-1) From ID J3-1 From ID A1J3.27 From ID A1P12.23	to W5 P1-1 to ID A1P3.27 to ID A1J12.23 to ID P12-85 (S201-45)
From ID P12-16 (S201-1) From ID A1J11.42 From ID A1P10.6 From ID P11-77 (S508-3) From ID A1J9.15	to ID A1J10.6 to ID P11-203 (S508-1)
From W5 P2-3 (UUT TB1-3) From ID J3-5 From ID A1J3.31 From ID A1P12.27	to W5 P1-5 to ID A1P3.31 to ID A1J12.27 to ID P12-55 (S201-47)
From ID P12-20 (S201-3) From ID A1J11.46 From ID A1P10.2 From ID P11-72 (S507-4) From ID A1J9.27	to ID A1J10.2 to ID P11-39 (S507-1)
From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1J8.28 to ID P10-203 (S503-1)
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2

Step 3

Description:

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Connect TB1-3 to DC4-HI and TB1-4 to GND. Connect TB1-9 to DC10-LO. Connect S101-32 to DMM-Hi. Connect DMM-Lo to GND. Verify that TB1-3 is not shorted to TB1-4. Expected Resistance is greater than 10 MEG

Connection Path is as follows:

From W5 P2-3 (UUT TB1-3) From ID J3-28 From ID A1J3.20 From ID A1P2.37 From ID P11-216 (S101-32) From ID A1J2.30 From ID A1P7.13 From ID P10-99 (S301-4) From ID A1J7.44 From ID A1P15.49	to ID A1J7.13 to ID P10-226 (S301-3)
From W5 P2-4 (UUT TB1-4) From ID J3-27 From ID A1J3.21 From ID A1P2.36 From ID P11-152 (S101-30) From ID A1J2.22 From ID A1P1.4	to ID A1P3.21 to ID A1J2.36 to ID P11-24 (S101-29)
From W5 P2-9 (UUT TB1-9) From ID J3-24 From ID A1J3.4 From ID A1P7.6 From ID P10-228 (S301-14) From ID A1J7.20 From ID A1P1.4	to ID A1P3.4 to ID A1J7.6 to ID P10-100 (S301-13)
From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P7.44 From ID P10-226 (S301-3) From ID A1J7.13 From ID A1P2.31 From ID P10-23 (S101-5) From ID A1J2.4 From ID A1P1.3	to ID A1P14.49 to ID A1J7.44 to ID P10-99 (S301-4) to ID A1P7.13 to ID A1J2.31 to ID P10-87 (S101-6) to ID A1P2.4 to ID A1J1.3 to ID P1-10 (DC4-HI)
From ID P20-3 (DMM-LO) From ID A1P7.38 From ID P10-229 (S301-24) From ID A1J7.36	to ID A1J7.38 to ID P10-130 (S301-23) to ID A1P7.36 to DMM-GND

2.3 MODULE 1 - STATIC TESTS

Description:

This module verifies the static resistance between UUT pins. This will check for correct operation of all resistors, as well as, check for shorts in the semiconductors.

Date: 04 March 2016

Refer to Reference Drawings when diagnosing connection paths.

Step 101

Description:

Verify the resistance between TB1-7 and TB1-9 is 100K ±5% Ohm.

Connection Path is as follows:

From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID P10-203 (S503-1)
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID P10-139 (S503-2)
From W5 P2-7 (UUT TB1-7) From ID J3-7 From ID A1J3.33 From ID A1P12.29	to W5 P1-7 to ID A1P3.33 to ID A1J12.29 to ID P12-24 (S202-7)
From ID P12-59 (S202-1) From ID A1J11.38 From ID A1P10.10 From ID P11-18 (S509-3) From ID A1J9.19	to ID A1J10.10 to ID P11-177 (S509-1)
From W5 P2-9 (UUT TB1-9) From ID J3-9 From ID A1J3.35 From ID A1P12.31	to W5 P1-9 to ID A1P3.35 to ID A1J12.31 to ID P12-57 (S202-13)
From ID P13-93 (S202-3) From ID A1J13.49 From ID A1P10.48 From ID P11-147 (S510-4) From ID A1J9.31	to ID A1J10.48 to ID P11-52 (S510-1)

Step 102

Description:

Verify the resistance between TB1-7 and TB1-11 is greater than 10 $\,$ MEG.

From ID P20-2 (DMM-HI)	to ID A1P14.49
From ID A1J14.49	to ID A1J8.28
From ID A1P8.28	to ID P10-203 (S503-1)

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From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-7 (UUT TB1-7) From ID J3-7 From ID A1J3.33 From ID A1P12.29	to W5 P1-7 to ID A1P3.33 to ID A1J12.29 to ID P12-24 (S202-7)
From ID P12-59 (S202-1) From ID A1J11.38 From ID A1P10.10 From ID P11-17 (S509-4) From ID A1J9.29	to ID A1J10.10 to ID P11-177 (S509-1)
From W5 P2-11 (UUT TB1-11) From ID J3-8 From ID A1J3.32 From ID A1P12.30	to W5 P1-8 to ID A1P3.32 to ID A1J12.30 to ID P12-56 (S202-8)
From ID P13-29 (S202-4) From ID A1J13.50 From ID A1P10.50 From ID P11-180 (S510-3) From ID A1J9.21	to ID A1J10.50 to ID P11-244 (S510-2)

Step 103

Description:

Verify the resistance between TB1-8 and TB1-12 is greater than 10 $_{\mbox{\scriptsize MEG}}$

From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-8 (UUT TB1-8) From ID J3-11 From ID A1J3.37	to W5 P1-11 to ID A1P3.37 to ID A1J12.33

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From ID A1P12.33	to ID P12-26 (S202-15)
From ID P12-59 (S202-1)	to ID AlP11.38
From ID A1J11.38	to ID A1J10.10
From ID A1P10.10	to ID P11-177 (S509-1)
From ID P11-17 (S509-4)	to ID A1P9.29
From ID AlJ9.29	to ID BUS 2
From W5 P2-12 (UUT TB1-12)	to W5 P1-12
From ID J3-12	to ID A1P3.36
From ID A1J3.36	to ID A1J12.34
From ID A1P12.34	to ID P12-58 (S202-16)
From ID P12-90 (S202-2)	to ID A1P11.36
,	
From ID AlJ11.36	to ID A1J10.12
From ID A1P10.12	to ID P11-242 (S509-2)
From ID P11-18 (S509-3)	to ID A1P9.19
From ID A1J9.19	to ID BUS 1

Step 104

Description:

Verify the resistance between TB1-6 and TB1-3 is from 500 to 787 ohms.

