

## Burst generator 2 MHz

### SFT 1420-1



- ◆ Frequency up to 2000 kHz
- ◆ Single spike to continuous bursts
- ◆ RS 232 interface
- ◆ Various special functions

#### 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 within the range of Nano-seconds and due to this wide RF-spectra up to 300 MHz, generating RF-interference.

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 1420. 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 optimized testing in the fields of:

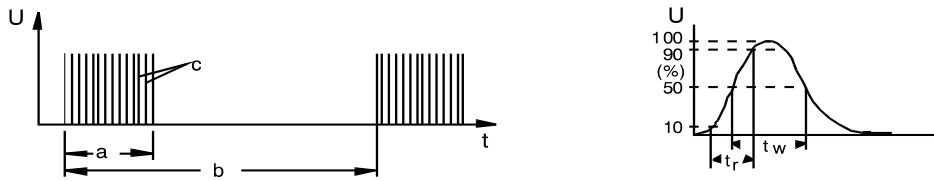
- ◆ **Research and design:** test with fixed standard values and investigations with variable settings (search for worst caste).
- ◆ **Quality insurance:** test with fixed standard values, manual adjustable or automatic test procedure by remote computer control.
- ◆ **Service:** handy unit an easy to be operated.

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

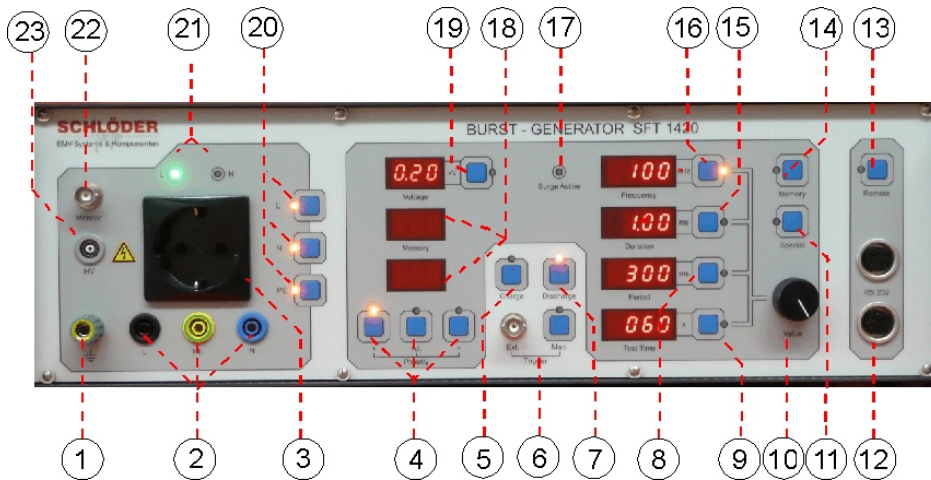
#### Burst definition (see drawing 1)

designation	param.	standard definition	variable setup on SFT 1420
burst duration	a	15 ms ± 20% at 5 kHz 0,75 ms ± 20% at 100 kHz (correspond to 75 pulses /package)	0,01 - 100 ms *1
burst period	b	300 ms ± 20 %	10 - 1000 ms *1
burst frequency	c	5 kHz or 100 kHz up to 4 kV	100 Hz - 2000 kHz up to 4.8 kV
pulse amplitude	U	0,5 / 1 / 2 / 4 kV	100 V - 4800 V (into 10 V steps)
pulse rise-time	t <sub>r</sub>	5 ns ± 30 %	*1: the SFT 1420 automatically concerns the units. maximum power restrictions
pulse width (50 Ohm)	t <sub>w</sub>	50 ns ± 30 %	
pulse-width (1 kOhm)		50 ns, -15ns/+100 ns	
impedance	Z	50 Ω ± 2 %	

technical data may be changed without notice



drawing 1



- [1] Earth connection
- [2] Laboratory jacks for EUT connection.
- [3] Protected earth outlet for EUT connection.
- [4] Polarity of the burst packet.
- [5] Charge release-key.
- [6] External or manual trigger release.
- [7] Discharge release key.
- [8] Selection key for the period-time.
- [9] Selection key for the test-time.
- [10] Digital potentiometer.
- [11] Selection of the special functions.
- [12] Jack for interface cable.
- [13] Activation of the interface mode.
- [14] Activation of the memory function.
- [15] Selection key for the duration-time.
- [16] Selection key for the frequency.
- [17] LED for "CWG active".
- [18] Displays for the memory mode.
- [19] Display for the pulse-voltage.
- [20] Coupling selection for the paths L, N and PE.
- [21] Phase indicators.
- [22] Output to control the optional coupling networks
- [23] HV-output for the connection of a capacitive coupling clamp or inductive probes.

**Technical data**

- ◆ Burst frequency                     single up to 2000 kHz
- ◆ Pulse amplitude                    100 V - 4800 V
- ◆ Polarity burst packet             pos., neg., alternating
- ◆ Pulse shape                         accord. to IEC 61000-4-4
- ◆ Max. pulses / sec                 15.000
- ◆ Max. pulses / packet             2.000
- ◆ Monitoring output                 BNC female

**Coupling network**

- ◆ Integrated in the test generator, coupling of the noise pulses to the EUT's power mains
- ◆ Operating volt. AC                 max. 230V / 16A, 50/60 Hz
- ◆ Operating volt. DC                 max. 110V / 8A
- ◆ Phase indicator                    LED red / green
- ◆ Coupling capacity                 33 nF
- ◆ Coupling selectors                 L, N-E, PE-E, L-E, etc.
- ◆ EUT power outlets                 protection earth outlet  
additional lab.terminals
- ◆ pulse output                        FISCHER coax HV-jack

**Common**

- ◆ Operation temperature            0 - 40 °C
- ◆ Dimensions                         19" rack
- ◆ Weight                                approx. 12,5 kg
- ◆ Power supply                        100-240V / 47-63 Hz

**Options**

- ◆ 3-phase coupling 4x 16A                             CWG 520
- ◆ 3-phase coupling 4x 32A                            CWG 523
- ◆ 3-phase coupling 4x 60A                            CWG 524
- ◆ Attenuator 100:1 / 50 Ohm                         SFT 450
- ◆ Probe set, magnetic field                         SFT 470
- ◆ Control software                                    EMV-SOFT
- ◆ Coupling clamp                                     SFT 415
- ◆ Calibration set for coupling clamp                SFT 415-CS
- ◆ 50 + 1000 Ω measurement resistor,             SFT450-Set  
calibrated necessary for verification  
the burst pulse on generator or clamp