



B1506A Power Device Analyzer for Circuit Design

The B1506A Eliminates Power Semiconductor Device and Component Performance Uncertainties for Circuit Designers

Do you have confidence that your circuit will function correctly in mission-critical applications?

The B1506A provides you with power device data under real operating conditions to ensure sufficient circuit operating margins.



Do you worry about having to recall thousands of products because you used faulty devices in your circuits?

Even without test experience, the B1506A allows you to measure IV and CV across temperature and identify counterfeit and out-of-spec devices.



Features

- Measure all IV parameters (R_{on} , BV, Leakage, V_{th} , V_{sat} , etc.)
- Measure transistor input, output, and reverse transfer capacitances at high voltage biases
- Measure gate charge (Qg) for N-ch MOS and IGBT
- Performs power loss (conduction, driving, and switching evaluation)
- Menu-driven user interface specially designed for circuit designers (Easy Test Navigator - ETN)
- Quick and automatic device datasheet generation
- Wide current and voltage operating range (1500A, 3kV)
- Thermal test capability (-50 to +250 °C)
- Oscilloscope View supports visual verification of pulsed measurement waveforms on the front panel
- Cover typical semiconductor devices and electronic components used in high-power circuits

Benefits

- Optimize circuit performance thru correct power device and power electronics component selection
 - Sufficient yet efficient circuit operating margin
 - Small form factor
 - Low power loss
 - Higher reliability thru screening of potentially faulty devices
 - Lower product cost
- Maximize productivity via fast development cycles
 - Reduced prototype development cycles
 - Fast and effective power semiconductor device and component selection
 - Quick power semiconductor device and component troubleshooting

Complete Power Device Characterization to Guarantee that Your Circuits Work the First Time

Automatically obtain the key parameters necessary for robust circuit operation across a wide operating range

If you are a circuit designer using power devices in your products, then you know how important it is to have an accurate and thorough understanding of the performance of those devices over a wide range of conditions. Power devices ultimately determine the power loss in an electronic circuit, so a deep understanding of their characteristics is critical to developing reliable and energy-efficient products. Unfortunately, the typical power device data sheet only shows behavior across a limited range of operating conditions. In addition, the test methodologies necessary to obtain key datasheet parameters are not always straightforward, and measuring device parameters on curve tracers and other traditional equipment can be tedious and time-consuming. The growing use of wide bandgap devices, especially those fabricated using SiC, GaN, or Ga₂O₃, has also introduced additional test complexity for parameters such as on-resistance, capacitance, and breakdown voltage that require new measurement solutions.

Keysight Technologies, Inc. B1506A meets a vital need by providing an automated and easy-to-use means to extract power device parameters. It can measure all of the parameters shown in the table on the right, and its intuitive GUI makes it easy for even a novice user to extract critical device parameters across a wide range of current, voltage, and temperature conditions.

Verify temperature performance to ensure operation in harsh environments

Power devices and components are used in many products, including heavy equipment, high-speed railways, and automobiles. For obvious reasons, all of these products need to be highly reliable and operate under harsh environmental conditions. Thermal performance is of particular importance since device operation at both low temperatures (for "cold" automotive start), and high temperatures (for devices located near heat-emitting equipment) must be guaranteed. In addition, to understanding general device characteristics over temperature, it may also be necessary to screen devices across temperatures since devices that look fine at room temperature can sometimes be out of spec at low or high temperatures. Unfortunately, temperature characterization of power devices and components is not easy. Thermal test chambers can take a long time for their temperature to stabilize, and long cables leading from the chamber to the test equipment can create resistive and inductive oscillation problems.

The B1506A meets all of these power device and component temperature testing challenges. It supports industry-standard InTEST Thermostream temperature control systems, allowing the B1506A to accurately and automatically characterize devices from -50 to 220° C. Moreover, if only high-temperature characterization is required, then InTEST can provide a thermal plate that supports temperature measurements from room up to 250 °C. Both of these solutions allow temperature measurements to be made in the B1506A test fixture, eliminating lengthy cables and minimizing the risk of oscillation. Both of these solutions also take into account condensation and user safety issues. The B1506A simplifies the

previously arduous task of power device temperature characterization, enabling you to focus on your primary goal of ensuring that your products meet all of their temperature performance requirements.

The B1506A can measure all of these device parameters:

Category	Parameters
Threshold voltage	V(th),Vge(th)
Transfer Characteristics ¹	Id-Vgs, Ic-Vge, gfs
On resistance	Rds-on, Vce(sat)
Gate leakage current	Igss, Iges
Output leakage current	Idss, Ices
Output Characteristics	Id-Vds, Ic-Vce
Breakdown voltage	BVds, BVces
Gate Charge	Qg, Qg(th), Qgs, Qgd, Qsw, Qsync, Qoss for N-ch MOS and IGBT
Gate Resistance	Rg
Device Capacitance	Ciss, Coss, Crss, Cgs, Cgd, Cies, Coes, Cres
Switching loss	Driving loss/Switching loss at a specified frequency. Conduction loss at a specified duty cycle



Figure 1. The B1506A works with the inTEST THERMOSTREAM to provide fast and automated device characterization across temperatures (-50 to +220 °C)

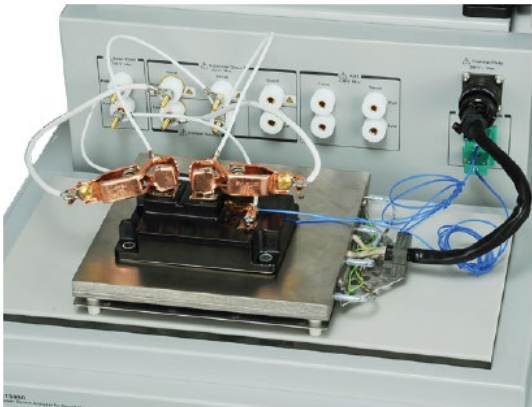


Figure 2. The inTEST thermal plate fits inside the B1506A's test fixture and supports automated temperature characterization (room temperature to +250 °C)

¹ The UHCU in the B1506A-H5x/H7x has an output resistance, similar to the traditional curve tracers. Therefore, the applied voltage to the Drain/Collector varies while the output current is changing due to the voltage drop at the output resistance.