From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26	to ID B03 1 to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-6 (UUT TB1-6) From ID J3-4 From ID A1J3.28 From ID A1P12.26	to W5 P1-4 to ID A1P3.28 to ID A1J12.26 to ID P12-25 (S202-6)
From ID P12-90 (S202-2) From ID A1J11.36 From ID A1P10.12 From ID P11-18 (S509-3) From ID A1J9.19	to ID A1P11.36 to ID A1J10.12 to ID P11-242 (S509-2) to ID A1P9.19 to ID BUS 1
From W5 P2-3 (UUT TB1-3) From ID J3-5 From ID A1J3.31 From ID A1P12.27	to W5 P1-5 to ID A1P3.31 to ID A1J12.27 to ID P12-55 (S201-47)

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 From ID P12-16 (S201-1)
 to ID A1P11.42

 From ID A1J11.42
 to ID A1J10.6

 From ID A1P10.6
 to ID P11-203 (S508-1)

 From ID P11-12 (S508-4)
 to ID A1P9.25

 From ID A1J9.25
 to ID BUS 2

Step 105

Description:

Verify the resistance between TB1-1 and TB1-3 is from 624 to 912 ohms.

Connection Path is as follows:

From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO)	to ID A1P14.50
From ID A1J14.50	to ID A1J8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID A1J6.23	to ID BUS 2
From W5 P2-1 (UUT TB1-1) From ID J3-1 From ID A1J3.27 From ID A1P12.23	to W5 P1-1 to ID A1P3.27 to ID A1J12.23 to ID P12-85 (S201-45)
From ID P12-20 (S201-3)	to ID A1P11.46
From ID A1J11.46	to ID A1J10.2
From ID A1P10.2	to ID P11-39 (S507-1)
From ID P11-168 (S507-3)	to ID A1P9.17
From ID A1J9.17	to ID BUS 1
From W5 P2-3 (UUT TB1-3)	to W5 P1-5
From ID J3-5	to ID A1P3.31
From ID A1J3.31	to ID A1J12.27
From ID A1P12.27	to ID P12-55 (S201-47)
From ID P12-16 (S201-1) From ID A1J11.42 From ID A1P10.6 From ID P11-12 (S508-4) From ID A1J9.25	to ID A1P11.42 to ID A1J10.6 to ID P11-203 (S508-1) to ID A1P9.25 to ID BUS 2

Step 106

Description:

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Verify the resistance between TB1-2 and TB1-3 is greater than 10 MEG. $\,$

Connection Path is as follows: From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-2 (UUT TB1-2) From ID J3-2 From ID AlJ3.26 From ID AlP12.24	to W5 P1-2 to ID A1P3.26 to ID A1J12.24 to ID P12-21 (S201-46)
From ID P12-52 (S201-4) From ID A1J11.44 From ID A1P10.4 From ID P11-72 (S507-4) From ID A1J9.27	to ID A1P11.44 to ID A1J10.4 to ID P11-71 (S507-2) to ID A1P9.27 to ID BUS 2
From W5 P2-3 (UUT TB1-3) From ID J3-5 From ID A1J3.31 From ID A1P12.27	to W5 P1-5 to ID A1P3.31 to ID A1J12.27 to ID P12-55 (S201-47)
From ID P12-16 (S201-1) From ID A1J11.42 From ID A1P10.6 From ID P11-77 (S508-3) From ID A1J9.15	to ID A1P11.42 to ID A1J10.6 to ID P11-203 (S508-1) to ID A1P9.15 to ID BUS 1

Step 107

Description:

Verify the resistance between TB1-5 and TB1-3 is greater than 10 MEG. $\,$

From	ID	P20-2 (DMM-HI)	to	ID	A1P14.49	
From	ID	A1J14.49	to	ID	A1J8.28	
From	ID	A1P8.28	to	ID	P10-203 (S503-1)
From	ID	P10-77 (S503-3)	to	ID	A1P6.13	
From	ID	A1J6.13	to	ID	BUS 1	
From	ID	P20-3 (DMM-LO)	to	ID	A1P14.50	
From	ID	A1J14.50	to	ID	A1J8.26	

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From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-5 (UUT TB1-5) From ID J3-3 From ID A1J3.29 From ID A1P12.25	to W5 P1-3 to ID A1P3.29 to ID A1J12.25 to ID P12-89 (S202-5)
From ID P12-59 (S202-1) From ID A1J11.38 From ID A1P10.10 From ID P11-17 (S509-4) From ID A1J9.29	to ID A1P11.38 to ID A1J10.10 to ID P11-177 (S509-1) to ID A1P9.29 to ID BUS 2
From W5 P2-3 (UUT TB1-3) From ID J3-5 From ID A1J3.31 From ID A1P12.27	to W5 P1-5 to ID A1P3.31 to ID A1J12.27 to ID P12-55 (S201-47)
From ID P12-16 (S201-1) From ID A1J11.42 From ID A1P10.6 From ID P11-77 (S508-3) From ID A1J9.15	to ID A1P11.42 to ID A1J10.6 to ID P11-203 (S508-1) to ID A1P9.15 to ID BUS 1

Step 108

Description:

Verify the resistance between TB1-5 and TB1-4 is greater than 10 $\,$ MEG.

