CY25402/CY25422/CY25482

# Two PLL Programmable Clock Generator with Spread Spectrum

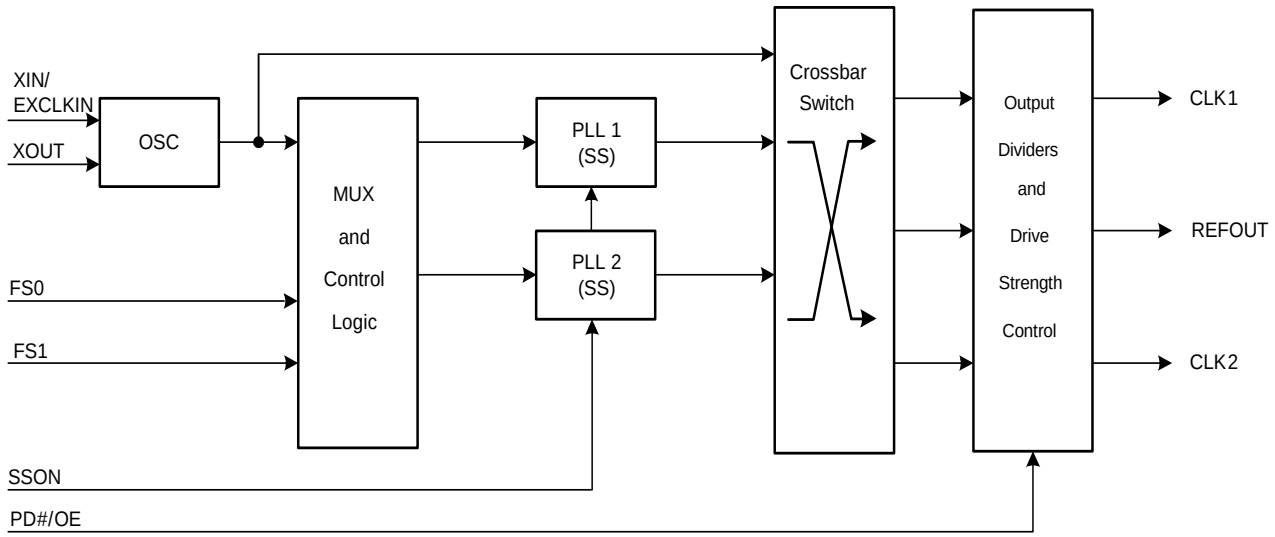
## Features

- Two fully integrated phase locked loops (PLLs)
- Input frequency range
  - External crystal: 8 to 48 MHz
  - External reference: 8 to 166 MHz clock
- Reference clock input voltage range
  - 2.5 V, 3.0 V, and 3.3 V for CY25482
  - 1.8 V for CY25402 and CY25422
- Wide operating output frequency range
  - 3 to 166 MHz
- Programmable spread spectrum with center and down spread option and lexmark and linear modulation profiles
- $V_{DD}$ supply voltage options:
  - 2.5 V, 3.0 V, and 3.3 V for CY25402 and CY25482
  - 1.8 V for CY25422
- Selectable output clock voltages independent of $V_{DD}$:
  - 2.5 V, 3.0 V, and 3.3 V for CY25402 and CY25482
  - 1.8 V for CY25422
- Frequency select feature with option to select four different frequencies
- Power-down, Output Enable, and SS ON/OFF controls
- Low jitter, high accuracy outputs
- Ability to synthesize nonstandard frequencies with Fractional-N capability
- Three clock outputs with programmable drive strength
- Glitch-free outputs while frequency switching
- 8-pin small outline integrated circuit (SOIC) package
- Commercial and Industrial temperature ranges

