

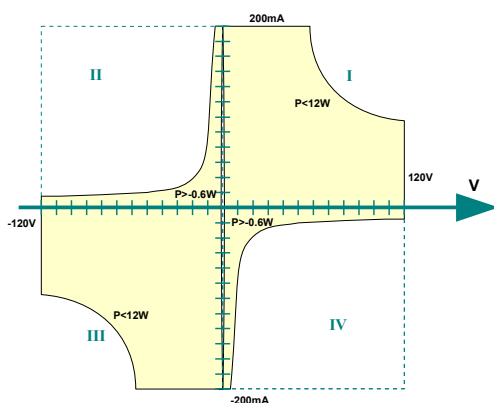
3 Independent Voltage Sources

- ✓ Voltage to $\pm 120V$, current to $\pm 200mA$, 12W
- ✓ Low Noise: down to 5mVp-p
- ✓ Low cost per channel

Main features

- 4-quadrant non-isolated DC voltage sources and 5-digit digital multimeter (DMM)
- 3 independent sources in the same module, all sharing the same ground
- 2 voltage ranges: +120V and -120V
- 2 current range: $\pm 2mA$ and $\pm 200mA$
- No crosstalking between sources
- No voltage transient when powering on/off or switching on/off
- 16-bit measurement and setting resolution
- Good voltage setting and read-back accuracy: 60mV typ.
- Programmable rising/falling slope
- Low noise: 5mVp-p typ.
- 4-wire operation available (remote voltage sensing)
- Output and Sense on a D-SUB connector
- Cost effective: up to 39 channels in a single Bilt chassis, 3 chassis sizes available: 5, 8 or 13 slot
- Operating area:

Yellow area: DC, Dashed line area: transient



Bilt system features

- Host connections at chassis level including Ethernet, USB, RS422, RS232 and GPIB (optional)
- Complete free software package provided, including a turnkey PC software and NI Labview drivers

Application examples

- Reliability tests for sensitive components
- Accurate biasing for measurement bench
- Forward and reverse diode characterization
- Burn-in / Lifetest of high voltage GaAs / GaN RF devices

BE586 module specifications

Operating area

Parameters	Conditions/Comments	Min.	Typ.	Max.
Voltage setting range	Absolute value for -120V and +120V ranges. Voltage between -0,24V and +0,24V can be obtained in current regulation	0,24V		120V
Current setting range	% of the range	1%		100%
Remote sense operating range	Max. voltage drop in the ground cable when sense connected	-1V		+1V
Voltage output headroom	Max module output voltage above voltage range for sense compensation		1V	
Sourced output power	Continuous power			12W
Sink output power	Continuous power			0,6W
Transient sink power	During less than 100ms, the module is switched off if longer			24W
Operating temperature	Ambiant temperature in front of Bilt's rear fan openings	15 °C		30 °C

Ranges and Accuracy

Voltage range switching by relay in standby mode with automatic range selection capability. Accuracy specified on a 18 °C-28 °C module temperature range, 30min warm-up.

Voltage :

Parameter	Resolution	2 year Accuracy ⁽¹⁾⁽³⁾	Ripple & Noise
Range	Setting & Readback		10Hz-20Mhz ⁽²⁾
+120V or -120V	3,7mV	0,1% (120mV)	5mVp-p typ., 15 mVp-p max.

(1) \pm offset \pm % of the reading or the setting, typical 90 day setting and measurement accuracy: 0,02%/24mV

(2) no output decoupling capacitor

(3) Additional voltage error if ground sense line not used <9mV

Current :

Parameter	Resolution	2 year Accuracy ⁽¹⁾	Load capacitance	
Range	Setting & Readback		Recommended ⁽²⁾	Max ⁽³⁾
\pm 200mA	6,4 μ A	0,1% (200 μ A)	470nF	4,7 μ F
\pm 2mA	64nA	0,1% (2 μ A)	10nF	4,7 μ F

(1) \pm offset \pm % of the reading or the setting

(2) for best noise and transient response results ; low esr ceramic capacitor recommended

(3) for regulation stability purpose

Regulation/measurements

Parameters	Conditions/Comments	Min.	Typ.	Max.
Voltage transient response time ⁽¹⁾	Recommended output decoupling capacitor		300 μ s	
Voltage to current transient response time ⁽²⁾	No output decoupling capacitor		300 μ s	
Line regulation	No line regulation error, guaranteed by design			0%
Load regulation	sense lines connected, 0 to max. source current			1mV
Measurements sampling frequency	Envelope trace capability at this rate, sample/second		330s/s	
Measurements bandwidth			1,6kHz	

(1) response time to a 10% to 90% load step, time to stabilize to within 500mV of setting

(2) time to stabilize from a constant voltage (CV) regulation to a constant current (CC) regulation after a load step

Connection

- 1 D-SUB 25 connector. Pinout is compatible for twisted pair ribbon cables

BE586 module specifications

Related products

BE584	6 independent DC sources $\pm 15V$ 200mA
BE587	4 independent DC sources $\pm 250V$ 1mA
BE2141	4 independent high stability DC sources $\pm 12V$ 15mA

Documentation

BE586 Brochure	Rev 4.0	2017/02/24	Module's specifications and main features
BE586 Manual			Manual with additional specification, quick-start guide and SCPI commands
http://www.bilt-system.com			ltest website

Standards, Calibration, Warranty and Maintenance

Bilt system is compliant with the applicable European Directives and holds the CE mark.

Any iTest product comes with a two-year parts and labour guarantee and a calibration certificate if applicable. A telephone support service is also available for the same period.

Our calibration laboratory performs according to ISO/CEI 17025 "General requirements for the competence of testing and calibration laboratories". All measurements are traceable to the International System of Unit.

The recommended calibration interval of this product is 1 year.

On request, ltest can proceed to scheduled calibration (in our workshop or at the customer's site).

Maintenance can also be performed on-site or in our workshop.



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