From ID P20-2 (DMM-HI)	to ID A1P14.49
From ID A1J14.49	to ID A1J8.28
From ID A1P8.28	to ID P10-203 (S503-1)
From ID P10-77 (S503-3)	to ID A1P6.13
From ID A1J6.13	to ID BUS 1
From ID P20-3 (DMM-LO)	to ID A1P14.50
From ID A1J14.50	to ID A1J8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID A1J6.23	to ID BUS 2
	1 2
From W5 P2-5 (UUT TB1-5)	to W5 P1-3
From ID J3-3	to ID A1P3.29
From ID A1J3.29	to ID A1J12.25
From ID A1P12.25	to ID P12-89 (S202-5)
D	L. TD 31D11 20
From ID P12-59 (S202-1)	to ID A1P11.38
From ID AlJ11.38	to ID A1J10.10
From ID A1P10.10	to ID P11-177 (S509-1)

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From ID P11-18 (S509-3) From ID A1J9.19	to ID A1P9.19 to ID BUS 1
From W5 P2-4 (UUT TB1-4) From ID J3-6 From ID A1J3.30 From ID A1P12.28	to W5 P1-6 to ID A1P3.30 to ID A1J12.28 to ID P12-86 (S201-48)
From ID P12-80 (S201-2) From ID A1J11.40 From ID A1P10.8 From ID P11-12 (S508-4)	to ID A1P11.40 to ID A1J10.8 to ID P11-139 (S508-2) to ID A1P9.25
From ID A1J9.25	to ID BUS 2

Step 109

Description:

Verify the resistance between TB1-2 and TB1-4 is greater than 10 MEG. $\,$

From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-2 (UUT TB1-2) From ID J3-2 From ID A1J3.26 From ID A1P12.24	to W5 P1-2 to ID A1P3.26 to ID A1J12.24 to ID P12-21 (S201-46)
From ID P12-52 (S201-4) From ID A1J11.44 From ID A1P10.4 From ID P11-168 (S507-3) From ID A1J9.17	to ID A1P11.44 to ID A1J10.4 to ID P11-71 (S507-2) to ID A1P9.17 to ID BUS 1
From W5 P2-4 (UUT TB1-4) From ID J3-6 From ID A1J3.30 From ID A1P12.28	to W5 P1-6 to ID A1P3.30 to ID A1J12.28 to ID P12-86 (S201-48)
From ID P12-80 (S201-2) From ID A1J11.40 From ID A1P10.8 From ID P11-12 (S508-4)	to ID A1P11.40 to ID A1J10.8 to ID P11-139 (S508-2) to ID A1P9.25

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From ID A1J9.25

to ID BUS 2

Step 110

Description:

Verify the resistance between TB1-5 and TB1-6 is greater than 10 MEG. $\,$

Connection Path is as follows:

	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-5 (UUT TB1-5) From ID J3-3 From ID A1J3.29 From ID A1P12.25	to W5 P1-3 to ID A1P3.29 to ID A1J12.25 to ID P12-89 (S202-5)
From ID P12-59 (S202-1) From ID A1J11.38 From ID A1P10.10 From ID P11-17 (S509-4) From ID A1J9.29	to ID P11-177 (S509-1)
From W5 P2-6 (UUT TB1-6) From ID J3-4 From ID A1J3.28 From ID A1P12.26	to W5 P1-4 to ID A1P3.28 to ID A1J12.26 to ID P12-25 (S202-6)
From ID P12-90 (S202-2) From ID A1J11.36 From ID A1P10.12 From ID P11-18 (S509-3) From ID A1J9.19	to ID A1P11.36 to ID A1J10.12 to ID P11-242 (S509-2) to ID A1P9.19 to ID BUS 1

Step 111

Description:

Verify the resistance between TB1-1 and TB1-2 is greater than 10 MEG. $\,$

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From ID From ID From ID	A1J14.49 A1P8.28	to II to II to II	A1P14.49 A1J8.28 P10-203 (S503-1) A1P6.13 BUS 1
From ID From ID From ID	A1J14.50 A1P8.26	to II to II	A1P14.50 A1J8.26 P10-139 (S503-2) A1P6.23 BUS 2
From ID From ID	,	to II	5 P1-1 0 A1P3.27 0 A1J12.23 0 P12-85 (S201-45)
From ID From ID From ID	A1J11.42 A1P10.6	to II to II	A1P11.42 A1J10.6 P11-203 (S508-1) A1P9.15 BUS 1
From ID From ID	· · · · · · · · · · · · · · · · · · ·	to II	5 P1-2 0 A1P3.26 0 A1J12.24 0 P12-21 (S201-46)
From ID From ID From ID	P12-80 (S201-2) A1J11.40 A1P10.8 P11-12 (S508-4) A1J9.25	to II to II	A1P11.40 A1J10.8 P11-139 (S508-2) A1P9.25 BUS 2

Step 112

Description:

Verify the resistance between TB1-11 and TB1-12 is less than 5 ohms.

From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-11 (UUT TB1-11)	to W5 P1-8

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From ID J3-8 From ID A1J3.32 From ID A1P12.30	to ID A1P3.32 to ID A1J12.30 to ID P12-56 (S202-8)
From ID P12-90 (S202-2) From ID A1J11.36 From ID A1P10.12 From ID P11-18 (S509-3) From ID A1J9.19	to ID A1P11.36 to ID A1J10.12 to ID P11-242 (S509-2) to ID A1P9.19 to ID BUS 1
From W5 P2-12 (UUT TB1-12) From ID J3-12 From ID A1J3.36 From ID A1P12.34	to W5 P1-12 to ID A1P3.36 to ID A1J12.34 to ID P12-58 (S202-16)
From ID P13-29 (S202-4) From ID A1J13.50 From ID A1P10.50 From ID P11-147 (S510-4)	to ID A1P13.50 to ID A1J10.50 to ID P11-244 (S510-2) to ID A1P9.31

Step 113

Description:

From ID AlJ9.31

Verify the resistance between TB1-9 and TB1-10 is less than 5 ohms.

to ID BUS 2

From ID P20-2 (DMM-HI)	to ID A1P14.49
	to ID A1J8.28
	to ID P10-203 (S503-1)
From ID P10-77 (S503-3)	to ID A1P6.13
From ID A1J6.13	to ID BUS 1
	to ID A1P14.50
From ID A1J14.50	to ID A1J8.26
	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID A1J6.23	to ID BUS 2
From W5 P2-9 (UUT TB1-9)	
From ID J3-9	to ID A1P3.35
From ID A1J3.35	to ID A1J12.31
From ID A1P12.31	to ID P12-57 (S202-13)
F	L. TD 31D11 20
From ID P12-59 (S202-1)	
From ID AlJ11.38	to ID AlJ10.10
	to ID P11-177 (S509-1)
From ID P11-18 (S509-3)	
From ID A1J9.19	to ID BUS 1
From W5 P2-10 (UUT TB1-10)	to W5 D1-10
From ID J3-10	to ID A1P3.34
From ID A1J3.34	to ID A1J12.32
FIOM ID AIOS.ST	CO ID AIUIZ.32

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From ID A1P12.32	to ID P12-88 (S202-14)
From ID P12-90 (S202-2)	to ID AlP11.36
From ID A1J11.36	to ID A1J10.12
From ID A1P10.12	to ID P11-242 (S509-2)
From ID P11-17 (S509-4)	to ID A1P9.29
From ID A1J9.29	to ID BUS 2

Step 114

Description:

Verify the resistance between TB1-8 and TB1-9 is 100K $\pm 5\%$ Ohm.