- The Easy Test Navigator software can provide the similar measurement results as the traditional curve tracers.
- The EasyEXPERT group+ software can provide more accurate results beyond the traditional curve tracers by compensating the voltage drop at the output resistance.

Wide Measurement Range, Flexible SMU Technology, and Traceability to Standards Ensure First Time Design Success

The B1506A's wide current and voltage measurement ranges meet advanced power electronics needs

Certain power electronics circuits are designed to handle large currents (such as those necessary for driving motors or energizing an LED). In heavy equipment, the current requirements can easily be 1000 A or more. Although in these applications, no current is supposed to flow in the off-state, typically, there are some small leakage currents under conditions of the high voltage bias. This means that even sub-nanoamp current measurements on the power devices used in these applications may be necessary to guarantee the energy efficiency of the end products. Understanding the maximum current when a device is on and the leakage current when a device is off is essential for circuit designers since these characteristics impact both operating margin and energy efficiency. The B1506A can easily meet these measurement requirements. With the ability to measure currents from picoamps up to 1500 A and voltages from microvolts up to 3 kV, the B1506A is an all-in-one solution for designers of high current and high voltage circuitry.

SMUs facilitate component characterization under actual circuit bias conditions

Depending on the device type and how it is used in the circuit, a power device may be voltage or current controlled. Obviously, when evaluating how a device will perform in a circuit it is essential to drive it using the same stimulus it will experience in the circuit. In addition, certain device parameters are best evaluated in a forced current or forced voltage mode. For example, a power device on resistance should be evaluated by forcing a current through the device that matches the current at which the on resistance is specified. Also, in many cases, a power device datasheet does not specify device behavior under actual use conditions, so some means to characterize it under a specific voltage or current bias is extremely valuable.

Unlike traditional curve tracers, the B1506A utilizes advanced SMU (Source Monitor Unit) technology. An SMU can function as either a precision voltage source or a precision current source, and it can also simultaneously and accurately measure both voltage and current. In addition, you can toggle the SMU operation between the current source mode and voltage source mode interactively or automatically without any physical connection changes. SMUs also have feedback circuitry that monitors the sense terminal and quickly corrects the voltage and current applied to the DUT to match its programmed value. SMU technology makes it easy to characterize power devices under the exact same bias conditions as they will experience in a power electronics circuit.

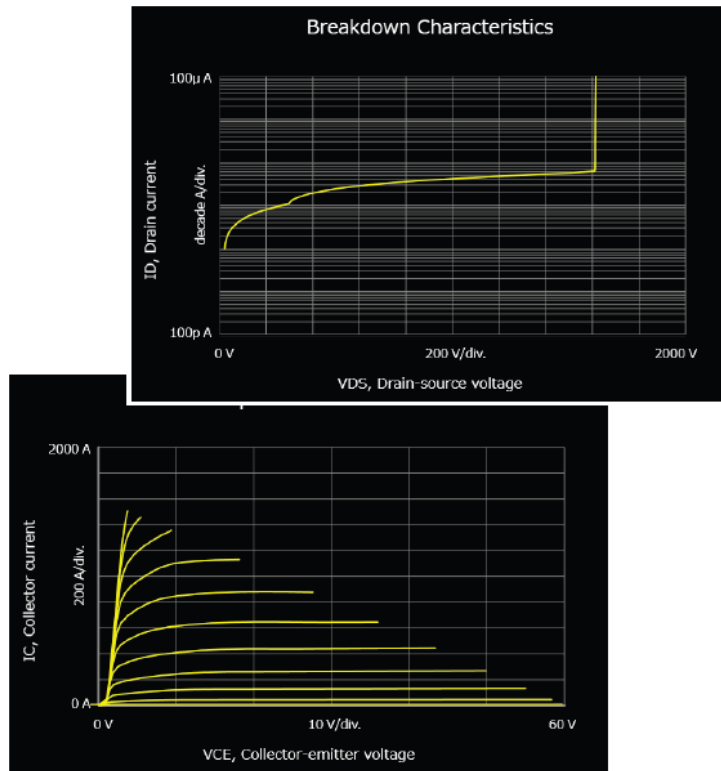


Figure 3. Measure ultra-high current characteristics up to 1500 A and accurate blocking characteristics up to 3 kV

