

System Information:

Model: Keithley Model 4200-SCS Semiconductor Characterization System

Date 06/29/2024 Central European Daylight Time

System name 4200SCS-1209459

System serial number 1209459

SBC serial number

Platform version 4200-300-3A

Operating system version 4200-852-6.0

KTE Interactive version V8.2-SP2

Powerline frequency 50 HZ

KXCI Settings SMU1 = SMU1

SMU2 = SMU2

SMU3 = SMU3

SMU4 = SMU4

SMU5 = SMU5

SMU6 = NONE

SMU7 = NONE

SMU8 = NONE

SMU9 = NONE

SMU10 = NONE

GPIB Address = 17

Delimiter = COMMA

EOI = ON

4145 Emulation = OFF

Communication = GPIB

PortNumber = 1225

User Library Directory

C:\S4200\kxci\usr\lib

Model: Keithley Instruments 4210-SMU High Power Source Measure Unit

Instrument ID	SMU1
Slot number	1
Firmware version	M30
Hardware version	6.1.525176
Serial number	1254217
Calibrated on date	Sep 23, 2013
Calibration due on date	Sep 23, 2014

Model: Keithley Instruments 4210-SMU High Power Source Measure Unit

Instrument ID	SMU2
Slot number	2
Firmware version	M30
Hardware version	6.1.527907
Serial number	1254321
Calibrated on date	Sep 23, 2013
Calibration due on date	Sep 23, 2014

Model: Keithley Instruments 4210-SMU High Power Source Measure Unit

Instrument ID	SMU3
Slot number	3
Firmware version	M30
Hardware version	6.1.527907
Serial number	1254318
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014

Model: Keithley Instruments 4210-SMU High Power Source Measure Unit

Instrument ID	SMU4
Slot number	4
Firmware version	M30
Hardware version	6.1.527907
Serial number	1254324
Calibrated on date	Sep 23, 2013
Calibration due on date	Sep 23, 2014

Model: Keithley Instruments 4200-SMU Medium Power Source Measure Unit

Instrument ID	SMU5
Slot number	5
Firmware version	M30
Hardware version	6.3.1815500
Serial number	6000906
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014

Model: Keithley Instruments 4210-CVU Multi-Frequency Capacitance Voltage Measure Unit

Instrument ID	CVU1
Slot number	7
Firmware version	2.05
Hardware version	4.0.528704
Serial number	Z014705
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014

Model: Keithley Instruments 4225-PMU Voltage Pulse Measure Unit

Instrument ID	PMU1
Slot number	9
Firmware version	1.52
Hardware version	1.0-615685
Serial number	1414803
Channel 1 ID	OUTPUT 1
Channel 2 ID	OUTPUT 2
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014
Channel 1 - High Impedance OFF State	Enabled
Channel 2 - High Impedance OFF State	Enabled

Model: Keithley Instruments 4200-PA Remote PreAmp

Instrument ID	SMU1
Slot number	1
Firmware version	G04
Hardware version	0.4-528489
Serial number	1254387
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014

Model: Keithley Instruments 4200-PA Remote PreAmp

Instrument ID	SMU2
Slot number	2

Model: Keithley Instruments 4200-PA Remote PreAmp

Instrument ID	SMU2
Slot number	2
Firmware version	E03
Hardware version	0.1.13571
Serial number	0970667
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014

Model: Keithley Instruments 4225-RPM Remote Module

Instrument ID	PMU1
Terminal ID	PMU1CH1
Slot number	9
Firmware version	1.50
Hardware version	1.5.1762505
Serial number	1422690
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014

Model: Keithley Instruments 4225-RPM Remote Module

Instrument ID	PMU1
Terminal ID	PMU1CH2
Slot number	9
Firmware version	1.50
Hardware version	1.5.1762505
Serial number	1422691

Model: Keithley Instruments 4225-RPM Remote Module

Instrument ID	PMU1
Terminal ID	PMU1CH2
Slot number	9
Firmware version	1.50
Hardware version	1.5.1762505
Serial number	1422691
Calibrated on date	Sep 24, 2013
Calibration due on date	Sep 24, 2014

