CR

SCPI COMMAND REFERENCE

TH2884

Impulse Winding Tester

Companion document to the TH2884 Operation Manual. Full remote-control SCPI command set over RS232C, USB (USBTMC/USBCDC) and LAN, organized by subsystem.

Techmize Electronic GmbH · Ismaning, Germany
Rev. 2026-10

TH2884 SCPI Command Reference

Impulse Winding Tester

This document lists the full remote-control command set for the TH2884. It is the companion reference to the *TH2884 Operation Manual*, which covers touchscreen operation, the physical remote interfaces (RS232C/USB/LAN/optional GPIB) and general operating procedures. SCPI is available over RS232C, USB and LAN.

Section	
1. Conventions & Reference Tables	1 page
2. Common Commands, DISPlay & SETup	1 page
3. IVOLTage & SRATE Subsystem	2 pages
4. COMParator Subsystem (part 1)	2 pages
5. COMParator Subsystem (part 2) & BDV	2 pages
6. TRIGger, STATistic & WADJust Subsystem	1 page
7. SWAVE Subsystem	1 page
8. FETCh? Subsystem & Waveform Data	2 pages
9. ABORt, MMEMory & SYSTem Subsystem	2 pages

SCPI commands are tree-structured (max. 3 levels, colon-separated) and case-insensitive. The capitalized portion of each keyword is the mandatory short form; the lower-case portion is optional (e.g. `IVOLTage:VOLTage` *may be sent as* `IVOLT:VOLT`*). A semicolon separates multiple commands at the same tree level;* `;:` *restarts the next command from the tree root. Numeric formats: NR1 = integer (e.g.* `123`*), NR2 = fixed point (e.g.* `12.3`*), NR3 = floating point (e.g.* `12.3E+5`*); NL (newline, decimal 10) terminates each command line, and ^END denotes the IEEE 488 bus EOI signal on a query response.*

SECTION 1

Conventions & Reference Tables

1.1 Command types

The instrument accepts two categories of command: IEEE 488.2 common commands and SCPI (Standard Commands for Programmable Instruments) commands. SCPI commands are tree-structured, up to three levels deep; the top level of each tree is a subsystem command. A command is only valid once its subsystem (and any intermediate level) has been selected; levels are separated by a colon.

1.2 Syntax rules

- Commands are case-insensitive (e.g. `FUNC:IMP CPD` = `func:imp cpd` = `Func:Imp CpD`).
- A space separates a command from its parameter: everything before the space is the command, everything after is the parameter (e.g. in `FUNC:IMP CPD`, `IMP` is the command and `CPD` is its parameter).
- Some commands take no parameter (e.g. `TRIGger`, `SWAVE:CHOose`).
- No space is permitted immediately before or after a colon.
- A command may be sent abbreviated or spelled out in full; the mandatory abbreviated portion is given in capitals throughout this document (e.g. `FUNCTION:IMPEDANCE CPD` = `FUNC:IMP CPD`).
- A command immediately followed by a question mark (`?`) performs a query (e.g. `FUNC:IMP?`).

1.3 Multiple commands in one line

- A semicolon (`;`) separates multiple commands at the same subsystem level within one command line (e.g. `CORR:SPOT1:STAT ON;FREQ 1KHZ` — `FREQ 1KHZ` and `STAT ON` are both sub-commands of `SPOT1`).
- A semicolon immediately followed by a colon (`;:`) restarts the next command from the top of the command tree (e.g. `FUNC:IMP CPD;:FUNC:SMON:STAT ON`).
- Common commands may be inserted at the start, middle or end of a command line, separated by semicolons, without affecting the tree-level relationships of the surrounding commands (e.g. `FUNC:IMP CPD;*TRG;SMON ON`).