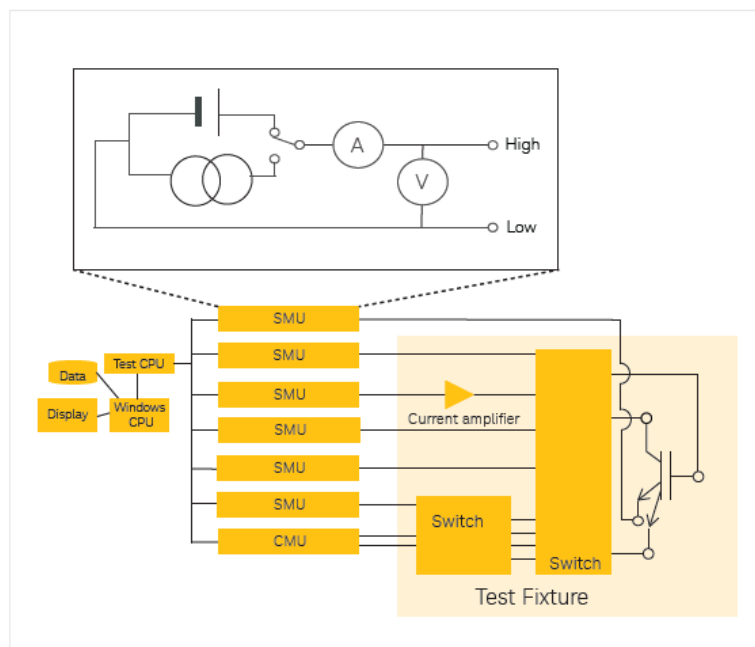


Figure 4. B1506A hardware architecture utilizes advanced SMU technology

Wide Measurement Range, Flexible SMU Technology, and Traceability to Standards Ensure First Time Design Success

A complete solution to fully evaluate both power devices and components used in power electronics circuits

In addition to power semiconductor devices, electronic components (such as inductors, capacitors, optocouplers, etc.) are also important elements affecting power electronic circuit performance that circuit designers, incoming inspection engineers, and failure analysis engineers need to evaluate. The B1506A provides ready-made test setups for various components to meet this need, as shown below.

- Inductors
- Capacitors
- Shunt R
- Resistors
- Connectors
- Cables
- Relays
- Photo couplers
- Solid state relays

Traceability to international standards guarantees measurement accuracy

For all current and voltage levels, obtaining accurate and reliable measurement results is vital. The larger the measurement error in device evaluation, the more significant its negative impact on circuit operating margins and peripheral circuit design. However, test data taken using traditional power device measurement equipment (such as curve tracers) is questionable regarding measurement accuracy and reliability. Therefore, many circuit designers only use curve tracers to verify gross device functionality and take the numerical measurement results as a rough indication of device behavior. When the need arises to compare the characteristics of multiple devices or verify a device meets a manufacturer's specifications, having only approximate device characterization data is not acceptable.

Keysight Technologies has developed a current measurement standard that is capable of measuring currents greater than 1000 A, making Keysight one of the few companies that can provide ultra-high current testing with traceability to international standards. The voltage measurements of up to 3 kV also have this same traceability, along with smaller current and voltage measurements. All B1506A instruments come with a Certificate of Calibration (COC), which guarantees their ability to make reliable measurements.

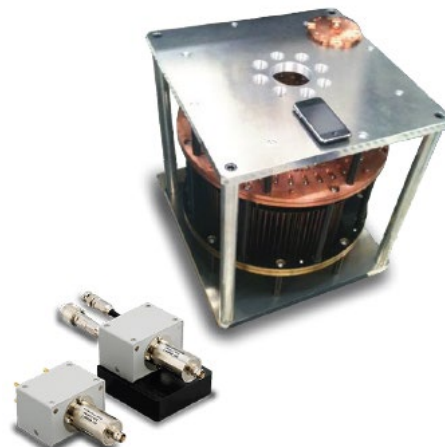


Figure 5. Internationally traceable measurement standard ensures test confidence

Accurately Estimate Device Power Loss in Your Power Circuits Before Fabrication

Measure gate charge (Q_g) parameters under actual use conditions

The rapid acceleration of power device performance continues to drive switching power supply operation frequencies higher, and end product sizes smaller. New device types and materials, such as super junction MOSFETs and SiC, GaN, or Ga₂O₃ FETs, offer superior switching performance and realize unprecedented frequency operating ranges (from several hundred kHz to over 1 MHz). Higher switching frequencies drive down power circuit costs by reducing the size of the circuit's magnetic components, which makes the entire power circuit lighter. However, higher switching frequencies increase a power device's switching and driving losses, making it critical to select power devices that minimize these parameters.

Gate charge (Q_g), which is defined as the total amount of charge necessary to drive a power device, is a critical parameter when estimating the driving loss during circuit operation. The driving loss consists of the product of Q_g , the gate voltage (V_g), and the switching frequency. Accurate Q_g evaluation allows precise driving loss calculation and optimized driving circuit design.

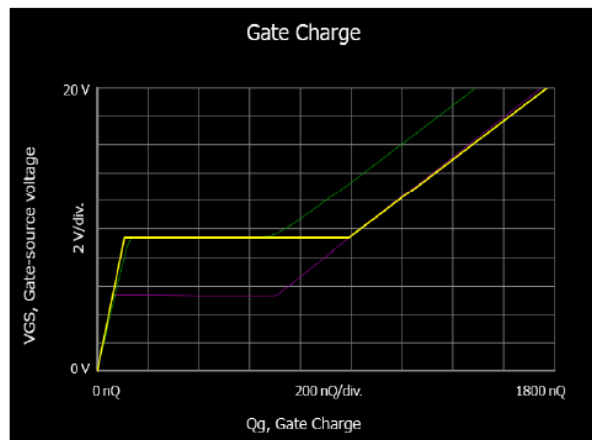


Figure 6. Gate charge characteristics for a super junction MOSFET

Q_g also provides other useful information to help with switching operation analysis. For example, when a circuit is not meeting performance expectations, examining the Q_g curve can offer valuable insights that help determine the root cause of the issue.

