

# SMA 21 (LC + LT + LV version) Multi-Application buzzer

The Sonitron Multi-Application buzzers are low cost commercial grade components for large volume applications. The SMA series are designed to meet a wide range of current consumption, voltage, sound pressure, mounting methods, connection, dimensions and packing requirements. The buzzers have a built-in oscillator generating their working frequency. They produce a highly reliable audible tone signal, giving either an extremely clear and penetrating tone or a soft sound for non-aggressive signals.



## ADVANTAGES & APPLICATIONS

### ADVANTAGES :

- octagonal form
- models with different pin pitches
- light but solid state construction
- little power consumption, especially the extra loud LC-versions
- important voltage range (1,5V to 24V)
- easy mountable
- SMD models with heat resistant label for protection during automatic soldering, packed in trays for automatic placing

### APPLICATIONS :

- portable battery operating devices
- audible alarms
- gas detectors
- weighing and measuring equipment
- medical instrumentation
- timers
- control instrumentation and systems
- copiers
- automobiles
- games and toys
- computer peripherals
- cash registers , etc

## SPECIFICATIONS

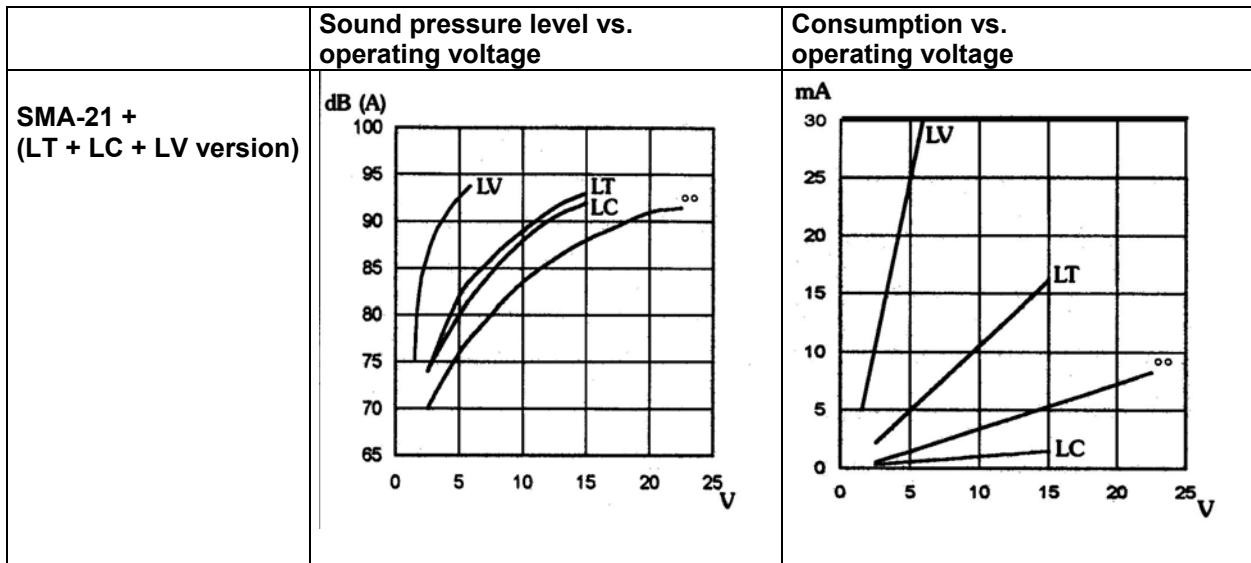
| Model    | Sound pressure<br>dB(A) * | Frequency (+/-<br>15%) Hz | Operating<br>voltage | Operating<br>current | Weight |
|----------|---------------------------|---------------------------|----------------------|----------------------|--------|
| SMA-21   | 85 dB(A)                  | 3.3 kHz                   | 1.5 to 24 Vdc        | 3.8 mA               | 2.5 g  |
| SMA-21LT | 90 dB(A)                  | 3.3 kHz                   | 1.5 to 15 Vdc        | 12.5 mA              | 2.5 g  |
| SMA-21LC | 91 dB(A)                  | 3.8 kHz                   | 1.5 to 15 Vdc        | 1.1 mA               | 2.5 g  |
| SMA-21LV | 87 dB(A) at 3V            | 3 kHz                     | 2 to 6 Vdc           | 13 mA at 3V          | 2.5 g  |