Model: Keithley Instruments 4200 Ground Unit

Instrument ID	GNDU
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Connections:

Instrument ID	Terminal Name	Terminal ID	Matrix Connection
SMU1	FORCE	SMU1	NC
SMU1	SENSE	-	NC
SMU2	FORCE	SMU2	NC
SMU2	SENSE	-	NC
SMU3	FORCE	SMU3	NC
SMU3	SENSE	-	NC
SMU4	FORCE	SMU4	NC
SMU4	SENSE	-	NC
SMU5	FORCE	SMU5	NC
SMU5	SENSE	-	NC
CVU1	CVH_CUR	CVH1	NC

Model: Keithley Instruments 4200 Ground Unit

Instrument ID	GNDU
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Connections:

Instrument ID	Terminal Name	Terminal ID	Matrix Connection
SMU1	FORCE	SMU1	NC
SMU1	SENSE	-	NC
SMU2	FORCE	SMU2	NC
SMU2	SENSE	-	NC
SMU3	FORCE	SMU3	NC
SMU3	SENSE	-	NC
SMU4	FORCE	SMU4	NC
SMU4	SENSE	-	NC
SMU5	FORCE	SMU5	NC
SMU5	SENSE	-	NC
CVU1	CVH_CUR	CVH1	NC
CVU1	CVH_POT	-	NC
CVU1	CVL_CUR	CVL1	NC
CVU1	CVL_POT	-	NC
PMU1	OUTPUT 1	PMU1CH1	NC
PMU1	OUTPUT 2	PMU1CH2	NC
PMU1	GND1	PMU1-1GND	NC
PMU1	GND2	PMU1-2GND	NC
GNDU	FORCE	GNDU	NC
GNDU	SENSE	-	NC

KI System Configuration

- KI 4200 SCS
 - KI 4200 PreAmp
 - KI 4210 HPSMU - SMU2
 - KI 4200 PreAmp
 - KI 4200 HPSMU - SMU3
 - KI 4210 HPSMU - SMU4
 - KI 4200 HPSMU - SMU5
 - KI 4210 CVU - CVU1
 - KI 4225 PPU - PPU1
 - KI 4225 RPM Ch1
 - KI 4225 RPM Ch2
 - KI Ground Unit - GDU

Properties & Connections

Instrument Properties

Model: Keithley 4210 HPSMU
Slot Number: 1
Firmware Version: M30
Hardware Version: 6.1.525175
Serial Number: 1254217
Calibrated On: Sep 23, 2013
Calibration Due On: Sep 23, 2014
Last Auto Cal On: Jan 09, 2015

Self Test...

Main Connections

Terminal Name	Connection	Terminal ID
FORCE		SMU1
SENSE		



KT System Configuration

- KT 4200 SCS
 - KT 4210 HP5MU - SMU1
 - KT 4200 PreAmp
 - KT 4210 HP5MU - SMU2
 - KT 4210 HP5MU - SMU3
 - KT 4210 HP5MU - SMU4
 - KT 4200 MP5MU - SMU5
 - KT 4210 CVU - CVU1
- KT 4225 PMU - PMU1
 - KT 4225 RPM Ch1
 - KT 4225 RPM Ch2
- KT Ground Unit - GNDU

Properties & Connections

Instrument Properties

Model: Kathley 4210HP5MU
Slot Number: 2
Firmware Version: M30
Hardware Version: 6.1-527907
Serial Number: 1254321
Calibrated On: Sep 23, 2013
Calibration Due On: Sep 23, 2014
Last Auto Cal On: May 21, 2024

Self Test

Main Connections

Terminal Name	Connection	Terminal ID
FORCE		SMU2
SENSE		

KI System Configuration

- [-] KI 4200 SCS
 - [-] KI 4210 HPSMU - SMU3
 - [-] KI 4200 ProAmp
 - [-] KI 4210 HPSMU - SMU2
 - [-] KI 4200 ProAmp
 - [-] KI 4210 HPSMU - SMU4
 - [-] KI 4200 MPSMU - SMU5
 - [-] KI 4210 CVU - CVU1
 - [-] KI 4225 PMU - PMU1
 - [-] KI 4225 RPM Ch1
 - [-] KI 4225 RPM Ch2
 - [-] KI Ground Unit - GNDU