1.4 Abbreviation rule

- If the full-length keyword or parameter is 4 characters or fewer, the abbreviation is identical to the full form (e.g. `MODE` → `MODE`).
- If the full-length form is longer than 4 characters: when the 4th character is a vowel, the abbreviation is the first 3 characters (e.g. `LEVel` → `LEV`); otherwise, the abbreviation is the first 4 characters (e.g. `TRIGger` → `TRIG`, `FREQuency` → `FREQ`).
- For a keyword or parameter made up of two or more words, the full-length form is the first word's initial letter plus the complete last word; the abbreviation is the first word's initial letter plus the (possibly abbreviated) last word. Example: Percent TOLerance → full form `PTOLerance`, abbreviation `PTOL`.

1.5 Symbol conventions

Symbol	Meaning
`:`	Colon — moves to the next level of the command tree.
`;`	Semicolon — separates multiple commands on one line (§1.3).
`*`	Asterisk — marks the command that follows as a common (IEEE 488.2) command.
`?`	Question mark — marks a query.
`,`	Comma — separates multiple parameters.
(space)	Separates a command from its parameter (§1.2).
`" "`	Quotation marks — content inside is taken literally (used for file names/paths).
`NR1` / `NR2` / `NR3`	Integer (e.g. `123`) / fixed-point decimal (e.g. `12.3`) / floating-point (e.g. `12.3E+5`).
`NL`	Newline, decimal 10 — terminates a command string.
`^END`	IEEE 488 bus EOI (end-of-identify) signal, appended to a query response.
`<>` / `[ ]`	Angle brackets enclose a program parameter; square brackets enclose an optional item.
`{ }`	Curly braces enclose a set of items of which exactly one may be chosen.

SECTION 2

Common Commands, DISPlay & SETup Subsystem

2.1 IEEE 488.2 common commands

Command	Details
`*RST`	Reset the instrument.
`*TRG`	Trigger a device-under-test measurement and write the measured waveform data to the output buffer — equivalent to `TRIG` followed by `FETCh:TWAVE?`. Used only to trigger a device-under-test measurement, not a standard-waveform acquisition (§7 `SWAVE`). Valid only on the Measurement Display page; ignored on other pages and while a test is already in progress.
`*IDN?`	Query the instrument identification. Returns `<model>,<version> Copyright(C) <date>`, e.g. `TH2884,V1.0.0 Copyright(C) 2024.07.19`.

2.2 DISPlay subsystem

Command	Details
`DISP:PAGE?` `DISPlay:PAGE <page>`	`page`: `MEASurement` (returns `MEAS DISP`), `MSETup` (returns `MEAS SETUP`), `COMParator` (returns `COMPARATOR`), `SAMPle` (returns `SAMPLE`), `ENV` (returns `ENV`), `TEST` (returns `TEST`), `ISETup` (returns `IO SETUP`), `FILE` (returns `FILE`), `ASSIst` (returns `ASSIST`), `ABOut` (returns `ABOUT`). Example: `WrtCmd("DISP:PAGE MEAS")`.
`DISP:WAVE?` `DISPlay:WAVE <AON|STD|TEST|AOFF>`	`AON`: both standard and test waveform shown; `STD`: standard only; `TEST`: test only; `AOFF`: neither. Query returns `ALL ON`, `ONLY STDWAVE`, `ONLY TESTWAVE` or `ALL OFF`. Example: `WrtCmd("DISP:WAVE AON")`.
`DISP:GRID?` `DISPlay:GRID <ON|OFF|1|0>`	Grid overlay on the waveform display area. Query returns `ON` or `OFF`. Example: `WrtCmd("DISP:GRID ON")`.

2.3 SETup subsystem

Command	Details
`SET:MODE?` `SETup:MODE <TEST|BDV>`	Test mode. `TEST`: normal (single-voltage) test; `BDV`: breakdown (destructive) test. Query returns `TEST` or `BDV`. Example: `WrtCmd("SET:MODE TEST")`.

