

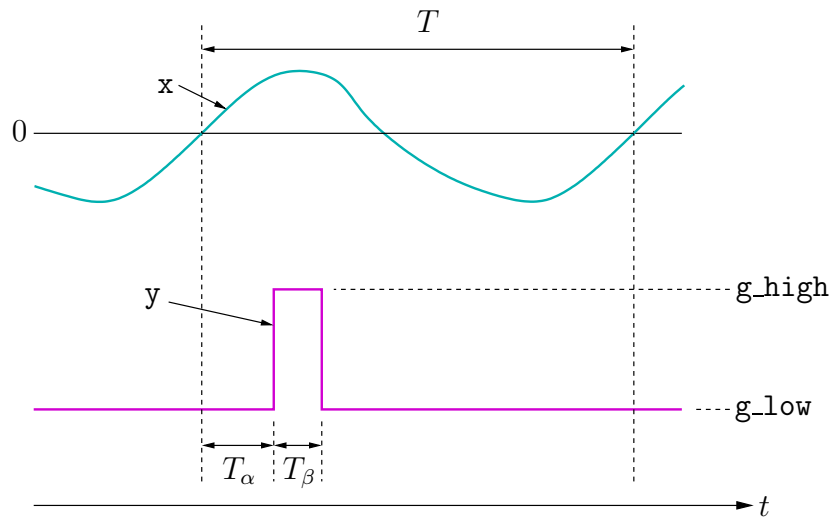
## gate\_pulse\_2.gce

### Attributes

```
mainvars: x y
rparms:
+ frequency=50
+ alpha=90
+ beta=20
+ g_low=0
+ g_high=1
+ delt_min=1.0e-6
+ delt_nrml=1.0e-3
```

### Description

`gate_pulse_2.gce` can be used to produce a pulse ( $y$ ), triggered by zero-crossing of the input variable  $x$  (see figure). The input  $x$  is assumed to be periodic, with the frequency specified by the real parameter `frequency`. The pulse duration is determined by the real parameter `beta` (in degrees) and is computed as  $T_\beta = \frac{\beta \times T}{360}$ . The pulse is delayed with respect to the zero-crossing of  $x$  (from negative to positive), the delay being specified by the real parameter `alpha` (in degrees). The delay interval is computed as  $T_\alpha = \frac{\alpha \times T}{360}$ .



The parameters `delt_min` and `delt_nrml` denote the minimum and normal time step, respectively. They are used to ensure that the transitions (from low to high and high to low) are captured with a good resolution. `delt_min` should be generally set to be small (by a factor of 10 to 100) compared to `delt_nrml`.

AC behaviour is not implemented.