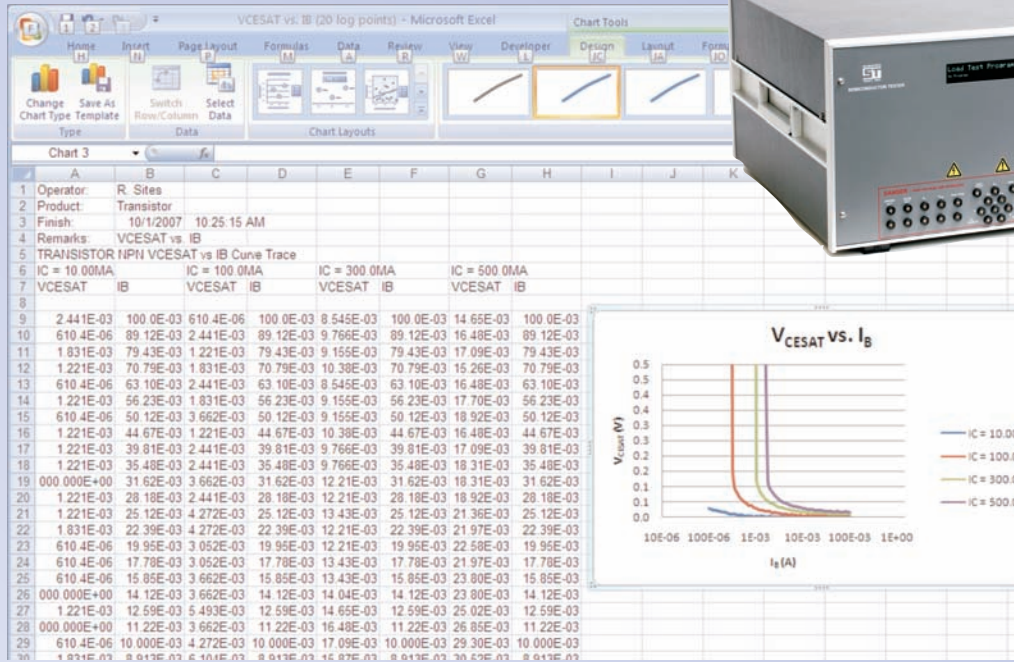
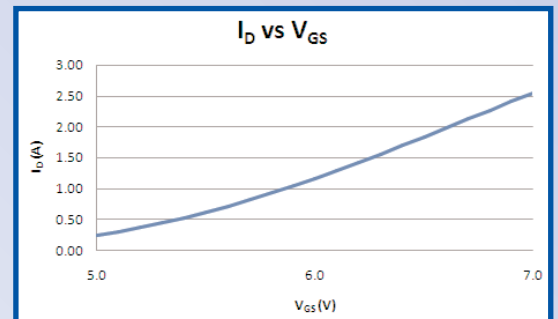
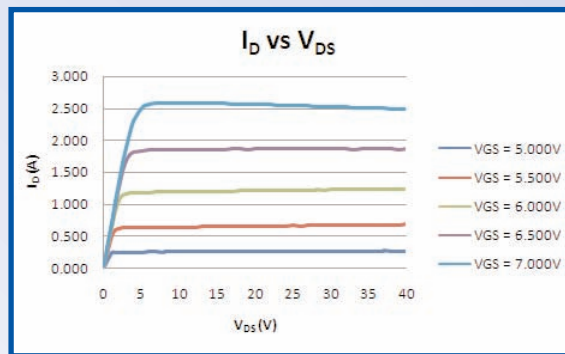
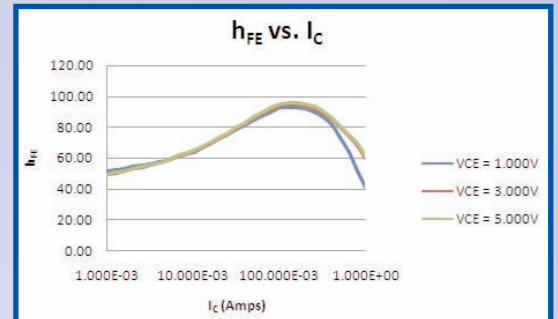
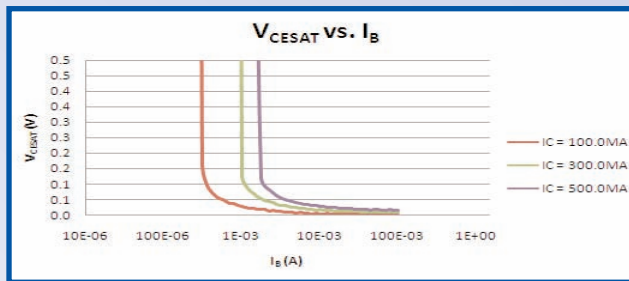


# PROGRAMMABLE CURVE TRACE



**CURVE TRACER**  
**SERIES 5000**

## Featuring



Your Discrete Test Source  
 Scientific Test, Inc.

# Performance

THE SERIES 5000 CURVE TRACER provides quick creation of digital curves for storage and intuitive manipulation. Curves are generated using a high speed ATE system.

## Function

Curves are generated using high speed ATE test steps to build the curve point by point. Precision data points are generated quickly and accurately using an STI 5000 Series Test System. Data increments are programmable in linear or logarithmic steps. Curves are generated rapidly. Typical test time per step is 6 to 20MS. A two hundred data point curve will typically take only a few seconds to generate. Captured curve data points can be loaded into EXCEL® to create curve trace presentations.