SECTION 3

IVOLTage & SRATE Subsystem

IVOLTage controls the parameters of the applied impulse: test voltage, breakdown-mode voltage sweep, test/demagnetizing pulse counts, voltage adjustment, inductance range, pre-test and inter-pulse delay. SRATE sets the waveform sampling rate.

Command	Details
`IVOLT:VOLT?` `IVOLTage:VOLTage <value>`	Impulse test-voltage setting. `value`: NR1, 10–1000, unit V. Example: `WrtCmd("IVOLT:VOLT 1000V")`.
`IVOLT:BVOLT?` `IVOLTage:BVOLTage <start,end,step%>`	Breakdown-mode voltage sweep. `start`/`end`: NR1, 10–1000 V. `step%`: NR1, 1–20 (percentage step from the end voltage — see Operation Manual §5.1 for the calculation). Example: `WrtCmd("IVOLT:BVOLT 100V,1000V,4")`.
`IVOLT:TIMP?` `IVOLTage:TIMPluse <number>`	Number of test (impulse) pulses per measurement. `number`: NR1, 1–32. Example: `WrtCmd("IVOLT:TIMP 3")`.
`IVOLT:EIMP?` `IVOLTage:EIMPluse <number>`	Number of excitation (demagnetizing) pulses. `number`: NR1, 0–9. Example: `WrtCmd("IVOLT:EIMP 3")`.
`IVOLT:NUMB?` `IVOLTage:NUMBers <test,excitation>`	Sets test and excitation pulse counts together. `test`: NR1, 1–32. `excitation`: NR1, 0–9. Example: `WrtCmd("IVOLT:NUMB 5,3")`.
`IVOLT:VADJ?` `IVOLTage:VADJust <ON|OFF|1|0>`	Voltage-adjustment function on/off. Query returns `ON` or `OFF`. Example: `WrtCmd("IVOLT:VADJ ON")`.
`IVOLT:LRANG?` `IVOLTage:LRANGe <AUTO|1|10|100>`	Inductance range. `AUTO`: instrument selects automatically; `1`/`10`/`100`: fixed 1/10/100 µH range. Query returns `AUTO`, `1uH`, `10uH` or `100uH`. Example: `WrtCmd("IVOLT:LRANG 10")`.
`IVOLT:PTEST?` `IVOLTage:PTEST <ON|OFF|1|0>`	Pre-test function on/off. Query returns `ON` or `OFF`. Example: `WrtCmd("IVOLT:PTEST ON")`.
`IVOLT:PAUS?` `IVOLTage:PAUSe <ON|OFF|1|0>`	Pause-between-steps function on/off, for breakdown mode. Query returns `ON` or `OFF`. Example: `WrtCmd("IVOLT:PAUS ON")`.
`IVOLT:DTIME?` `IVOLTage:DTIME <value>`	Inter-pulse interval time. `value`: NR1, 10–70, unit ms. Example: `WrtCmd("IVOLT:DTIME 10")`.

3.1 SRATE subsystem

Command	Details
`SRATE[:RATE]?` `SRATE[:RATE] <value>`	Waveform sampling rate. `value`: one of `200Msps`/`200M`, `100Msps`/`100M`, `50Msps`/`50M`, `25Msps`/`25M`, `12.5Msps`/`12.5`. Query returns e.g. `200Msps`. Example: `WrtCmd("SRATE 200M")`.

NOTE — SAMPLE RATE

The five sample-rate settings correspond to the steps available on the Measurement Setup page (Operation Manual §5.1).

SECTION 4

COMParator Subsystem (1 of 2)

Configures the comparator and its nine comparison methods: area, area-difference, burr-total, max.-burr, peak ratio, peak diff, angular frequency, damping coefficient and quality factor. Each method's state, comparison window (where applicable) and limit(s) are set independently. `:BDV:` inserted immediately after `COMParator` addresses the breakdown-mode (destructive-test) counterpart of every command in this section and §5, with identical syntax (§5.4).