Since Q_g varies with the output voltage and current, it should be evaluated under in-circuit bias conditions. The Q_g characteristics shown on a device datasheet only provide an approximation of the value of Q_g during actual circuit operation.

The B1506A can accurately evaluate Q_g for N-ch MOS and IGBT for both low-voltage and high-voltage power devices. The B1506A can produce the complete gate charge curve and many other gate charge-related parameters.

Accurately Estimate Device Power Loss in Your Power Circuits Before Fabrication

Quick and easy power loss calculation

In addition to driving loss, the B1506A can also calculate conduction loss and switching loss. While gate charge is defined as the total amount of charge required to turn on a FET, the Qg curve can also be interpreted as a representation of the non-linearity of a power device's stray capacitances. This makes it possible to calculate switching parameters and switch loss using known equations that combine the gate resistance, the resistance in series to the gate, and the switching frequency. The B1506A's ability to accurately measure on-resistance (Ron) and peak current also makes it easy to calculate conduction loss.

Easy Test Navigator, the B1506A's software, has a unique user interface optimized for circuit designers. It supports simple and easy evaluation of a device's IV and Qg characteristics and can display a device's driving, switching, and conduction losses on the B1506A's screen.

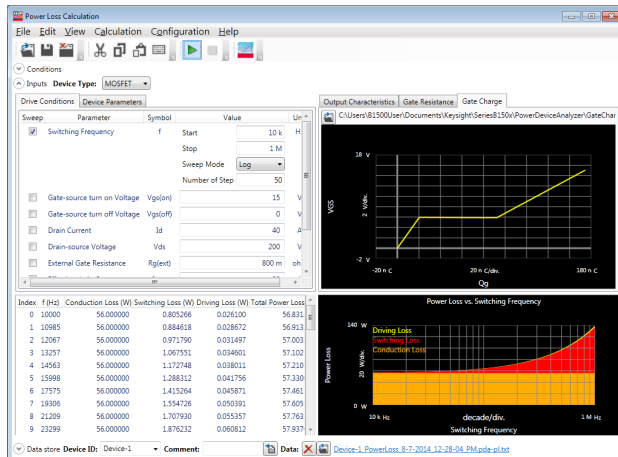


Figure 7. Driving, conduction and switching losses calculated by the B1506A

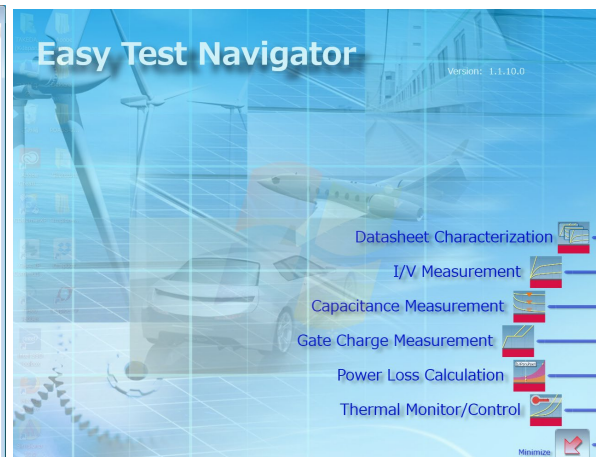
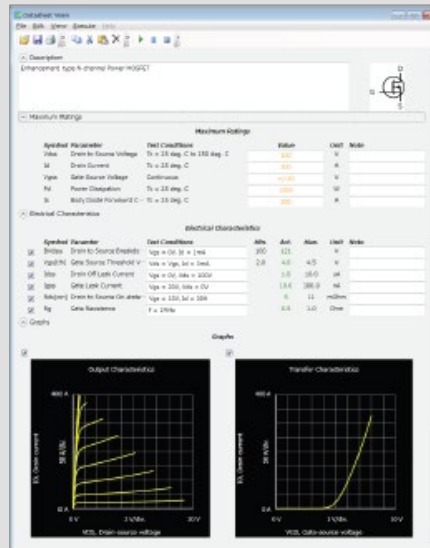
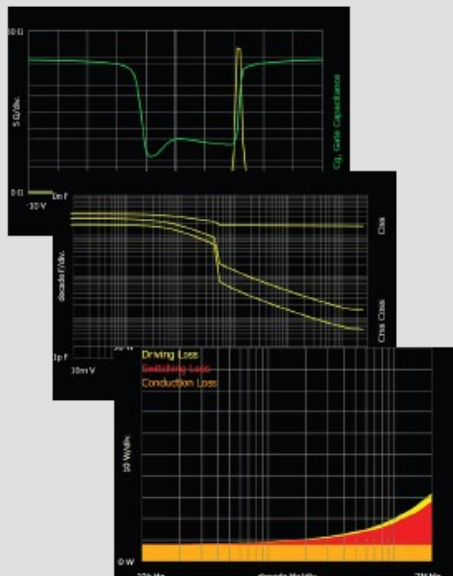


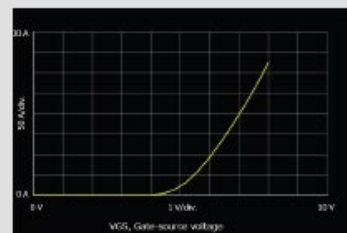
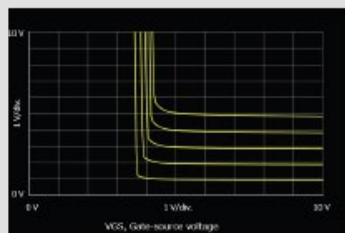
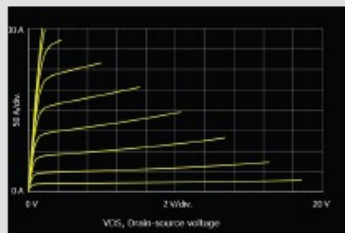
Figure 8. Easy Test Navigator (ETN) allows users to perform IV, CV and Qg measurements and to calculate device power losses.