## Standard Features

- Wide Selection of Available Curves
- Programmable Data Point Increments
- Increments can be Linear or Logarithmic
- Programmable Off-Time to Minimize Heating
- Save and Re-call Curve Entry Programs
- Save & Re-Call Previously Captured Curve Image
- Load Curve Data Directly to EXCEL®
- Run up to 10 Curve Programs in Sequence with data loaded to Excel® Automatically
- Program Maximum Current/Voltage Limits to Prevent Damage or Heating



## Programming

Programming a curve requires that a standard test be selected. Ex, IB vs VCE as a function of IC requires a VCESAT transistor test be selected.

Step	Scan	Device	Limit	Bias 2	Bias 3	RBE/RGK	RL	RGS	BP	ANET	G
01:00	DL AR	TRANSISTOR NPN	HFE > 75.05	IC = 10.03MA	VCE = 10.01 V	Open				Off	Off
02:00	DL AR	TRANSISTOR NPN	VBE < 1.299 V	IC = 149.9MA	VCE = 400.9MV	Open					
03:00	DL AR	TRANSISTOR NPN	IEBO < 100.1NA	VEBO = 3.001 V							
04:00	DL AR	TRANSISTOR NPN	VCESAT < 1.600 V	IB = 49.99MA	IC = 500.2MA	Open					
05:00	DL AR	TRANSISTOR NPN	ICBO < 99.88NA	VCBO = 50.01 V							
06:00	DL AR	TRANSISTOR NPN	ICE < 300.1NA	VCE = 30.01 V							
07:00	DL AR	TRANSISTOR NPN	BVCE > 30.01 V	IC = 10.01MA		Open				Off	Off
08:00	DL AR	TRANSISTOR NPN	BVCBO > 60.00 V	IC = 10.01UA							
09:00	DL AR	TRANSISTOR NPN	BVEBO > 5.001 V	IE = 10.01UA							

# Performance

STI Curve Trace (V 2.9) ? X

**TRANSISTOR NPN VCESAT vs IB Curve Trace**

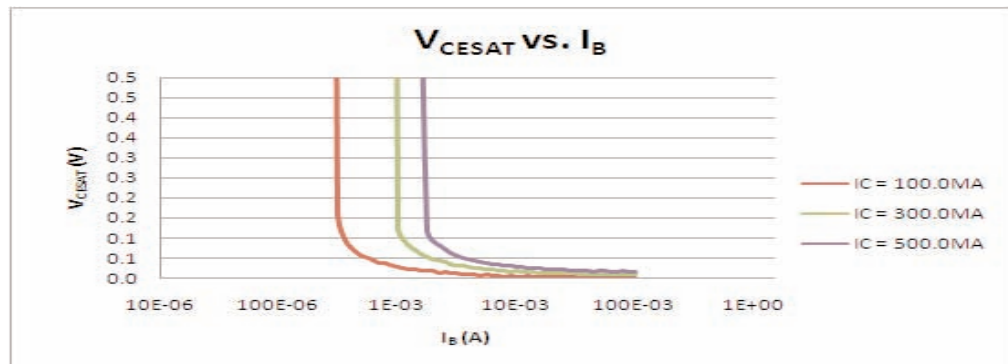
y-axis: **VCESAT**   **V**

x-axis: **IB**      **A** Logarithmic Points / Decade: 8

Data Sets: **IC**      **A**

Note: Leave Max/Min and Inc2 at 0.0 for One Increment Only

Off Time:  **MSec**



## Ranges

Voltage:	1KV Standard, 2KV Optional
Current:	1NA to 50A, 100A Optional
Optional(5300HX):	Optional(5300HX):20PA 500/1000/1200A
Resolution:	1MV 0.1NA, 0.1 Milliohm RDSON Optional(5300HX): 1PA

# Tests

Additional curves can be added using any test available in the 5000E/5300HX Test Families. These include but are not limited to transistor, triac, SCR, MOSFET, IGBT, OVP, gated device, diode, zener, opto-coupler, regulator, MOV, J-FET, opto-switch, diac, opto-logic, Quadrac<sup>®</sup>, sidac, STS, SBS, and relay.

See Test Tables in Model 5000E brochure or 5300 Series Buyers Guide, or go to [www.scitest.com](http://www.scitest.com) for specific tests.



- Proven Technology
- High Speed Data Log
- Capable of Testing Multiple & Mixed Devices
- 1KV Standard, 2 KV Optional
- 1NA to 50A Standard, 100A Optional
- Windows<sup>®</sup> Application Software
- RDSON to 0.1 mOHM Resolution
- 0.1NA Resolution
- Complete Self-Test
- Auto-Calibration
- Optional Scanner
- Wafer Map Option
- Curve Trace

## Standard Curves Available:

Mosfet (N-Channel & P-Channel)  
ID vs. VDS at range of VGS  
ID vs. VGS at fixed VDS  
IS vs. VSD  
RDS vs. VGS at fixed ID  
RDS vs. ID at several VGS  
IDSS vs. VDS  
Transistor (NPN & PNP)  
HFE vs. IC  
BVCE(O,S,R,V) vs. IC  
BVEBO vs. IE  
BVCBO vs. IC  
VCE(SAT) vs. IC  
VBE(SAT) vs. IC  
VBE(ON) vs. IC (use VBE test)  
VCE(SAT) vs. IB at a range of IC  
VF vs. IF

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