4.1 Area comparison

Command	Details

`COMP:AREA[:STATe]?`
`COMParator:AREAsize[:STATe]`
`<ON|OFF|1|0>`
	Area-comparison method on/off. Query returns `ON` or `OFF`. Example: `WrtCmd("COMP:AREA ON")`.

`COMP:AREA:RANG?`
`COMParator:AREAsize:RANGe`
`<start,end>`
	Comparison window. `start`/`end`: NR1, 1–12000; `end` must not be less than `start` (an error is reported otherwise). Example: `WrtCmd("COMP:AREA:RANG 1,12000")`.

`COMP:AREA:LIM?`
`COMParator:AREAsize:LIMit`
`<lower,upper>`
	Lower/upper comparison limit. `lower`/`upper`: NR2, −99.9–99.9, unit %. Example: `WrtCmd("COMP:AREA:LIM -20.0,20.0")`.

4.2 Area-difference comparison (Zone)

Command	Details

`COMP:DIFF[:STATe]?`
`COMParator:DIFFzone[:STATe]`
`<ON|OFF|1|0>`
	Area-difference comparison method on/off. Example: `WrtCmd("COMP:DIFF ON")`.

`COMP:DIFF:RANG?`
`COMParator:DIFFzone:RANGe`
`<start,end>`
	Comparison window. `start`/`end`: NR1, 1–12000; `end` must not be less than `start`. Example: `WrtCmd("COMP:DIFF:RANG 1,12000")`.

`COMP:DIFF:LIM?`
`COMParator:DIFFzone:LIMit`
`<lower,upper>`
	Lower/upper comparison limit. `lower`/`upper`: NR2, −99.9–99.9, unit %. Example: `WrtCmd("COMP:DIFF:LIM -20.0,20.0")`.

4.3 Burr-total comparison (Flutter)

Command	Details

`COMP:FLUT[:STATe]?`
`COMParator:FLUTter[:STATe]`
`<ON|OFF|1|0>`
	Burr-total comparison method on/off. Example: `WrtCmd("COMP:FLUT ON")`.

`COMP:FLUT:RANG?`
`COMParator:FLUTter:RANGe`
`<start,end>`
	Comparison window. `start`/`end`: NR1, 1–12000; `end` must not be less than `start`. Example: `WrtCmd("COMP:FLUT:RANG 1,12000")`.

`COMP:FLUT:LIM?` `COMParator:FLUTter:LIMit <upper>`	Upper comparison limit (single-sided, unitless). `upper`: NR1, 1–99999. Example: `WrtCmd("COMP:FLUT:LIM 1000")`.

4.4 Max.-burr comparison (Laplace)

Command	Details

`COMP:LAPL[:STATe]?`
`COMParator:LAPLac[:STATe]`
`<ON|OFF|1|0>`
	Max.-burr comparison method on/off. Example: `WrtCmd("COMP:LAPL ON")`.

`COMP:LAPL:RANG?`
`COMParator:LAPLac:RANGe`
`<start,end>`
	Comparison window. `start`/`end`: NR1, 1–12000; `end` must not be less than `start`. Example: `WrtCmd("COMP:LAPL:RANG 1,12000")`.

`COMP:LAPL:LIM?` `COMParator:LAPLac:LIMit <upper>`	Upper comparison limit (single-sided, unitless). `upper`: NR1, 1–9999. Example: `WrtCmd("COMP:LAPL:LIM 100")`.

4.5 Peak-ratio comparison

Command	Details

`COMP:PRAT[:STATe]?`
`COMParator:PRATio[:STATe]`
`<ON|OFF|1|0>`
	Peak-ratio comparison method on/off. Example: `WrtCmd("COMP:PRAT ON")`.

`COMP:PRAT:LIM?`
`COMParator:PRATio:LIMit`
`<lower,upper>`
	Lower/upper comparison limit. `lower`/`upper`: NR2, 0.1–99.9, unit %. Example: `WrtCmd("COMP:PRAT:LIM 20.0,90.0")`.