Measure All Parameters Required for Power Circuit Design Under Actual Operating Conditions

All parameters



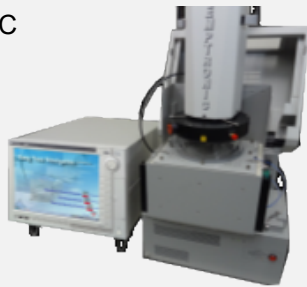
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Measure All Parameters Required for Power Circuit Design Under Actual Operating Conditions

Wide range of operating conditions

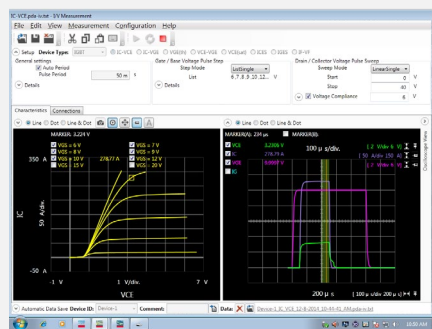
- 1500 A
- 3 kV
- -50 to +250 °C



Select the ideal power device or component

Optimize product performance through

- Smaller form factor
- Improved reliability
- Reduced cost
- Higher energy efficiency



Easy and Elegant Switching Loss Analysis

Fully automated input, output, and reverse transfer capacitance measurement

Understanding the input, output, and reverse return capacitances of three-terminal devices (such as MOSFETs or IGBTs) is very important because these parameters dictate the switching speed and the switching loss when a switching power supply operates at a high frequency. However, accurately measuring these parameters is not straightforward. When measuring the capacitance between two terminals of a three-terminal device, the other terminal must be appropriately configured (using the capacitance meter's AC guard output) to make an accurate measurement. Other components (such as an AC-blocking resistor or a DC-blocking capacitor) may also be needed depending on the capacitance parameter and type of device being measured. In addition, some capacitance measurements need high voltage biases to be applied to the DUT, requiring additional components to protect instrument resources from damage in the event of device breakdown. For these reasons, a great deal of skill and thought needs to go into making a single type of capacitance measurement, and it is easy to make a mistake that leads to invalid data collection.

Using its built-in capacitance selector module, the B1506A can automatically and accurately measure FET capacitance values (C_{iss} , C_{oss} , C_{rss}). The capacitance selector contains all of the resistors, capacitors, and protection circuits necessary to make high-voltage capacitance measurements, and it automatically arranges these components into the correct configuration for specified capacitance measurements. The B1506A's capacitance selector can even provide accurate capacitance data for normally on devices (such as SiC JFETs).

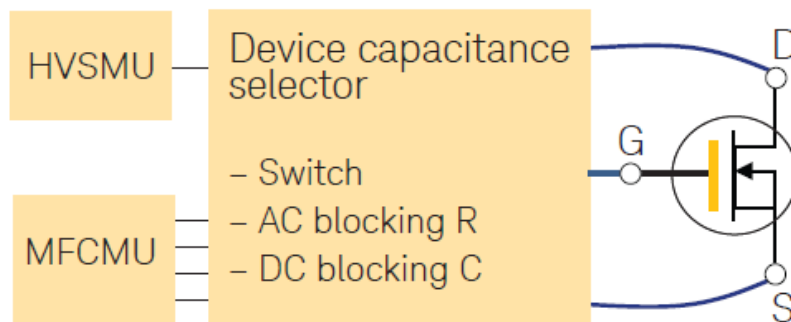


Figure 9. Capacitance selector supports fully automated C_{iss} , C_{oss} and C_{rss} measurement

Easy and Elegant Switching Loss Analysis

Measure device junction capacitances at DC biases of up to 3kV

An applied DC voltage causes a power device's depletion region to modulate, which in turn causes the junction capacitance to vary with voltage. A power device's drain or collector terminal is often exposed to high voltages when it is off, which determines the value of its junction capacitances when it turns on. Therefore, understanding how device capacitance changes with applied voltage are very important for power electronics circuit designers. Knowing the true value of device capacitance at a specific voltage and the calculated voltage the device will experience in a circuit allows you to select a power device with the lowest loss. The B1506A automates the process of determining the drain and collector voltage dependency of the input, output, and reverse transfer capacitances. Moreover, although power device capacitance measurement needs to be performed at relatively high frequencies, the B1506A can compensate for the various parasitic elements in the cables and fixturing and to produce reliable capacitance measurements.

The B1506A can also automatically calculate the device gate resistance (R_g) when it performs capacitance measurement, eliminating the need for additional complicated data analysis. Gate resistance is an important parameter for circuit designers since it influences device operation speed and switching loss.

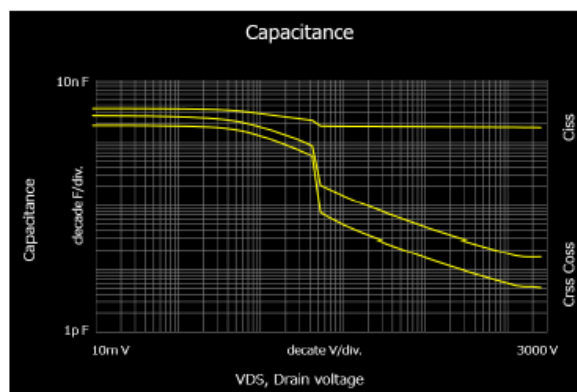


Figure 10. Ciss, Coss and Crss vs. drain voltage.