Connection Path is as follows:

From ID A	P10-77 (S503-3)	to I	D A1P14.49 D A1J8.28 D P10-203 (S503-1) D A1P6.13 D BUS 1
From ID Z	A1J14.50 A1P8.26 P10-12 (S503-4)	to I to I to I	D A1P14.50 D A1J8.26 D P10-139 (S503-2) D A1P6.23 D BUS 2
From ID (A1J3.37	to I	75 P1-11 CD A1P3.37 CD A1J12.33 CD P12-26 (S202-15)
From ID A	A1J11.38 A1P10.10 P11-18 (S509-3)	to I to I to I	D A1P11.38 D A1J10.10 D P11-177 (S509-1) D A1P9.19 D BUS 1
From ID (J3-9 A1J3.35	to I	75 P1-9 ED A1P3.35 ED A1J12.31 ED P12-57 (S202-13)
From ID A	A1P10.48 P11-147 (S510-4)	to I to I to I	D A1P13.49 D A1J10.48 D P11-52 (S510-1) D A1P9.31 D BUS 2

2.4 MODULE 2 – BJT TESTS

Description:

This module will verify the on and off characteristics of the BJTs, as well as their protection devices.

Refer to Reference Drawings when diagnosing connection paths.

Step 201

Description:

This test verifies the correct behavior of DIODE CR1 in the forward current path. Current is passed through CR1 from Anode to Cathode using DC10 as a source in series with a 280 ohm resistor - a Voltage drop of <= 1 volts is expected while current is flowing and is verified using the DMM.

From II From II From II From II From II	D J3-23 D A1J3.3 D A1P7.8	to W5 P1-23 to ID A1P3.3 to ID A1J7.8 to ID P10-227 (S301-21) to ID A1P7.30 to ID A1J4.20 to R101
From II From II From II	D P20-2 (DMM-HI) D A1J14.49 D A1P8.28 D P10-77 (S503-3) D A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From II From II From II	D P20-3 (DMM-LO) D A1J14.50 D A1P8.26 D P10-12 (S503-4) D A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From II From II		to W5 P1-6 to ID A1P3.30 to ID A1J12.28 to ID P12-86 (S201-48)
From II From II From II	D P12-80 (S201-2) D A1J11.40 D A1P10.8 D P11-77 (S508-3) D A1J9.15	to ID A1P11.40 to ID A1J10.8 to ID P11-139 (S508-2) to ID A1P9.15 to ID BUS 1
From II		to W5 P1-3 to ID A1P3.29 to ID A1J12.25 to ID P12-89 (S202-5)
From II	D P12-59 (S202-1) D A1J11.38 D A1P10.10	to ID A1P11.38 to ID A1J10.10 to ID P11-177 (S509-1)

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From	ID	P11-17 (S509-4)	to	ID	A1P9.29
From	ID	A1J9.29	to	ID	BUS 2
From	W5	P2-4 (UUT TB1-4)	to	W5	P1-17
From	ID	J3-17	to	ID	A1P3.5
From	ID	A1J3.5	to	ID	A1J2.29
From	ID	A1P2.29	to	ID	P10-153 (S101-15)
From	ID	P10-217 (S101-16)	to	ID	A1P2.21
From	ID	A1J2.21	to	ID	A1J1.6
From	ID	A1P1.6	to	ID	P1-28 (DC10-HI)

Step 202

Description:

This test verifies the correct behavior of DIODE VR2 and CR2. A current is passed through the series combination from VR2 cathode to anode to CR2 anode to cathode. Expected Voltage is 33 + -10% V.

From W5 P2-2 (UUT TB1-2) From ID J3-22 From ID A1J3.2 From ID A1P7.10 From ID P10-132 (S301-20) From ID A1J7.28 From ID A1P4.20 From ID R101.2 From ID R101.2 From ID A1J4.21 From ID A1J4.22	to ID A1P3.2 to ID A1J7.10 to ID P10-3 (S301-19)
From W5 P2-4 (UUT TB1-4) From ID J3-17 From ID A1J3.5 From ID A1P2.29 From ID P10-217 (S101-16) From ID A1J2.21 From ID A1P1.6	to W5 P1-17 to ID A1P3.5 to ID A1J2.29 to ID P10-153 (S101-15) to ID A1P2.21 to ID A1J1.6 to ID P1-28 (DC10-HI)
From ID P20-2 (DMM-HI) From ID A1J15.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P15.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO) From ID A1J15.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P15.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-4 (UUT TB1-4) From ID J3-6	to W5 P1-6 to ID A1P3.30

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From ID A1J3.30 From ID A1P12.28	to ID A1J12.28 to ID P12-86 (S201-48)
From ID P12-80 (S201-2) From ID A1J12.40 From ID A1P10.8 From ID P11-77 (S508-3) From ID A1J9.15	to ID A1P12.40 to ID A1J10.8 to ID P11-139 (S508-2) to ID A1P9.15 to ID BUS 1
From W5 P2-2 (UUT TB1-2) From ID J3-2 From ID A1J3.26 From ID A1P12.24	to W5 P1-2 to ID A1P3.26 to ID A1J12.24 to ID P12-21 (S201-46)
From ID P12-52 (S201-4) From ID A1J12.44 From ID A1P10.4 From ID P11-72 (S507-4) From ID A1J9.27	to ID A1P12.44 to ID A1J10.4 to ID P11-71 (S507-2) to ID A1P9.27 to ID BUS 2

Step 203

Description:

This test verifies Q1 is open without base drive applied. The collector voltage is measured with a collector load resistor connected to GND.