## Benefits

- Multiple high performance PLLs allow synthesis of unrelated frequencies
- Nonvolatile programming for personalization of PLL frequencies, spread spectrum characteristics, drive strength, crystal load capacitance, and output frequencies
- Application specific programmable EMI reduction using spread spectrum for clocks
- Programmable PLLs for system frequency margin tests
- Meets critical timing requirements in complex system designs
- Suitability for PC, consumer, portable, and networking applications
- Capable of zero parts per million (PPM) frequency synthesis error
- Uninterrupted system operation during clock frequency switch
- Application compatibility in standard and low power systems

## Block Diagram



## Contents

**Table 1. Device Selector Guide**

| Device | Crystal Input | EXCKLKIN Input | $V_{DD}$ |
|---|---|---|---|
| CY25402 | Yes | 1.8 V LVCMOS | 2.5 V, 3.0 V, 3.3 V |
| CY25482 | No | 2.5 V, 3.0 V, 3.3 V LVCMOS | 2.5 V, 3.0 V, 3.3 V |
| CY25422 | Yes | 1.8 V LVCMOS | 1.8 V |

## Pin Description

**Figure 1. Pin Diagram - CY25402 8-LD SOIC**

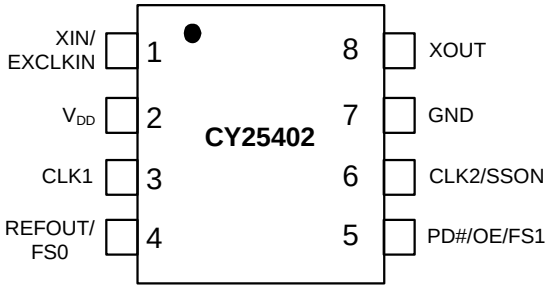



**Table 2. Pin Definition - CY25402 (2.5 V, 3.0 V, or 3.3 V Supply)**

| Pin Number | Name | IO | Description |
|---|---|---|---|
| 1 | XIN/EXCLKIN | Input | Crystal input or 1.8 V External clock input |
| 2 | $V_{DD}$ | Power | Power supply: 2.5 V, 3.0 V, or 3.3 V |
| 3 | CLK1 | Output | Programmable clock output with spread spectrum |
| 4 | REFOUT/FS0 | Output/input | Multifunction programmable pin: Reference clock output or frequency select pin |
| 5 | PD#/OE/FS1 | Input | Multifunction programmable pin: Power-down, output enable or Frequency select pin |
| 6 | CLK2/SSON | Output/input | Multifunction programmable pin: Programmable clock output with spread spectrum or Spread spectrum ON/OFF control pin |
| 7 | GND | Power | Power supply ground |
| 8 | XOUT | Output | Crystal output |

**Figure 2. Pin Diagram - CY25482 8-LD SOIC**

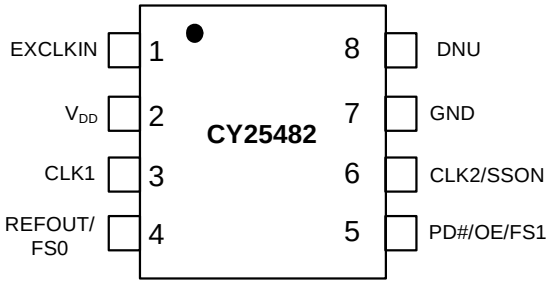



**Table 3. Pin Definition - CY25482 (2.5 V, 3.0 V, or 3.3 V Supply)**

| Pin Number | Name | IO | Description |
|---|---|---|---|
| 1 | EXCLKIN | Input | 2.5 V, 3.0 V, or 3.3 V external clock input |
| 2 | $V_{DD}$ | Power | Power Supply: 2.5 V, 3.0 V, or 3.3 V |
| 3 | CLK1 | Output | Programmable clock output with spread spectrum |
| 4 | REFOUT/FS0 | Output/input | Multifunction programmable pin: Reference clock output or frequency select pin |
| 5 | PD#/OE/FS1 | Input | Multifunction programmable pin: Power-down, output enable or frequency select pin |
| 6 | CLK2/SSON | Output/input | Multifunction Programmable pin: Programmable clock output with spread spectrum or spread spectrum ON/OFF control pin |
| 7 | GND | Power | Power supply ground |
| 8 | DNU | Output | Do not use this pin |