Properties & Connections

Instrument Properties

Model	Keithley 4210 HPSMU
Slot Number	3
Firmware Version	M30
Hardware Version	6.1:527907
Serial Number	1254318
Calibrated On	Sep 24, 2013
Calibration Due On	Sep 24, 2014
Last Auto Cal On	May 21, 2024

Main Connections

Terminal Name	Connection	Terminal ID
FORCE		SMU3
SENSE		



KI System Configuration

- [-] KI 4200 SCS
 - [-] KI 4210 HPSMU - SMU1
 - [-] KI 4200 PreAmp
 - [-] KI 4210 HPSMU - SMU2
 - [-] KI 4200 PreAmp
 - [-] KI 4210 HPSMU - SMU3
 - [-] KI 4200 PreAmp
 - [-] KI 4200 MPSMU - SMU5
 - [-] KI 4210 CVU - CVU1
- [-] KI 4225 PMU - PMU1
 - [-] KI 4225 RPM Ch1
 - [-] KI 4225 RPM Ch2
- [-] KI Ground Unit - GNDU

Properties & Connections

Instrument Properties

Model: Keithley 4210 HPSMU
Slot Number: 4
Firmware Version: M30
Hardware Version: G.1-527907
Serial Number: 1254324
Calibrated On: Sep 23, 2013
Calibration Due On: Sep 23, 2014
Last Auto Cal On: May 21, 2024

Multix Connections

Terminal Name	Connection	Terminal ID
FORCE		SMU4
SENSE		



KI System Configuration

- [-] KI 4200 SCS
 - [-] KI 4210 HPSMU - SMU1
 - [+] KI 4200 PreAmp
 - [-] KI 4210 HPSMU - SMU2
 - [+] KI 4200 PreAmp
 - [-] KI 4210 HPSMU - SMU3
 - [-] KI 4210 HPSMU - SMU4
 - [-] KI 4210 CWU - CWU1
 - [-] KI 4225 PMU - PMU1
 - [+] KI 4225 RPM Ch1
 - [+] KI 4225 RPM Ch2
 - [-] KI Ground Unit - GNDU

Properties & Connections

Instrument Properties

Model: Keithley 4200 MPSMU
Slot Number: 5
Firmware Version: M30
Hardware Version: 6.31015500
Serial Number: 6000906
Calibrated On: Sep 24, 2013
Calibration Due On: Sep 24, 2014
Last Auto Cal On: May 21, 2024

Matrix Connections

Terminal Name	Connection	Terminal ID
FORCE		SMU5
SENSE		

KT System Configuration

- KT 4200 SCS
 - KT 4210 HPSMU - SMU1
 - KT 4200 PreAmp
 - KT 4210 HPSMU - SMU2
 - KT 4200 PreAmp
 - KT 4210 HPSMU - SMU3
 - KT 4210 HPSMU - SMU4
 - KT 4200 MPSMU - SMU5
- KT 4225 SMU - PMU1
 - KT 4225 RPM Ch1
 - KT 4225 RPM Ch2
- KT Ground Unit - GNDU

Properties & Connections

Instrument Properties

Model: Keithley 4210 CVU
Slot Number: 7
Firmware Version: 2.05
Hardware Version: 4.0528704
Serial Number: Z0H4205
Calibrated On: Sep 24, 2013
Calibration Due On: Sep 24, 2014

Monitor Connections

Terminal Name	Connection	Terminal ID
CVH_CUR		CVH1
CVH_POT		-
DVL_CUR		DVL1
DVL_POT		-



KT System Configuration

- KT 4200 SCS
 - KT 4210 HPSMU - SMU1
 - KT 4200 PreAmp
 - KT 4210 HPSMU - SMU2
 - KT 4200 PreAmp
 - KT 4210 HPSMU - SMU3
 - KT 4210 HPSMU - SMU4
 - KT 4200 MPSMU - SMU5
 - KT 4210 CVU - CVU1
 - KT 4225 RPM Ch1
 - KT 4225 RPM Ch2
 - KT Ground Unit - GNDU

Properties & Connections

Instrument Properties

Model: Kollboy 4225 PMU
Slot Number: 9
Firmware Version: 1.52
Hardware Version: 1.0.615685
Serial Number: 1414803
Calibrated On: Sep 24, 2013
Calibration Due On: Sep 24, 2014

Self Test...