From W5 P2-5 (UUT TB1-5) From ID J3-20 From ID A1J3.23 From ID A1P2.34 From ID P11-215 (S101-28) From ID A1J2.8 From ID A1P4.4	to W5 P1-20 to ID A1P3.23 to ID A1J2.34 to ID P11-151 (S101-27) to ID A1P2.8 to ID A1J4.4 to R104
From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1J8.28 to ID P10-203 (S503-1)
From ID P20-3 (DMM-LO) From ID A1J14.50 From ID A1P8.26 From ID P10-12 (S503-4) From ID A1J6.23	to ID A1P14.50 to ID A1J8.26 to ID P10-139 (S503-2) to ID A1P6.23 to ID BUS 2
From W5 P2-5 (UUT TB1-5) From ID J3-3 From ID A1J3.29 From ID A1P12.25	to W5 P1-3 to ID A1P3.29 to ID A1J12.25 to ID P12-89 (S202-5)

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From ID P12-59 (S202-1) From ID A1J11.38 From ID A1P10.10 From ID P11-18 (S509-3) From ID A1J9.19	to ID A1P11.38 to ID A1J10.10 to ID P11-177 (S509-1) to ID A1P9.19 to ID BUS 1
From W5 P2-4 (UUT TB1-4) From ID J3-6 From ID A1J3.30 From ID A1P12.28	to W5 P1-6 to ID A1P3.30 to ID A1J12.28 to ID P12-86 (S201-48)
From ID P12-80 (S201-2) From ID A1J11.40 From ID A1P10.8 From ID P11-12 (S508-4) From ID A1J9.25	to ID A1P11.40 to ID A1J10.8 to ID P11-139 (S508-2) to ID A1P9.25 to ID BUS 2
From W5 P2-3 (UUT TB1-3) From ID J3-28 From ID A1J3.20 From ID A1P2.37 From ID P11-216 (S101-32) From ID A1J2.30 From ID A1P2.31 From ID P10-23 (S101-5) From ID A1J2.4 From ID A1P1.3	to W5 P1-28 to ID A1P3.20 to ID A1J2.37 to ID P11-152 (S101-31) to ID A1P2.30 to ID A1J2.31 to ID P10-87 (S101-6) to ID A1P2.4 to ID A1J1.3 to P1-11 (DC4-HI)

Step 204

Description:

This test verifies operation of Q1 with base drive applied. The voltage from collector to GND is verified with a collector load resistor connected to GND to be VCC minus Emitter to Collector drop.

From W5 P2-5 (UUT TB1-5)	to W5 P1-20
From ID J3-20	to ID A1P3.23
From ID A1J3.23	to ID A1J2.34
From ID A1P2.34	to ID P11-151 (S101-27)
From ID P11-215 (S101-28)	to ID A1P2.8
From ID A1J2.8	to ID A1J4.4
From ID A1P4.4	to R104
From W5 P2-3 (UUT TB1-3)	to W5 P1-28
From ID J3-28	to ID A1P3.20
From ID A1J3.20	to ID A1J2.37
From ID A1P2.37	to ID P11-152 (S101-31)
From ID P11-216 (S101-32)	to ID A1P2.30
From ID A1J2.30	to ID A1J2.31
From ID A1P2.31	to ID P10-87 (S101-6)
From ID P10-23 (S101-5)	to ID A1P2.4

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From ID AlJ2.4 From ID AlP1.3	to ID A1J1.3 to P1-11 (DC4-HI)
From ID P20-2 (DMM-HI) From ID A1J14.49 From ID A1P8.28 From ID P10-77 (S503-3) From ID A1J6.13	to ID A1P14.49 to ID A1J8.28 to ID P10-203 (S503-1) to ID A1P6.13 to ID BUS 1
From ID P20-3 (DMM-LO)	to ID A1P14.50
From ID A1J14.50	to ID A1J8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID A1J6.23	to ID BUS 2
From W5 P2-5 (UUT TB1-5)	to W5 P1-3
From ID J3-3	to ID A1P3.29
From ID A1J3.29	to ID A1J12.25
From ID A1P12.25	to ID P12-89 (S202-5)
From ID P12-59 (S202-1)	to ID A1P11.38
From ID A1J11.38	to ID A1J10.10
From ID A1P10.10	to ID P11-177 (S509-1)
From ID P11-18 (S509-3)	to ID A1P9.19
From ID A1J9.19	to ID BUS 1
From W5 P2-4 (UUT TB1-4) From ID J3-6 From ID A1J3.30 From ID A1P12.28	to W5 P1-6 to ID A1P3.30 to ID A1J12.28 to ID P12-86 (S201-48)
From ID P12-80 (S201-2)	to ID A1P11.40
From ID A1J11.40	to ID A1J10.8
From ID A1P10.8	to ID P11-139 (S508-2)
From ID P11-12 (S508-4)	to ID A1P9.25
From ID A1J9.25	to ID BUS 2

Step 205

Description:

This test verifies Q2 is open without base drive applied. The voltage from collector to GND is measured with a collector load resistor connected to GND.

From W5 P2-2 (UUT TB1-2)	to W5 P1-19
From ID J3-19	to ID A1P3.11
From ID A1J3.11	to ID A1J2.19
From ID A1P2.19	to ID P11-23 (S101-25)
From ID P11-87 (S101-26)	to ID A1P2.9
From ID A1J2.9	to ID A1J4.3
From ID A1P4.3	to R105