**Figure 3. Pin Diagram - CY25422 8-LD SOIC**

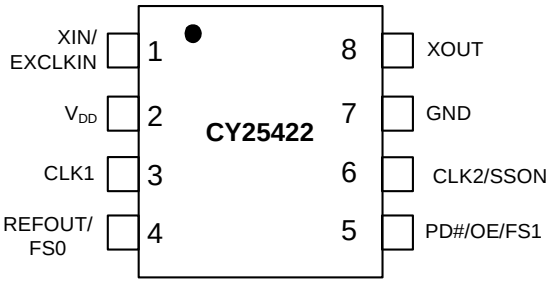



**Table 4. Pin Definition - CY25422 (1.8 V Supply)**

| Pin Number | Name | IO | Description |
|---|---|---|---|
| 1 | XIN/EXCLKIN | Input | Crystal input or 1.8 V external clock input |
| 2 | $V_{DD}$ | Power | Power supply: 1.8 V |
| 3 | CLK1 | Output | Programmable clock output with spread spectrum |
| 4 | REFOUT/FS0 | Output/input | Multifunction programmable pin: reference clock output or frequency select pin |
| 5 | PD#/OE/FS1 | Input | Multifunction programmable pin: power-down, output enable or frequency select pin |
| 6 | CLK2/SSON | Output/input | Multifunction programmable pin: programmable clock output with spread spectrum or spread spectrum ON/OFF control pin |
| 7 | GND | Power | Power supply ground |
| 8 | XOUT | Output | Crystal output |

## General Description

### 2 Configurable PLLs

The CY25402, CY25422, and CY25482 have two programmable PLLs that can be used to generate output frequencies ranging from 3 to 166 MHz. The advantage of having two PLLs is that a single device generates two independent frequencies from a single crystal.

### Input Reference Clocks

The input reference clock can be either a crystal or a clock signal, for CY25402 and CY25422 while just a clock signal for CY25482. The input frequency range for crystal (XIN) is 8 MHz to 48 MHz and that for external reference clock (EXCLKIN) is 8 MHz to 166 MHz. The voltage range of the reference clock input for CY25482 is 2.5 V/3.0 V/3.3 V while that for CY25402 and CY25422 is 1.8 V. This gives user an option for this device to be compatible for different input clock voltage levels in the system.

### $V_{DD}$ Power Supply Options

These devices have programmable power supply options. The CY25402/CY25482 is a high voltage part that can be programmed to operate at any voltage 2.5 V, 3.0 V, or 3.3 V while CY25422 is a low voltage part that can operate at 1.8 V.

### Output Source Selection

These devices have programmable input sources for each of its clock outputs. There are three available clock sources and these clock sources are: XIN/EXCLKIN, PLL1, and PLL2. Output clock source selection is done by using three out of three crossbar switch. Thus, any one of these three available clock sources can be arbitrarily selected for the clock outputs. This gives user a flexibility to have two independent clock outputs.

### Spread Spectrum Control

Both PLLs (PLL1 and PLL2) have spread spectrum capability for EMI reduction in the system. The device uses a Cypress proprietary PLL and spread spectrum clock (SSC) technology to synthesize and modulate the frequency of the PLL. The spread spectrum feature can be turned on or off using a multifunction control pin (CLK2/SSON). It can be programmed to either center spread range from ±0.125% to ±2.50% or down spread range from –0.25% to –5.0% with lexmark or linear profile.

### Frequency Select

Each PLL can be programmed for up to four different frequencies. There are two multifunction programmable pins, REFOUT/FS0 and PD#/OE/FS1 which if programmed as frequency select inputs, can be used to select among these arbitrarily programmed frequency settings. Each output has programmable output divider options.

### Glitch-Free Frequency Switch

When the frequency select pin, FS(1:0) is used to switch frequency, the outputs are glitch-free provided frequency is switched using output dividers. This feature enables uninterrupted system operation while clock frequency is being switched.