Peak ratio has no comparison-window (`RANGe`) command — it is computed from the self-resonant waveform's first two peaks directly, with no user-adjustable window (Operation Manual §5.4).

4.6 Peak-diff comparison

Command	Details

`COMP:PDIFF[:STATe]?`
`COMParator:PDIFF[:STATe]`
`<ON|OFF|1|0>`
	Peak-diff comparison method on/off. Example: `WrtCmd("COMP:PDIFF ON")`.

`COMP:PDIFF:LIM?`
`COMParator:PDIFF:LIMit`
`<lower,upper>`
	Lower/upper comparison limit. `lower`/`upper`: NR2, −99.9–99.9, unit %. Example: `WrtCmd("COMP:PDIFF:LIM -20.0,20.0")`.

SECTION 5

COMParator Subsystem (2 of 2) & BDV

5.1 Angular-frequency comparison (Omega)

Command	Details

`COMP:OMEG[:STATe]?`
`COMParator:OMEGa[:STATe]`
`<ON|OFF|1|0>`
	Angular-frequency comparison method on/off. Example: `WrtCmd("COMP:OMEG ON")`.

`COMP:OMEG:LIM?`
`COMParator:OMEGa:LIMit`
`<lower,upper>`
	Lower/upper comparison limit. `lower/upper`: NR2, −99.9–99.9, unit %. Example: `WrtCmd("COMP:OMEG:LIM -20.0,20.0")`.

5.2 Damping-coefficient comparison (Lambda)

Command	Details

`COMP:LAMB[:STATe]?`
`COMParator:LAMBda[:STATe]`
`<ON|OFF|1|0>`
	Damping-coefficient comparison method on/off. Example: `WrtCmd("COMP:LAMB ON")`.

`COMP:LAMB:LIM?`
`COMParator:LAMBda:LIMit`
`<lower,upper>`
	Lower/upper comparison limit. `lower/upper`: NR2, −99.9–99.9, unit %. Example: `WrtCmd("COMP:LAMB:LIM -20.0,20.0")`.

Angular frequency and damping coefficient together characterize the waveform's damped oscillation $V = A{\cdot}e^{\lambda t}{\cdot}\cos(\omega t)$; both are patent-protected methods (CN117192443) and, like peak ratio, have no window command.

5.3 Quality-factor comparison (Q)

Command	Details
`COMP:Q[:STATe]?` `COMParator:Q[:STATe] <ON|OFF|1|0>`	Quality-factor comparison method on/off. Example: `WrtCmd("COMP:Q ON")`.
`COMP:Q:LIM?` `COMParator:Q:LIMit <lower,upper>`	Lower/upper comparison limit. `lower/upper`: NR2, −99.9–99.9, unit %. Example: `WrtCmd("COMP:Q:LIM -20.0,20.0")`.

5.4 BDV (breakdown-mode) comparator commands

Each of the nine comparison methods above has an identical breakdown-mode (destructive-test) counterpart, reached by inserting `:BDV:` immediately after `COMParator` in the command root. The parameter syntax, ranges and query forms are exactly as documented in §4.1–4.6 and §5.1–5.3 above — only the command root changes:

Method	Normal-mode root	BDV (breakdown-mode) root
Area	`COMParator:AREAsize`	`COMParator:BDV:AREAsize`
Area-difference (Zone)	`COMParator:DIFFzone`	`COMParator:BDV:DIFFzone`
Burr-total (Flutter)	`COMParator:FLUTter`	`COMParator:BDV:FLUTter`
Max.-burr (Laplace)	`COMParator:LAPLac`	`COMParator:BDV:LAPLac`
Peak ratio	`COMParator:PRATio`	`COMParator:BDV:PRATio`
Peak diff	`COMParator:PDIFF`	`COMParator:BDV:PDIFF`
Angular frequency (Omega)	`COMParator:OMEGa`	`COMParator:BDV:OMEGa`
Damping coefficient (Lambda)	`COMParator:LAMBda`	`COMParator:BDV:LAMBda`
Quality factor (Q)	`COMParator:Q`	`COMParator:BDV:Q`

Example: `WrtCmd("COMP:BDV:AREA:RANG 1,12000")` sets the area comparison window for breakdown-mode testing, exactly as `COMP:AREA:RANG` does for normal-mode testing.