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From W5 P2-3 (UUT TB1-3)	to W5 P1-28
From ID J3-28	to ID A1P3.20
From ID A1J3.20	to ID A1J2.37
From ID A1P2.37	to ID P11-152 (S101-31)
From ID P11-216 (S101-32)	to ID A1P2.30
From ID A1J2.30	to ID A1J2.31
From ID A1P2.31	to ID P10-87 (S101-6)
From ID P10-23 (S101-5)	to ID A1P2.4
From ID A1J2.4	to ID A1J1.3
From ID A1P1.3	to P1-11 (DC4-HI)
From ID P20-2 (DMM-HI)	to ID A1P14.49
From ID AlJ14.49	to ID A1J8.28
From ID A1P8.28	to ID P10-203 (S503-1)
From ID P10-77 (S503-3)	to ID A1P6.13
From ID A1J6.13	to ID BUS 1
From ID P20-3 (DMM-LO)	
From ID A1J14.50	to ID A1J8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID AlJ6.23	to ID BUS 2
From W5 P2-2 (UUT TB1-2)	to W5 P1-2
From ID J3-2	to ID A1P3.26
From ID A1J3.26	to ID A1J12.24
From ID A1P12.24	to ID P12-21 (S201-46)
110111 12.21	
From ID P12-52 (S201-4)	to ID A1P11.44
From ID AlJ11.44	to ID A1J10.4
From ID A1P10.4	to ID P11-71 (S507-2)
	to ID A1P9.17
From ID AlJ9.17	to ID BUS 1
From W5 P2-4 (UUT TB1-4)	to W5 P1-6
From ID J3-6	to ID A1P3.30
From ID A1J3.30	to ID A1J12.28
From ID A1P12.28	to ID P12-86 (S201-48)
From ID P12-80 (S201-2)	to ID AlP11.40
From ID AlJ11.40	to ID A1J10.8
From ID A1P10.8	to ID P11-139 (S508-2)
From ID P11-12 (S508-4)	to ID A1P9.25
From ID A1J9.25	to ID BUS 2

Step 206

Description:

This test verifies operation of Q2 with base drive applied. The voltage from collector to GND is verified with a collector load resistor connected to GND to be VCC minus Emitter to Collector drop.

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From W5	P2-2 (UUT TB1-2)	to	W5	P1-19
From ID				A1P3.11
From ID				A1J2.19
				P11-23 (S101-25)
	P11-87 (S101-26)			
From ID				A1J4.3
From ID			R10	
FIOII ID	AIP4.3	LU	KI	75
From W5	P2-3 (UUT TB1-3)	to	พร	P1-28
From ID				A1P3.20
	A1J3.20			A1J2.37
	A1P2.37			P11-152 (S101-31)
	P11-216 (S101-32)			
	A1J2.30			A1J2.31
				P10-87 (S101-6)
				A1P2.4
From ID				A1J1.3
From ID	AIPI.3	to	PI-	-11 (DC4-HI)
From ID	P20-2 (DMM-HI)	tο	TD	A1P14.49
	A1J14.49			A1J8.28
	A1P8.28			P10-203 (S503-1)
	P10-77 (S503-3)			A1P6.13
	A1J6.13			BUS 1
TIOM ID	A100.13	CO	דט	D0D 1
From ID	P20-3 (DMM-LO)	to	ID	A1P14.50
From ID	A1J14.50	to	ID	A1J8.26
From ID	A1P8.26	to	ID	P10-139 (S503-2)
From ID	P10-12 (S503-4)	to	ID	A1P6.23
	A1J6.23	to	ID	BUS 2
	-0.0 (1.0)			-1 0
	P2-2 (UUT TB1-2)			P1-2
From ID				A1P3.26
	A1J3.26			A1J12.24
From ID	A1P12.24	to	ID	P12-21 (S201-46)
From ID	P12-52 (S201-4)	t.o	TD	A1P11.44
	A1J11.44			A1J10.4
	A1P10.4			P11-71 (S507-2)
	P11-168 (S507-3)			A1P9.17
	A1J9.17			BUS 1
FIOIII ID	A109.17	LU	דח	DUD 1
From W5	P2-4 (UUT TB1-4)	to	W5	P1-6
From ID				A1P3.30
From ID	A1J3.30	to	ID	A1J12.28
	A1P12.28			P12-86 (S201-48)
From ID	P12-80 (S201-2)			A1P11.40
From ID	A1J11.40	to	ID	A1J10.8
From ID	A1P10.8	to	ID	P11-139 (S508-2)
From ID	P11-12 (S508-4)	to	ID	A1P9.25
From ID	A1J9.25	to	ID	BUS 2
	DO 1 (IIIII TD1 1)		T. T.	D1 1
From W5	P2-1 (UUT TB1-1)	to	W5	P1-1

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From ID J3-1 From ID A1J3.27 From ID A1P12.23	to ID A1P3.27 to ID A1J12.23 to ID P12-85 (S201-45)
FIOR ID AIFIZ.25	CO ID FIZ-03 (5201-43)
From ID P12-20 (S201-3)	to ID A1P11.46
From ID AlJ11.46	to ID A1J10.2
From ID A1P10.2	to ID P11-39 (S507-1)
From ID P11-5 (S507-8)	to ID A1P9.24
From ID A1J9.24	to ID BUS 6
From ID BUS 6	to ID A1J8.50
From ID A1P8.50	to ID P10-138 (S301-54)
From ID P10-9 (S301-53)	to ID A1P7.26
From ID A1J7.26	to ID A1J4.18
From ID A1P4.18	to R108

2.5 MODULE 3 – FET TESTS

Description:

This module will verify the on and off characteristics of the FETs, as well as their protection devices.

Refer to Reference Drawings when diagnosing connection paths.

Step 301

Description:

This step will verify that VR1 has the proper voltage drop of $43 \pm 10\%$. DC10 will be used as a source through R102 of 280 Ohms. DC10 is set to 52 volts.