### PD#/OE Mode

Multifunction pin PD#/OE/FS1 (Pin 5) can be programmed to operate as either frequency select (FS1), power down (PD#) or output enable (OE) mode. PD# is a low-true input. If activated it shuts off the entire chip, resulting in minimum power consumption for the device. Setting this signal high brings the device in the operational mode with default register settings.

When this pin is programmed as Output Enable (OE), clock outputs can be enabled or disabled using OE (pin 5). Individual clock outputs can be programmed to be sensitive to this OE pin.

### Output Drive Strength

The DC drive strength of the individual clock output can be programmed for different values. Table 4 on page 4 shows the typical rise and fall times for different drive strength settings.

**Table 5. Output Drive Strength**

| Output Drive Strength | Rise/Fall Time (ns) (Typical Value) |
|---|---|
| Low | 6.8 |
| Mid Low | 3.4 |
| Mid High | 2.0 |
| High | 1.0 |

### Generic Configuration and Custom Frequency

There is a generic set of output frequencies available from the factory that can be used for the device evaluation purposes. The devices, CY25402, CY25422, and CY25482 can be custom programmed to any desired frequencies and listed features. For customer specific programming, please contact local Cypress field application engineer (FAE) or sales representative.

## Absolute Maximum Conditions

| Parameter | Description | Condition | Min | Max | Unit |
|---|---|---|---|---|---|
| $V_{DD}$ | Supply voltage for CY25402/CY25482 | – | –0.5 | 4.5 | V |
| $V_{DD}$ | Supply voltage for CY25422 | – | –0.5 | 2.6 | V |
| $V_{IN}$ | Input voltage for CY25402/CY25482 | Relative to $V_{SS}$ | –0.5 | $V_{DD}$+0.5 | V |
| $V_{IN}$ | Input voltage for CY25422 | Relative to $V_{SS}$ | –0.5 | 2.2 | V |
| $T_S$ | Temperature, Storage | Non Functional | –65 | +150 | °C |
| $ESD_{HBM}$ | ESD protection (human body model) | JEDEC EIA/JESD22-A114-E | 2000 | – | V |
| UL-94 | Flammability rating | V-0 at1/8 in. | – | 10 | ppm |
| MSL | Moisture sensitivity level | SOIC package | 3 | | |

## Recommended Operating Conditions

| Parameter | Description | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| $V_{DD}$ | $V_{DD}$ Operating voltage for CY25402/CY25482 | 2.25 | – | 3.60 | V |
| $V_{DD}$ | $V_{DD}$ Operating voltage for CY25422 | 1.65 | 1.8 | 1.95 | V |
| $T_{AC}$ | Commercial ambient temperature | 0 | – | +70 | °C |
| $T_{AI}$ | Industrial ambient temperature | –40 | -- | +85 | °C |
| $C_{LOAD}$ | Maximum load capacitance | – | – | 15 | pF |
| $t_{PU}$ | Power-up time for all $V_{DD}$ to reach minimum specified voltage (power ramps must be monotonic) | 0.05 | – | 500 | ms |