More precise switching waveform simulations

Circuit simulators such as SPICE are essential for power electronics circuit designers. Accurately simulating the performance of a circuit can result in significant cost savings through reduced development cycles and prototyping. However, until now, accurate modeling of non-linear capacitance characteristics was impossible since no equipment could perform high-voltage capacitance measurements. The B1506A can precisely model Crss, Ciss, and R_g , which is essential for accurate power circuit simulations. The B1506A can generate accurate values for these parameters by correlating Crss and Ciss voltage dependency with the devices' gate charge characteristics. The switching characteristics on the right show simulation results obtained using precise Crss, Ciss, and R_g modeling data.

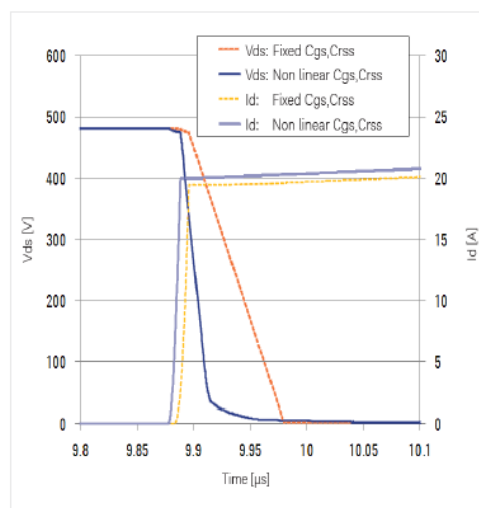


Figure 11. Simulation example: Switching waveforms with & without CV and R_g data.

Eliminate Concerns About Using Counterfeit or Substandard Power Devices in Your Circuits

The B1506A can measure the key parameters essential to ensure reliable and efficient device performance

The traditional method of selecting devices to use in a power electronics circuit involves checking device data sheet characteristics or measuring gross characteristics using a curve tracer. Unfortunately, you can never be certain that a power device's behavior matches the characteristics shown on its device datasheet, and curve tracers can only provide coarse parameters such as breakdown voltage and approximate on-resistance. Modern high-performance power devices exceed the measurement capabilities of traditional curve tracers, and of course, curve tracers cannot characterize capacitance at all. Understanding the relationship between on-resistance and gate-to-drain capacitance (C_{gd}) is also crucial to optimize high-speed device performance. If you reduce device on-resistance by reducing channel width, capacitances such as C_{gd} will increase. This means that both on-resistance and capacitance must be measured to predict device performance accurately. In fact, low-cost, low-performance devices and counterfeit devices often have large junction capacitances even though their measured on-resistance is low. In addition to capacitance and on-resistance issues, inferior-grade devices also often show severe performance degradation at high temperatures.

The B1506A can easily characterize the three key parameters of on-resistance, junction capacitance, and temperature dependency. This makes it easy to detect counterfeit and inferior power devices, offering many obvious cost benefits in reducing design cycles and product liability issues.

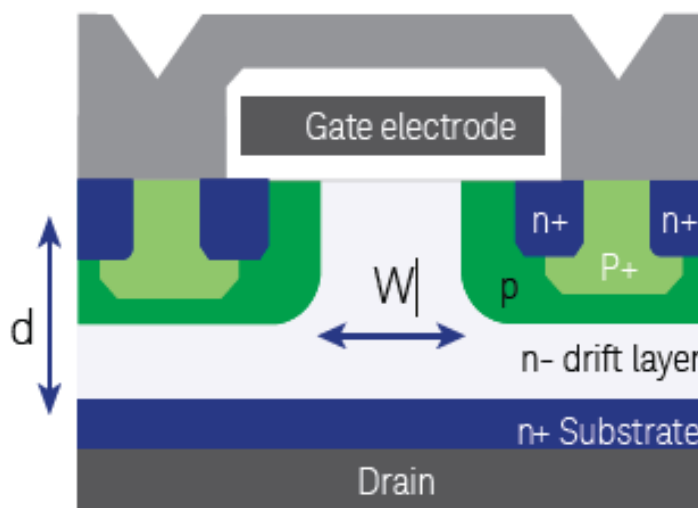


Figure 12. Trade-off between on-resistance and device capacitance

Efficient fault isolation

When circuits do not perform as expected, a very effective troubleshooting method is to perform a detailed characterization of each power device or component in the circuit. Corrective circuit operation is often due to unpredictable leakage currents or degraded breakdown voltages. Recognizing a bad component can often provide a shortcut to identifying a solution for improper circuit behavior.

The B1506A's easy-to-use and intuitive GUI makes it easy to verify the behavior of a power device or component. The B1506A has a Pass/Fail mode that collates test results with predefined limits and highlights the failed parameters in red.

If further detailed characterization is necessary, then the well-proven EasyEXPERT software interface is available to create more specific measurement setups. In addition, an Oscilloscope View is available that allows you to monitor in the time domain the actual pulsed voltage and current waveforms being applied to the DUT at any point along a measurement curve. These B1506A features can significantly expedite the process of fault isolation.