From W5 P2-9 (UUT TB1-9)	to W5 P1-24
From ID J3-24	to ID A1P3.4
From ID A1J3.4	to ID A1J7.6
From ID A1P7.6	to ID P10-100 (S301-13)
From ID P10-228 (S301-14)	to ID A1P7.20
From ID A1J7.20	to ID A1J1.4
From ID A1P1.4	to DC10-LO
From W5 P2-11 (UUT TB1-11)	to W5 P1-21
From ID J3-21	to ID A1P3.1
From ID A1J3.1	to ID A1J4.14
From ID A1P4.14	to R102
From R102	to ID A1P4.19
From ID A1J4.19	to ID A1J7.27
From ID A1P7.27	to ID P10-67 (S301-17)
From ID P10-4 (S301-18)	to ID A1P7.11
From ID A1J7.11	to ID A1J1.6
From ID A1P1.6	to ID P1-28 (DC10-HI)
From ID P20-2 (DMM-HI)	to ID A1P14.49

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From ID AlJ14.49	to ID A1J8.28
From ID A1P8.28	to ID P10-203 (S503-1)
From ID P10-77 (S503-3)	to ID A1P6.13
From ID A1J6.13	to ID BUS 1
From ID P20-3 (DMM-LO)	to ID A1P14.50
From ID A1J14.50	to ID A1J8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID A1J6.23	to ID BUS 2
From W5 P2-11 (UUT TB1-11)	to W5 P1-8
From ID J3-8	to ID A1P3.32
From ID A1J3.32	to ID A1J12.30
From ID A1P12.30	to ID P12-56 (S202-8)
From ID P12-90 (S202-2)	to ID A1P11.36
From ID AlJ11.36	to ID A1J10.12
From ID A1P10.12	to ID P11-242 (S509-2)
From ID P11-18 (S509-3)	to ID A1P9.19
From ID AlJ9.19	to ID BUS 1
From W5 P2-9 (UUT TB1-9)	to W5 P1-9
From ID J3-9	to ID A1P3.35
From ID A1J3.35	to ID A1J12.31
From ID A1P12.31	to ID P12-57 (S202-13)
From ID P13-93 (S202-3)	to ID A1P13.49
From ID AlJ13.49	to ID A1J10.48
From ID A1P10.48	to ID P11-52 (S510-1)
From ID P11-147 (S510-4)	to ID AlP9.31
From ID A1J9.31	to ID BUS 2

Step 302

Description:

This step will verify operation of Q3 in the off state Q3 Drain Source Voltage will be measured to verify that is it off. R103 will be tied from VCC (using DC10) to the Drain of the FET.

From W5 P2-9 (UUT TB1-9)	to W5 P1-24
From ID J3-24	to ID A1P3.4
From ID A1J3.4	to ID A1J7.6
From ID A1P7.6	to ID P10-100 (S301-13)
From ID P10-228 (S301-14)	to ID A1P7.20
From ID A1J7.20	to ID A1J1.4
From ID A1P1.4	to DC10-LO
From ID P20-2 (DMM-HI)	to ID A1P14.49
From ID AlJ14.49	to ID A1J8.30
From ID A1P8.30	to ID P10-41 (S301-42)
From ID P10-199 (S301-41)	to ID A1P7.2
From ID A1J7.2	to ID A1J2.29

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From ID A1P2.29	to ID P10-153 (S101-15)
From ID P10-217 (S101-16)	to ID A1P2.11
From ID A1J2.11	to ID A1J1.6
From ID A1P1.6	to ID P1-28 (DC10-HI)
From ID P20-3 (DMM-LO)	to ID A1J7.38
From ID A1P7.38	to ID P10-130 (S301-23)
From ID P10-229 (S301-24)	
From ID A1J7.36	to DMM-GND
From W5 P2-12 (UUT TB1-12)	to W5 P1-18
From ID J3-18	to ID A1P3.22
From ID A1J3.22	to ID A1J2.35
From ID A1P2.35	to ID P10-214 (S101-4)
From ID P10-150 (S101-3)	
From ID A1J2.12	to ID A1J4.13
From ID A1P4.13	to R103
FION ID AIP4.13	CO R103
From R103	to ID AlP4.1
From ID AlJ4.1	to ID AlJ2.11
From ID A1P2.11 From ID P10-90 (S101-18)	to ID P10-26 (S101-17)
	to ID A1P2.1
From ID AlJ2.1	to ID A1J1.6
From ID A1P1.6	to ID P1-28 (DC10-HI)
From W5 P2-7 (UUT TB1-7)	to W5 P1-7
From ID J3-7	to ID A1P3.33
From ID A1J3.33	to ID A1J12.29
From ID A103.33 From ID A1P12.29	to ID P12-24 (S202-7)
FION ID AIPIZ. 29	to ID PIZ-24 (5202-7)
From W5 P2-8 (UUT TB1-8)	to W5 P1-11
From ID J3-11	to ID A1P3.37
From ID A1J3.37	to ID A1J12.33
From ID A1P12.33	to ID P12-26 (S202-15)
FIOU ID AIPIZ.33	to 1D P12-20 (5202-15)
From ID P13-93 (S202-3)	to ID A1P13.49
From ID A1J13.49	to ID A1J10.48
From ID A1P10.48	to ID P11-52 (S510-1)
From ID P11-20 (S510-8)	to ID A1P9.28
From ID A1J9.28	to ID BUS 6
F10m 1D A109.20	CO 1D BOS 0
From ID BUS 6	to ID A1J8.48
From ID A1P8.48	to ID P10-171 (S301-50)
From ID P10-42 (S301-49)	to ID A1P7.24
From ID A1J7.24	to ID A1J4.16
From ID A1P4.16	to R109
IIOm ID AII 1,10	CO 1710)

Step 303

Description:

This step will verify operation of Q3 by turning it on. Q3 Drain Source Voltage will be measured to verify that is it on. R103 will be tied from VCC (using DC10) to the Drain of the FET.