5.5 Typical workflow

1. Acquire and select a standard waveform (SWAVE subsystem, §7).
2. Enable the comparison method(s) appropriate to the test objective (§4.1–5.3); set each enabled method's comparison window (where applicable) and limit(s).
3. Trigger a measurement (TRIGger subsystem, §6.1) and retrieve the result with `FETCh:CRESult?` or `FETCh:CCRESult?` (§8.2).

SECTION 6

TRIGger, STATistic & WADJust Subsystem

6.1 TRIGger subsystem

Command	Details
`TRIG[:IMMediate]`	Trigger one device-under-test measurement. Valid only on the Measurement Display page; ignored on other pages and while a test is already in progress. Used only for device-under-test measurements — to trigger a standard-waveform acquisition, use `SWAVE:TRIGger` (§7). The host receives an `"END"` response once the full measurement completes, and only then can send the next command. Example: `WrtCmd("TRIG")`.
`TRIG:SOUR?` `TRIGger:SOURce <MAN|EXTERNAL|BUS>`	Trigger source. `MAN`: front-panel START key or foot switch; `EXTERNAL`: HANDLER interface; `BUS`: RS232/USB/LAN remote command. Query returns `MAN`, `EXTERNAL` or `BUS`. Example: `WrtCmd("TRIG:SOUR BUS")`.

6.2 STATistic subsystem

Command	Details
`STAT[:STATe]?` `STATistic[:STATe] <ON|OFF|1|0>`	Statistics function on/off. Query returns `ON` or `OFF`. Example: `WrtCmd("STAT ON")`.
`STATistic:CLEAr`	Clear the accumulated statistics data. No query form. Example: `WrtCmd("STAT:CLEA")`.
`STATistic:SAVE`	Save the accumulated statistics data to a USB-drive file. No query form. Example: `WrtCmd("STAT:SAVE")`.

The statistics result values themselves are retrieved with `FETCh:STATistic?` (§8.1).

6.3 WADJust subsystem

Controls the on-screen time-base zoom and left/right scroll of the displayed waveform (a display convenience; it does not affect the acquired data).

Command	Details
`WADJust:MOVE <RIGHt|LEFt|+1|-1>`	Scroll the displayed waveform left (`RIGHt`/`+1`) or right (`LEFt`/`-1`) — the direction keywords are as listed. No query form. Example: `WrtCmd("WADJ:MOVE RIGH")`.
`WADJust:STEP?` `WADJust:STEP <0.01|0.1|1>`	Scroll step size. Query returns `0.01`, `0.1` or `1`. Example: `WrtCmd("WADJ:STEP 1")`.
`WADJust:EXTend?` `WADJust:EXTend <1|2|4|8|MIN|MAX>`	Waveform time-base zoom. `1`/`MIN`: zoomed out; `2`: normal/original view; `4`: zoomed in; `8`/`MAX`: maximum zoom. Query returns `1`, `2`, `4` or `8`. Example: `WrtCmd("WADJ:EXT 1")`.

SECTION 7

SWAVE (Standard WAVE) Subsystem

Controls acquisition and selection of the standard (reference) waveform that the comparator methods measure against: sampling mode, triggering a standard-waveform acquisition, and confirming the chosen waveform.

