TEKTRONIX

576

The Tektronix 576 is a legendary, industry-standard analog semiconductor curve tracer designed for testing two- and three-terminal discrete semiconductor devices. Renowned for its high-power capabilities and precise step generation, the 576 provides real-time characteristic curves of transistors, diodes, thyristors, and other solid-state components. With its standard test fixture, the system delivers up to 220 watts of peak power, while the optional 176 pulsed high-current fixture extends pulsed collector sweep capability up to 200 amps peak for heavy-duty power semiconductor testing.

SPECIFICATIONS

General

Interfaces	Analog X-Y outputs (rear panel)
Display	CRT with 10x10 division illuminated graticule and automated scale factor readout
Warm-up Time	20 minutes for specified accuracy

Physical

Power Supply	100V / 115V / 120V / 200V / 230V / 240V AC (selectable ±10%), 48 to 66 Hz, ~350 W
Operating Temperature	0°C to +50°C °C
Dimensions (W×H×D)	292 mm × 381 mm × 584 mm mm
Weight	32 kg (70 lbs) kg

Collector Supply

Collector Supply Voltage Ranges	15 V, 75 V, 350 V, 1500 V
Max Continuous Peak Current (15 V Range)	10 A
Max Continuous Peak Current (75 V Range)	2 A
Max Continuous Peak Current (350 V Range)	500 mA
Max Continuous Peak Current (1500 V Range)	100 mA
Series Resistance Range	0.3 Ω to 6.5 MΩ
Max Peak Power (Standard Fixture)	Up to 220 W
Pulsed Peak Power (176 Fixture)	Selectable 10 W, 100 W, or 1000 W
Collector Supply Pulsed Peak Current (15 V Range)	200 A (with 176 high-current fixture)
Collector Supply Pulsed Peak Current (75 V Range)	40 A (with 176 high-current fixture)
Collector Supply Pulsed Peak Current (350 V Range)	8 A (with 176 high-current fixture)
Collector Supply Polarity	+, -, AC, or Leakage
Collector Supply Operating Modes	Normal Sweep, DC, Single Sweep

Step Generator

Step Generator Current Mode Step Range	5 nA/step to 200 mA/step
Step Generator Current Mode Max Current	X20 amplitude setting (2 A max at 200 mA/step, 1.5 A max at 100 mA/step)
Step Generator Current Mode Max Voltage	At least 10 V
Step Generator Current Mode Max Opposing Offset Current	X10 amplitude setting or 10 mA, whichever is less
Step Generator Current Mode Max Opposing Voltage	Limited at 1 V to 3 V
Step Generator Voltage Mode Step Range	5 mV/step to 2 V/step
Step Generator Voltage Mode Max Voltage	X20 amplitude setting (40 V maximum)
Step Generator Voltage Mode Max Current	At least 2 A at 10 V (derating linearly to 10 mA at 40 V)
Step Generator Voltage Mode Max Opposing Offset Voltage	X10 amplitude setting
Step Generator Voltage Mode Max Opposing Current	Limited at 5 mA to 20 mA
Steps per Family	1 to 10
Step Polarity	Positive or Negative
Step Rate	Line frequency or twice line frequency
Step Generator Current Step Range	5 nA to 200 mA per step (using 0.1× multiplier)
Step Generator Voltage Step Range	5 mV to 2 V per step (using 0.1× multiplier)
Step Generator Offset Range	-10 to +10 steps (continuously variable)
Step Generator Offset Control	10-turn potentiometer, 0 to 10× step amplitude

Pulsed Step Generator (176 Fixture)

Pulsed Step Max Current (176 Fixture)	20 A peak (200 x amplitude setting or 20 A, whichever is less)
Pulsed Step Max Voltage (176 Fixture)	At least 3 V up to 10 A, 2 V up to 20 A
Pulsed Step Width (176 Fixture)	300 µs or 80 µs
Pulsed Step Offset (176 Fixture)	Pulsed when selected

Test Fixtures & Accessories

Standard Test Fixture Configuration	Plug-in fixture with two sets of five-pin test terminals
Standard Test Fixture Controls	Emitter Grounded/Base Grounded switch, Left-Off-Right switch
Standard Test Fixture I/O	Step Gen Output, Ext Base or Emitter input
Standard Test Fixture Compatibility	Six-pin universal, three-pin, and Kelvin high-power transistor adapters
Pulsed High-Current Fixture Model	176
Programmable Test Fixture Model	172
Safety Interlock Protection	Protective microswitches and acrylic shield protect operator from 75 V, 350 V, and 1500 V ranges

Deflection System

Vertical Collector Current sensitivity	1 µA/div to 2 A/div
Horizontal Collector Voltage Sensitivity	50 mV/div to 200 V/div
Deflection System Accuracy	±3% or better
Vertical Collector Current Range	1 µA/div to 2 A/div (in 1-2-5 sequence)
Horizontal Collector Voltage Range	50 mV/div to 200 V/div (in 1-2-5 sequence)
Horizontal Base Voltage Range	50 mV/div to 2 V/div (in 1-2-5 sequence)

Display & Controls

CRT Size & Design	6.5-inch diagonal, post-deflection accelerating electrostatic CRT
Calibrated Display Offset	Up to 10 divisions, horizontal or vertical
Display Verification Checks	Dedicated Zero and Calibration pushbuttons

Physical & General

Cooling Method	Forced air ventilation via rear-panel fan

CRT Display

CRT Phosphor Type	P31

Power

Max Power Consumption	310 W
Line Voltage Settings	100 V / 110 V / 120 V / 200 V / 220 V / 240 V AC (selectable)
Line Frequency Range	48 Hz to 66 Hz

Display

CRT Readout System	Fiber-optic digital readout of vertical sensitivity, horizontal sensitivity, and step generator values

TECHNOLOGY

Analog / CRT

APPLICATIONS

Discrete Semiconductor Parameter Analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.