From W5 P2-9 (UUT TB1-9)	to W5 P1-24
From ID J3-24	to ID A1P3.4
From ID A1J3.4	to ID A1J7.6
From ID A1P7.6	to ID P10-100 (S301-13)
From ID P10-228 (S301-14)	to ID A1P7.20
From ID AlJ7.20	to ID A1J1.4
From ID A1P1.4	to DC10-LO
120 12 1111111	00 2020 20
From W5 P2-12 (UUT TB1-12)	to W5 P1-18
From ID J3-18	to ID A1P3.22
From ID A1J3.22	to ID A1J2.35
From ID A1P2.35	to ID P10-214 (S101-4)
From ID P10-150 (S101-3)	to ID A1P2.12
From ID A1J2.12	to ID A1J4.13
From ID A1P4.13	to R103
From R103	to ID A1P4.1
From ID AlJ4.1	to ID A1J2.11
From ID A1P2.11	to ID P10-26 (S101-17)
From ID P10-90 (S101-18)	to ID A1P2.1
From ID A1J2.1	to ID A1J1.6
From ID A1P1.6	to ID P1-28 (DC10-HI)
	,
From W5 P2-8 (UUT TB1-8)	to W5 P1-11
From ID J3-11	to ID A1P3.37
From ID A1J3.37	to ID A1J12.33
From ID A1P12.33	to ID P12-26 (S202-15)
From ID P13-93 (S202-3)	
From ID A1J13.49	to ID A1J10.48
From ID A1P10.48	to ID P11-52 (S510-1)
From ID P11-20 (S510-8)	to ID A1P9.28
From ID A1J9.28	to ID BUS 6
From ID BUS 6	to ID A1J8.48
From ID A1P8.48	to ID P10-171 (S301-50)
	,
From ID P10-42 (S301-49)	to ID A1P7.24
From ID A1J7.24	to ID A1J4.16
From ID A1P4.16	to R109
From ID P20-2 (DMM-HI)	to ID A1P14.49
From ID AlJ14.49	to ID A1J8.28
From ID A198.28	to ID P10-203 (S503-1)
From ID P10-77 (S503-3)	to ID A1P6.13
From ID AlJ6.13	
From ID Alu6.13	to ID BUS 1
From ID P20-3 (DMM-LO)	to ID A1P14.50
From ID A1J14.50	to ID A1J8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID A1J6.23	to ID BUS 2
110m 1D 11100.23	20 10 100 2
From W5 P2-12 (UUT TB1-12)	to W5 P1-12

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From ID J3-12 From ID A1J3.36 From ID A1P12.34	to ID A1P3.36 to ID A1J12.34 to ID P12-58 (S202-16)
From ID P12-90 (S202-2) From ID A1J11.36 From ID A1P10.12 From ID P11-18 (S509-3) From ID A1J9.19	to ID A1P11.36 to ID A1J10.12 to ID P11-242 (S509-2) to ID A1P9.19 to ID BUS 1
From W5 P2-10 (UUT TB1-10)	to W5 P1-10
From ID J3-10	to ID A1P3.34
From ID A1J3.34	to ID A1J12.32
From ID A1P12.32	to ID P12-88 (S202-14)
From ID P13-29 (S202-4) From ID A1J13.50 From ID A1P10.50	to ID A1P13.50 to ID A1J10.50
	to ID P11-244 (S510-2)
From ID P11-147 (S510-4)	to ID Alp9.31
From ID A1J9.31	to ID BUS 2

Step 304

Description:

This step will verify operation of Q4 by turning it on. Q4 Drain Source Voltage will be measured to verify that is it on. R103 will be tied from VCC (using DC10) to the Drain of both FETs.

From W5 P2-9 (UUT TB1-9) From ID J3-24 From ID A1J3.4 From ID A1P7.6 From ID P10-228 (S301-14) From ID A1J7.20 From ID A1P1.4	to W5 P1-24 to ID A1P3.4 to ID A1J7.6 to ID P10-100 (S301-13) to ID A1P7.20 to ID A1J1.4 to DC10-LO
From W5 P2-12 (UUT TB1-12) From ID J3-18 From ID A1J3.22 From ID A1P2.35 From ID P10-150 (S101-3) From ID A1J2.12 From ID A1P4.13	to W5 P1-18 to ID A1P3.22 to ID A1J2.35 to ID P10-214 (S101-4) to ID A1P2.12 to ID A1J4.13 to R103
From R103 From ID A1J4.1 From ID A1P2.11 From ID P10-90 (S101-18) From ID A1J2.1 From ID A1P1.6	to ID A1P4.1 to ID A1J2.11 to ID P10-26 (S101-17) to ID A1P2.1 to ID A1J1.6 to ID P1-28 (DC10-HI)
From W5 P2-7 (UUT TB1-7)	to W5 P1-7

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From ID J3-7	to ID A1P3.33
From ID A1J3.33	to ID A1J12.29
From ID A1P12.29	to ID P12-24 (S202-7)
From ID P13-93 (S202-3)	to ID A1P13.49
	to ID A1J10.48
From ID A1P10.48	to ID P11-52 (S510-1)
	to ID Alp9.28
From ID A1J9.28	to ID BUS 6
110.11 15 11109.20	00 12 205 0
From ID BUS 6	to ID AlJ8.48
	to ID P10-171 (S301-50)
From ID P10-42 (S301-49)	to ID A1P7.24
	to ID A1J4.16
From ID A1P4.16	to R109
FIOR ID AIF4.10	CO K109
From ID P20-2 (DMM-HI)	to ID A1P14.49
From ID AlJ14.49	to ID A1J8.28
From ID A1P8.28	to ID P10-203 (S503-1)
From ID P10-77 (S503-3)	to ID A1P6.13
From ID AlJ6.13	to ID BUS 1
FION ID ALUG.13	CO ID BOS I
From ID P20-3 (DMM-LO)	to ID AlP14.50
From ID A1J14.50	to ID AlJ8.26
From ID A1P8.26	to ID P10-139 (S503-2)
From ID P10-12 (S503-4)	to ID A1P6.23
From ID AlJ6.23	to ID BUS 2
From W5 P2-12 (UUT TB1-12)	to W5 P1-12
From ID J3-12	to ID A1P3.36
From ID AlJ3.36	to ID A1J12.34
From ID A1P12.34	to ID P12-58 (S202-16)
From ID P12-90 (S202-2)	+
	to ID A1710.13
From ID AlJ11.36	to ID A1J10.12
From ID A1P10.12	to ID P11-242 (S509-2)
From ID P11-18 (S509-3)	to ID A1P9.19
From ID A1J9.19	to ID BUS 1
	1 10
From W5 P2-10 (UUT TB1-10)	to W5 P1-10
From ID J3-10	to ID A1P3.34
From ID A1J3.34	to ID A1J12.32
From ID A1P12.32	to ID P12-88 (S202-14)
E TD D12 00 / C000 4\	L- TD 31D12 F0
From ID P13-29 (S202-4)	to ID A1P13.50
From ID A1J13.50	to ID A1J10.50
From ID A1P10.50	to ID P11-244 (S510-2)
From ID P11-147 (S510-4)	to ID A1P9.31
From ID A1J9.31	to ID BUS 2

3.0 Functional Flow Chart (FFC)