Command	Details
`SWAVE:SMODE?` `SWAVE:SMODE <OSAMPle|OCYCLe>`	Standard-waveform sampling mode. `OSAMPle`: single-point sampling (manual, §5.3.1 of the Operation Manual); `OCYCLe`: single acquisition cycle (automatic, §5.3.2). Query returns `ONE SAMPLE` or `ONE CYCLE`. Example: `WrtCmd("SWAVE:SMODE OSAMP")`.
`SWAVE:TRIGger[:IMMediate]`	Trigger one standard-waveform acquisition. Valid only on the Sampling page, and only when the trigger source is set to `BUS` (§6.1); ignored on other pages, with any other trigger source, and while a test is in progress. Example: `WrtCmd("SWAVE:TRIG")`.
`SWAVE:CHOose`	Select (accept) the currently acquired standard waveform as the active reference. Valid only on the Sampling page, and only once an acquisition has completed and the instrument is in the selection state; ignored otherwise. No query form. Example: `WrtCmd("SWAVE:CHO")`.

SECTION 8

FETCh? Subsystem

Retrieves waveform data, the overall and per-method comparator results, statistics data, and the peak-voltage, frequency and time measurement results.

8.1 Measurement & statistics results

Command	Details
`FETC:VOLT?`	Peak voltage of the most recent measurement. Example return: `783V`.
`FETC:FREQ?`	Frequency result of the most recent measurement. Returns `<NR3><NL^END>`, unit Hz.
`FETC:TIME?`	Time result of the most recent measurement. Returns `<NR3><NL^END>`, unit s.
`FETC:STATistic?`	Current statistics-counter data. Returns ten comma-separated NR1 values: total tests and total passes overall, then (total tests, passes) for the area, area-difference, corona and phase-difference methods, in that order, terminated `<NL^END>`.

8.2 Comparator result

Command	Details
`FETC:CCRESult?`	Overall pass/fail result only. Returns `<NR1><NL^END>`: `1` = PASS, `0` = FAIL.
`FETC:CRESult?`	Full comparator result of the most recent device-under-test measurement. Three possible returns: (1) if none of the nine comparison methods is enabled, returns `2`; (2) if no device-under-test measurement has yet been made, returns `3`; (3) otherwise, returns `<NR1,NR3,NR3,NR1,NR1,NR3,NR3,NR3,NR3,NR3><NL^END>` — the first value is the overall result (1 = pass, 0 = fail), followed by the nine per-method results in the order: area, area-difference, burr-total, max.-burr, peak ratio, peak diff, angular frequency, damping coefficient, quality factor. A disabled method returns `9999` (burr-total, max.-burr) or `9.9E37` (all other methods) in its position.

8.3 Waveform data

Command	Details
`FETC:SWAVE?`	Output the currently acquired/selected standard waveform data. Example: `WrtCmd("FETC:SWAVE?")`.
`FETC:TWAVE?`	Output the most recent test (device-under-test) waveform data. Example: `WrtCmd("FETC:TWAVE?")`.
`FETC:CWAVE?`	Output the currently displayed second-derivative (sub-display) waveform data. Example: `WrtCmd("FETC:CWAVE?")`.

If no waveform data exists yet and the instrument has neither started a new measurement nor is currently measuring, `FETCh:SWAVE?` and `FETCh:TWAVE?` become valid only once the next (or current) measurement completes.

> **WARNING**
> After sending a waveform-data query, the host must be ready to receive immediately, to avoid data loss.

SECTION 9

ABORt, MMEMory & SYSTem Subsystem

9.1 ABORt subsystem

Command	Details
`ABORt`	Abort the measurement currently in progress. No query form. Example: `WrtCmd("ABOR")`.

9.2 MMEMory subsystem

Saves, loads and deletes instrument-settings files, addressed by path rather than by a numbered slot. A file's path prefix selects internal storage (`files/`) or a connected USB drive (`usb/`); if no prefix is given, internal storage is assumed.