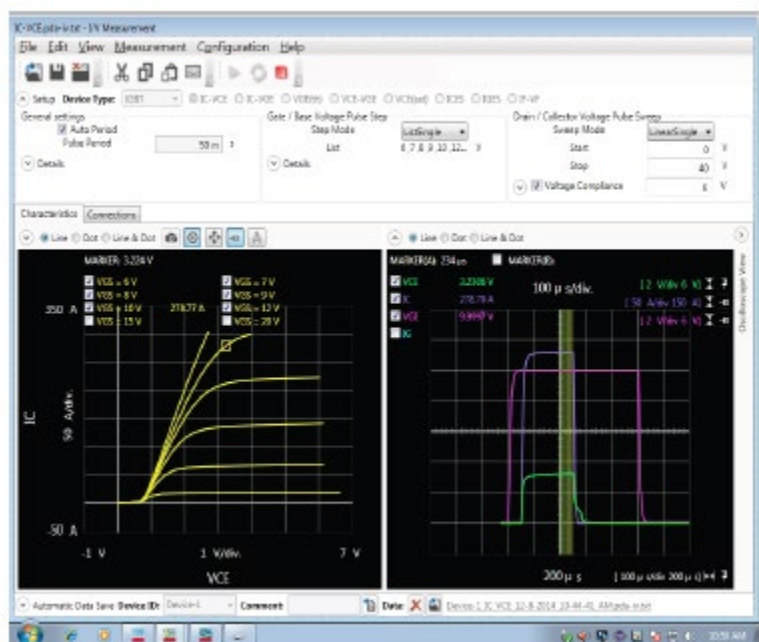


Figure 13. The B1506A software and its Oscilloscope View are useful to check power device behavior

Achieve Accurate Results Immediately Without the Need for Training or Measurement Expertise

Intuitive data sheet style user interface eliminates the need for product training

Traditional power device evaluation has been a complicated process involving many different pieces of equipment (curve tracers, oscilloscopes, LCR meters, production functional testers, etc.). Not only does it take a long time to learn how to use this equipment properly, but a lack of automation capability means it is easy to make mistakes that can cast doubt on the measurement results. However, the B1506A has a unique datasheet characterization mode that displays device tests in data sheet format. It provides an intuitive interface that enables anyone to measure key device parameters without specialized training. In addition, all device characteristics (including high current, high voltage, small leakage currents, and three terminal device capacitances) can be measured without any need to modify the device connections. Since typical test setups for MOSFETs, IGBTs, and various other components are built-in, you can start characterizing components immediately after unpacking the B1506A. Of course, it is also easy to customize the predefined setups. All measurement results are automatically stored onto the B1506A's internal SSD, making it easy to generate test reports later. A Pass/Fail feature is also available to detect counterfeit and substandard devices and components quickly.

The B1506A's cabling and DUT connections inside the test fixture are also easy to make. The B1506A's simplified interface architecture dramatically minimizes the chance of operator error. From a hardware and software perspective, the B1506A is the best instrument for power device characterization.

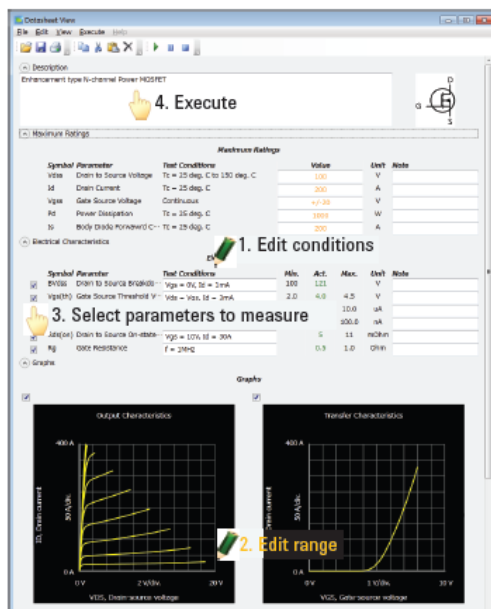


Figure 14. The intuitive data sheet characterization mode of Easy Test Navigator provides complete device characteristics in a few simple steps



Figure 15. Simplified DUT connections eliminate errors. For traditional curve tracer users, the curve tracer socket module is provided

Innovative switching technology supports a fully automated IV and CV measurement solution

Although understanding the IV and CV characteristics of power devices has become more important than ever as switching frequencies have increased, no equipment has been available to evaluate both of these parameters. There are several reasons for this, all relating to the CV measurements. First, high voltage bias CV measurements are innately difficult to make. The second is that the circuit complexities involved in switching between IV and CV measurements are not trivial since some capacitance measurements require additional AC or DC blocking components. The third and final issue is that CV measurements require proper compensation to cancel out measurement errors, which typically requires some measurement expertise on the user's part. In addition to these challenges, automating this entire process is not trivial.

However, Keysight's unmatched semiconductor device capacitance measurement expertise, combined with an innovative switching solution, allows the B1506A to make fully compensated and automatic IV and CV measurements at the touch of a button.

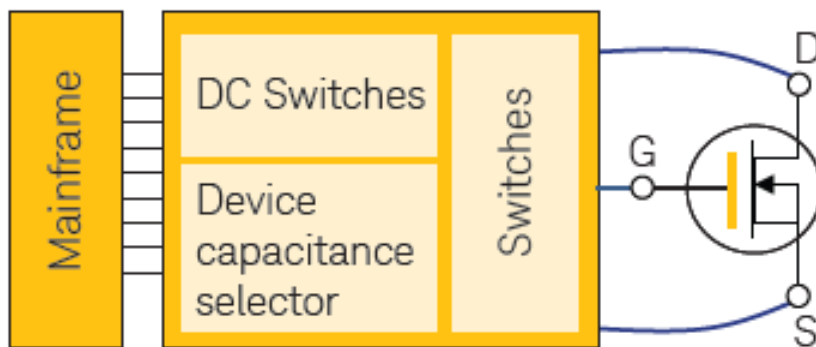


Figure 16. Innovative switching solution supports fully automated IV and CV measurements

