**Burst generator 125 kHz**

**SFT 1400**

- Frequency up to 125 kHz
- Single spike to continuous burst
- Up to 500 pulses per package
- IEC 61000-4-4, July. 2005
- Various special functions
- Up to 5000 pulses per second

**Introduction**

The test generator simulates quick transient noise interference as they are defined in several standards (IEC 61000-4-4, EN 61000-4-4). In generally this noise interference are mostly generated by switched inductive loads. The single pulses show a very short rise-time (5ns) and due to this a wide RF-spectra up to 300 MHz. RF-interferences are the result.

By increasing the number of pulses within the burst packet time-critical events may be tested in connection with the exact triggering of the SFT 1400. The generator includes several special functions such as „Real Burst“ which simulates the natural appearance of the burst phenomena or „Sweep“ to simulate the bouncing of an electrical contact. The functions „IFM“ and „DFM“ (increasing and decreasing frequency) are powerful instruments to investigate resonance or saturation effects in the tested device.

The easy operation and the clearly arranged front panel with the generator settings allows a time-saving and optimised testing in the fields of:

- **Research & design:** Test with fixed standard values (via Memory function) and investigations with variable settings (search for worst case)
- **Quality assurance:** Test with fixed standard values (via Memory function), manual adjustable or automated test procedure by remote computer control
- **Service:** Handy unit and easy to be operated

All parameters like voltage, frequency, burst duration and burst period are variably adjustable.

**Burst definition (see drawing 1)**

<table>
<thead>
<tr>
<th>designation</th>
<th>param.</th>
<th>standard definition</th>
<th>variable setup on SFT 1400</th>
</tr>
</thead>
<tbody>
<tr>
<td>burst duration</td>
<td>a</td>
<td>15 ms ± 20% at 5 kHz&lt;br&gt;0,75 ms ± 20% at 100 kHz&lt;br&gt;(correspond to 75 pulses /package)</td>
<td>0,01 - 100 ms *1</td>
</tr>
<tr>
<td>burst period</td>
<td>b</td>
<td>300 ms ± 20 %</td>
<td>10 - 1000 ms *1</td>
</tr>
<tr>
<td>burst frequency</td>
<td>c</td>
<td>5 kHz or 100 kHz up to 4 kV</td>
<td>100 Hz - 125 kHz up to 5 kV</td>
</tr>
<tr>
<td>pulse amplitude</td>
<td>U</td>
<td>0,5 / 1 / 2 / 4 kV</td>
<td>200 V - 5000 V (into 10 V steps)</td>
</tr>
<tr>
<td>pulse rise-time</td>
<td>t_r</td>
<td>5 ns ± 30 %</td>
<td></td>
</tr>
<tr>
<td>pulse width (50 Ohm)</td>
<td>t_w</td>
<td>50 ns ± 30 %</td>
<td></td>
</tr>
<tr>
<td>pulse-width (1 kOhm)</td>
<td>t_w</td>
<td>50 ns ± 30 %, -15ns/+100 ns</td>
<td></td>
</tr>
<tr>
<td>impedance</td>
<td>Z</td>
<td>50 Ω ± 2 %</td>
<td></td>
</tr>
</tbody>
</table>

*1: the SFT 1400 automatically concerns the units. maximum power restrictions.
[1] Earth connection
[2] Laboratory jacks for EUT connection.
[9] Selection of the special functions.
[14] Selection key for the frequency.
[16] Displays for the memory mode.
[18] Coupling selection for the paths L, N and PE.
[19] Phase indicators.
[20] Monitoring (TTL output)
[21] HV-output for the connection of a capacitive coupling clamp or 3-phase coupling network

Technical data
- Burst frequency: single up to 125 kHz
- Pulse amplitude: 200 V - 5000 V
- Polarity burst package: pos., neg., alternating
- Pulse shape: accord. to IEC 61000-4-4
- Max. Pulses / sec: 5000 (up to 2 kV);
  3000 (up to 3 kV) and
  1500 (up to 5 kV)
- Max. Pulses / package: 500
- Remote control: RS 232

Coupling network
- Integrated in the test generator, coupling of the noise pulses to the EUT's power mains
- Nominal voltage: max. 250V / 16A, 50 Hz
- Voltage DC: max. 60V / 16A
- Phase indicator: lamp red / green
- Coupling capacity: 33 nF
- Coupling selectors: L, N, PE - > E; L, N - > E; a.s.o.
- EUT power outlets: protection earth outlet additional lab. terminals
- Pulse output: FISCHER coax HV-jack

Common
- operation temp.: 0 - 40 °C
- dimensions: 19" rack
- weight: 10 kg
- power supply: 230V / 100VA, 50 Hz

Options
- 3-phase coupling: CWG 520 (4x16 A)
- 3-phase coupling: CWG 523 (4x32 A)
- 3-phase coupling: CWG 524 (4x60 A)
- Coupling clamp: SFT 410
- Attenuator: SFT 450
- 100:1/50 Ohm
- Probe set: SFT 470
- Control software: EMV-SOFT

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