Matrix Connections

Terminal Name	Connection	Terminal ID
Channel 1		PMU1CH1
Channel 2		PMU1CH2
Ground 1		PMU1-1GND
Ground 2		PMU1-2GND



KI System Configuration

- KI 4200 SCS
 - KI 4210 HPSMU - SMU1
 - KI 4200 PreAmp
 - KI 4210 HPSMU - SMU2
 - KI 4200 PreAmp
 - KI 4210 HPSMU - SMU3
 - KI 4210 HPSMU - SMU4
 - KI 4210 HPSMU - SMU5
 - KI 4210 CVU - CVU1
- KI 4225 PMU - PMU1
 - KI 4225 RPM Ch2
- KI Ground Unit - GRDU

Properties & Connections

Instrument Properties

Model: Keithley 4225 RPM
PMU Slot Number: 9
Firmware Version: 1.50
Hardware Version: 1.5.1762505
Serial Number: 1422630
Calibrated On: Sep 24, 2013
Calibration Due On: Sep 24, 2014
PMU Channel: 1

Self Test...

Connections

SMU Connection: NC
CVU Connection: CVU1



KT System Configuration

- KT 4200 SCS
 - KT 4210 HPSMU - SMU1
 - KT 4200 PreAmp
 - KT 4210 HPSMU - SMU2
 - KT 4200 PreAmp
 - KT 4210 HPSMU - SMU3
 - KT 4210 HPSMU - SMU4
 - KT 4200 HPSMU - SMU5
 - KT 4210 CVU - CVU1
 - KT 4225 PMU - PMU1
 - KT 4225 RPM Ch1
 - KT Ground Unit - GNDU

Properties & Connections

Instrument Properties

Model: Keithley 4225 RPM
PMU Slot Number: 9
Firmware Version: 1.50
Hardware Version: 1.5.1762505
Serial Number: 1422691
Calibrated On: Sep 24, 2013
Calibration Due On: Sep 24, 2014
PMU Channel: 2

Self Test

Connections

SMU Connection: NC
CVU Connection: CVU1



KI System Configuration

- [-] KI 4200 SC5
 - [-] KI 4210 HPSMJ - SML1
 - [-] KI 4210 HPSMJ - SML2
 - [-] KI 4200 Profamp
 - [-] KI 4210 HPSMJ - SML3
 - [-] KI 4210 HPSMJ - SML4
 - [-] KI 4200 HPSMJ - SML5
 - [-] KI 4210 CVJ - CVU1
 - [-] KI 4225 PPHJ - PPH1
 - [-] KI 4225 RPH Ch1
 - [-] KI 4225 RPH Ch2
 - [-] KI Ground Unit - GUEU

Properties

Instrument Properties

Model: Keithley 4200 Profamp
Firmware Version: G04
Hardware Version: 0.4.520409
Serial Number: 1254307
Calibrated On: Sep 24, 2013
Calibration Due On: Sep 24, 2014

Self Test...

KI System Configuration

- [-] KI 4200 SCS
 - [-] KI 4210 HPSMU - SMU1
 - [-] KI 4200 ProAmp
 - [-] KI 4210 HPSMU - SMU2
 - [-] KI 4210 HPSMU - SMU3
 - [-] KI 4210 HPSMU - SMU4
 - [-] KI 4200 HPSMU - SMU5
 - [-] KI 4210 CVU - CVU1
 - [-] KI 4225 PMU - PMU1
 - [-] KI 4225 RPM Ch1
 - [-] KI 4225 RPM Ch2
 - [-] KI Ground Unit - GNDU

Properties

Measurement Properties

Model: Keithley 4200 ProAmp
Firmware Version: E03
Hardware Version: 0.1-13571
Serial Number: 0870667
Calibrated On: Sep 24, 2013
Calibration Due On: Sep 24, 2014

Self Test...