Command	Details
`MMEMory:LOAD <"filename">`	Load a previously saved settings file. `"filename"`: quoted path, e.g. `"files/abc.sta"` (internal) or `"usb/TH2884/abc.sta"` (USB drive). If the file does not exist, the instrument displays `File not exist`. No query form. Example: `WrtCmd('MMEM:LOAD "files/abc.sta"')`.
`MMEMory:SAVE <"filename">`	Save the instrument's current settings to a file. `"filename"`: quoted path, same prefix convention as `LOAD`. No query form. Example: `WrtCmd('MMEM:SAVE "usb/TH2884/qwe.sta"')`.
`MMEMory:DELete <"filename">`	Delete a file. `"filename"`: quoted path, same prefix convention. No query form. Example: `WrtCmd('MMEM:DEL "files/qwe.sta"')`.

9.3 SYSTem subsystem

Command	Details
`SYST:BEEP:KEY?` `SYSTem:BEEPer:KEY <OFF|HIGH|MIDDLE|LOW>`	Key-press sound volume. Query returns `OFF`, `HIGH`, `MIDDLE` or `LOW`. Example: `WrtCmd("SYST:BEEP:KEY LOW")`.
`SYST:BEEP:PASS?` `SYSTem:BEEPer:PASS <OFF|HIGH|MIDDLE|LOW>`	Pass-result sound volume. Example: `WrtCmd("SYST:BEEP:PASS OFF")`.
`SYST:BEEP:FAIL?` `SYSTem:BEEPer:FAIL <OFF|HIGH|MIDDLE|LOW>`	Fail-result sound volume. Example: `WrtCmd("SYST:BEEP:FAIL HIGH")`.
`SYST:LANG?` `SYSTem:LANGuage <CHINESE|ENGLISH>`	Display language. Example: `WrtCmd("SYST:LANG ENGLISH")`.
`SYST:DATETIME?` `SYSTem:DATETIME <yr,mo,day,hr,min,sec>`	System date/time. All fields NR1: year 2000–2100, month 1–12, day 1–31, hour 0–23, minute 0–59, second 0–59. Query returns `YYYY-MM-DD HH:MM:SS`. Example: `WrtCmd("SYST:DATETIME 2024,7,26,16,52,0")`.
`SYST:INT?` `SYSTem:INTerval <value>`	Inter-pulse interval time. `value`: NR1, 10–70, unit ms. Example: `WrtCmd("SYST:INT 70")`.
`SYST:TDEL?` `SYSTem:TDELay <value>`	Trigger delay time. `value`: NR1, 0–9999, unit ms. Example: `WrtCmd("SYST:TDEL 0")`.
`SYST:PRAT?` `SYSTem:PRATio <HALF|THIRD|QUARTER|FIFTH>`	Pre-test voltage ratio (fraction of the set impulse voltage). Example: `WrtCmd("SYST:PRAT HALF")`.
`SYST:ERAT?` `SYSTem:ERATio <value>`	Excitation-pulse voltage ratio. `value`: NR1, −20–20, unit %. Example: `WrtCmd("SYST:ERAT 20")`.
`SYST:LMARG?` `SYSTem:LMARGin <lower,upper>`	Inductance-deviation OPEN/SHORT judgement window. `lower`: NR1, −50–−5. `upper`: NR1, 5–50, unit %. Example: `WrtCmd("SYST:LMARG -10,8")`.

Contact, support & related documents

This command reference is the companion to the *TH2884 Operation Manual* (touchscreen operation, remote-interface wiring, HANDLER interface) and the *TH2884 Datasheet* (specifications). For questions about any command's exact behaviour, or to report a discrepancy against your instrument's firmware, contact Techmize using the details below.

Techmize Electronic GmbH

Office 125–126, Regus
Carl-Zeiss-Ring 15a, 85737 Ismaning,
Germany
An international subsidiary of Changzhou
Tonghui Electronic Co., Ltd. (China)

Contact

Mobile: +49 171 4981898
Email: dx.han@tonghui.com.cn
Web: en.tonghui.com.cn

Registration

Managing Director: Haohua Zhao
Register Court: Amtsgericht München
HRB 312530 · VAT ID DE463170824