\* All measurements are made in free air at 21°C, at 30 cm, at 12V, except for the SMA-21LV, which is measured at 3V.

|                         |                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------|
| Operating temperature   | -20°C to +70°C                                                                        |
| Storage temperature     | -40°C to +85°C                                                                        |
| Life time (at 21°C)     | See expected life time curve in addendum                                              |
| Case material           | ABS (UL rating: 94 HB) for pin-versions<br>PPS (UL rating: 94 V0/5V) for SMD-versions |
| Standard colour of case | Grey                                                                                  |

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## ELECTRICAL PARAMETERS



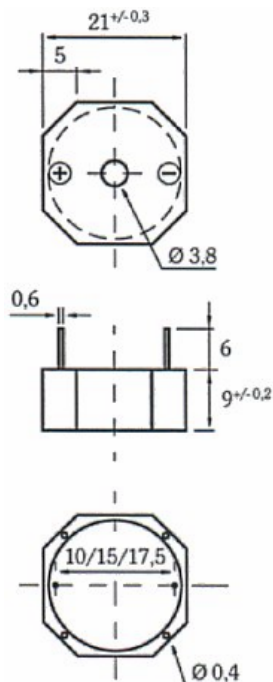
All measurements are made at 30 cm in free air at 21°C.

°°: standard versions, respectively SMA-21

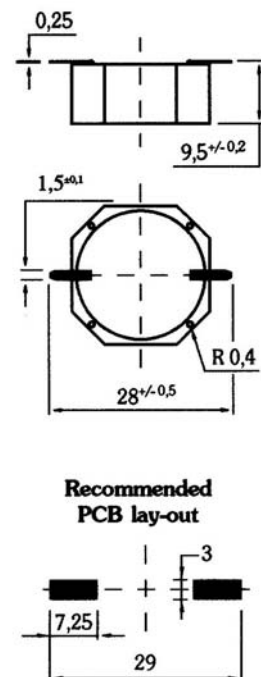
## DIMENSIONS (All dimensions are in mm)

### SMA 21 (LT + LC + LV version):

**Pin version:**



**SMD version:**



|                                                                                                    |                                                                                   |                |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|
| <b>sonitron<sup>®</sup></b> nv/sa<br>Excellence in physical<br>acoustics<br>Sint-Niklaas – Belgium | <b>SMA 21</b><br><b>(LC + LT + LV version)</b><br><b>Multi-Application buzzer</b> | Pagina 3 van 3 |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|

## PRODUCT CODIFICATION

|                            |                      |                              |                             |                                                      |
|----------------------------|----------------------|------------------------------|-----------------------------|------------------------------------------------------|
| <b>SMA</b>                 | <b>21</b>            | <b>L</b><br><b>LV</b>        | <b>C</b><br><b>T</b>        | <b>P10</b><br><b>P15</b><br><b>P17.5</b><br><b>S</b> |
| ↓                          | ↓                    | ↓                            | ↓                           | ↓                                                    |
| Sonitron Multi-Application | Square diameter (mm) | L : Loud<br>LV : Low voltage | C : C-MOS<br>T : Transistor | P : Pin distance (in mm)<br>S : SMD terminals        |

## LIST OF AVAILABLE PRODUCT TYPES

| Version      | Standard (°°)                            | Transistor (LT)                                | Low Current (LC)                               | Low voltage (LV)             |
|--------------|------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------|
| SMA-21 serie | SMA-21 P10<br>SMA-21 P15<br>SMA-21 P17.5 | SMA-21LT P10<br>SMA-21LT P15<br>SMA-21LT P17.5 | SMA-21LC P10<br>SMA-21LC P15<br>SMA-21LC P17.5 | SMA-21LV P10<br>SMA-21LV P15 |
|              | SMA-21 S                                 | SMA-21LT S                                     | SMA-21LC S                                     | SMA-21LV S                   |

## MODELS ON REQUEST

The SMA series can be delivered, upon special request, with the following protection :

- **Wash tabs**

A wash tab is glued on the sound emitting hole of the buzzer to protect it from water penetrating into the hole of the cavity. The PCB at the back is also sealed with a silicon film. To order this part, please add WASHTAB to the model number of the SMA series.

- **Acryl coating**

For applications in aggressive humid conditions, models containing a membrane with a protective coating are available. The protective coating gives a complementary assurance against smog. Add MC to the model number of the SMA series.