Selection Guide

				B1506A-H20/H21	B1506A-H50/H51	B1506A-H70/H71
Collection/Drain channel	Maximum output	Voltage		± 3000 V	± 3000 V	± 3000 V
		Current	Pulsed	± 20 A	± 500 A	± 1500 A
	Minimum resolution	(source)	DC	± 1 A	± 100 mA	
			Voltage	200 nV	25 μV	
	Minimum resolution	(measure)	Current	100 fA	100 fA	
			Voltage	200 nV	500 nV	
		Current	10 fA	10 fA		
Gate channel	Maximum output	Voltage		± 100 V		
		Current	Pulsed	± 1 A		
	Minimum resolution	(source)	DC	± 100 mA		
			Voltage	200 nV		
	Minimum resolution	(measure)	Current	500 fA		
			Voltage	200 nV		
		Current	10 fA			
Capacitance measurement (H21/H51/H71 only)	Max. bias	Gate		± 100 V		
		Collector/Drain		± 3000 V		
	Frequency range			1 kHz to 1 MHz		
	Capacitance range			100 fF to 1 μF		

Characteristics	Category	Parameters
Static characteristics	Threshold voltage	V(th), Vge(th)
	Transfer characteristics	Id-Vgs, Ic-Vge, gfs
	On resistance	Rds-on, Vce(sat)
	Gate leakage current	Igss, Iges
	Output leakage current	Idss, Ices
	Output characteristics	Id-Vds, Ic-Vce
	Breakdown voltage	BVds, BVces
Gate charge characteristics ³	Gate charge	Qg, Qg(th), Qgs, Qgd, Qsw, Qsync, Qoss for Nch-MOS and IGBT
Capacitance characteristics ³	Gate resistance	Rg
	Device capacitance	Ciss, Coss, Crss, Cgs, Cgd, Cies, Coes, Cres
Power loss ³		Driving loss/Switching loss ¹ Conduction loss at a specified duty cycle ²

1. Driving loss and switching loss are calculated by measuring Qg characteristics, Vth, and Rg at a specified frequency.

2. Conduction loss is calculated from measured Rds-on and peak current.

3. B1506A-H21/H51/H71 only

Supported power devices and electronic components

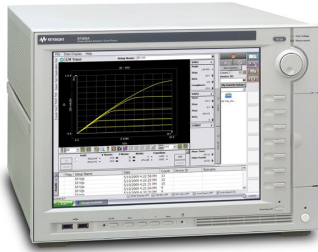
MOSFETs, IGBTs, Diodes, Inductors, Capacitors, Shunt R, Resistors, Connectors, Cables, Relays, Photo couplers, Solid state relays

Ordering Information

Model number	Option	Description
B1506A		Power device analyzer for circuit design ²
	H20	Option H20 - 20 A/3 kV/Thermal fixture package
	H21	Option H21 - 20 A/3 kV/C-V/Gate charge/Thermal fixture package
	H50	Option H50 - 500 A/3 kV/Thermal fixture package
	H51	Option H51 - 500 A/3 kV/C-V/Gate charge/Thermal fixture package
	H70	Option H70 - 1500 A/3 kV/Thermal fixture package
	H71	Option H71 - 1500 A/3 kV/C-V/Gate charge/Thermal fixture package
	Thermal test option	
	T01	Thermal test enclosure (Thermostream compatible)
	Documentation	
	0B0	Download the product manual from the Keysight website
	Calibration documentation	
	UK6	Commercial calibration certificate with test data
	A6J	ANSI Z540-1-1994 calibration
	Drive option	
B1506AU	Upgrade kit for B1506A	
	Mainframe upgrade	
	B1500AU-PC3	Mainframe upgrade (available for S/N MY53440101 or later)
	Current upgrade	
	005	20 A to 500 A current upgrade for B1506A-H21
	015	500 A to 1500 A current upgrade for B1506A-H51
	105	20 A to 500 A current upgrade for B1506A-H20
	115	500 A to 1500 A current upgrade for B1506A-H50
	CV and Qg upgrade ¹	
	021	Add CV and Qg to B1506A-H20
	051	Add CV and Qg to B1506A-H50
	071	Add CV and Qg to B1506A-H70
	Accessory	
	T01	Thermal test enclosure (Thermostream compatible)
	F02	Blank silicon plate
	F10	3-pin inline package socket module
	F11	Universal socket module
	F13	Curve tracer test adapter socket module
	F14	Gate charge socket adapter

1. Universal Socket Module (B1506AU Opt F11) and Gate Charge Socket Adapter (B1506AU Opt F14) are not furnished. Order these options if necessary.

2. Mainframe with serial number MY64320101 or later is not equipped with DVD drive.



Keysight B1505A Power Device
Analyzer/Curve Tracer
(1500 A/10 kV)

www.keysight.com/find/b1505a



Keysight B1500A
Semiconductor Device Analyzer

www.keysight.com/find/b1500a



Keysight B2900 Precision
Instrument Family

www.keysight.com/find/smu

B1506A Now Supported in Windows 10

The B1506A PC platform has been renewed. It includes Windows 10 OS, a faster CPU, 8 GB of memory, and a solid-state drive (SSD). The latest PC platform enables you to perform your software tasks easily while improving your total computing performance. Windows 10 upgrade option is also available.

For more information:

<https://www.keysight.com/us/en/assets/7018-04136/technical-overviews/5991-3327.pdf>



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