## DC Electrical Specifications

| Parameter | Description | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $V_{OL}$ | Output low voltage | $I_{OL}$ = 2 mA, drive strength = [00] | – | – | 0.4 | V |
| | | $I_{OL}$ = 3 mA, drive strength = [01] | | | | |
| | | $I_{OL}$ = 7 mA, drive strength = [10] | | | | |
| | | $I_{OL}$ = 12 mA, drive strength = [11] | | | | |
| $V_{OH}$ | Output high voltage | $I_{OH}$ = –2 mA, drive strength = [00] | $V_{DD}$ – 0.4 | – | – | V |
| | | $I_{OH}$ = –3 mA, drive strength = [01] | | | | |
| | | $I_{OH}$ = –7 mA, drive strength = [10] | | | | |
| | | $I_{OH}$ = –12 mA, drive strength = [11] | | | | |
| $V_{IL1}$ | Input low voltage of PD#/OE, FS0, FS1 and SSON | – | – | – | 0.2*$V_{DD}$ | V |
| $V_{IL2}$ | Input low voltage of EXCLKIN | – | – | – | 0.18 | V |
| $V_{IH1}$ | Input High Voltage of PD#/OE, FS0, FS1 and SSON | – | 0.8*$V_{DD}$ | – | – | V |
| $V_{IH2}$ | Input high voltage of EXCLKIN for CY25402/CY25422 | – | 1.62 | – | 2.2 | V |
| $V_{IH3}$ | Input high voltage of EXCLKIN for CY25482 | – | 0.8*$V_{DD}$ | – | – | V |
| $I_{IL}$ | Input low current, PD#/OE/FS1 | $V_{IN}$ = 0V | – | – | 10 | µA |
| $I_{IH}$ | Input high current, PD#/OE/FS1 | $V_{IN}$ = $V_{DD}$ | – | – | 10 | µA |
| $I_{ILDN}$ | Input low current, SSON and FS0 pins | $V_{IN}$ = 0V (Internal pull down resistor = 160k typ.) | – | – | 10 | µA |
| $I_{IHDN}$ | Input high current, SSON and FS0 pins | $V_{IN}$ = $V_{DD}$ (Internal pull down resistor = 160k typ.) | 14 | – | 36 | µA |
| $R_{DN}$ | Pull-down resistor of CLK1, REFOUT/FS0 and CLK2/SSON pins | Output clocks in off state by setting PD# = Low | 100 | 160 | 250 | kΩ |
| $I_{DD}$[1,2] | Supply current for CY25422 | PD# = High, No load | – | 12 | – | mA |
| | Supply current for CY25402/CY25482 | PD# = High, No load | – | 14 | – | mA |
| $I_{DDS}$[1] | Standby current | PD# = Low | – | 3 | – | µA |
| $C_{IN}$[2] | Input capacitance | SSON, PD#/OE/FS1 and FS0 pins | – | – | 7 | pF |

**Notes**
1. Guaranteed by design but not 100% tested
2. Configuration dependent.

## AC Electrical Specifications

| Parameter | Description | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $F_{IN}$ (crystal) | Crystal Frequency, XIN | | 8 | – | 48 | MHz |
| $F_{IN}$ (clock) | Input Clock Frequency (EXCLKIN) | | 8 | – | 166 | MHz |
| $F_{CLK}$ | Output Clock Frequency | | 3 | – | 166 | MHz |
| DC | Output Duty Cycle, All Clocks except Ref Out | Duty Cycle is defined in Figure 5 on page 9; $t_1/t_2$, measured at 50% of $V_{DD}$ | 45 | 50 | 55 | % |
| DC | Ref Out Duty Cycle | Ref In Min 45%, Max 55% | 40 | – | 60 | % |
| $T_{RF1}$[3] | Output Rise/Fall Time | Measured from 20% to 80% of $V_{DD}$, as shown in Figure 6 on page 9, $C_{LOAD}$ = 15 pF, drive strength [00] | – | 6.8 | – | ns |
| $T_{RF2}$[3] | Output Rise/Fall Time | Measured from 20% to 80% of $V_{DD}$, as shown in Figure 6 on page 9, $C_{LOAD}$ = 15 pF, drive strength [01] | – | 3.4 | – | ns |
| $T_{RF3}$[3] | Output Rise/Fall Time | Measured from 20% to 80% of $V_{DD}$, as shown in Figure 6 on page 9, $C_{LOAD}$ = 15 pF, drive strength [10] | – | 2.0 | – | ns |
| $T_{RF4}$[3] | Output Rise/Fall Time | Measured from 20% to 80% of $V_{DD}$, as shown in Figure 6 on page 9, $C_{LOAD}$ = 15 pF, drive strength [11] | – | 1.0 | – | ns |
| $T_{CCJ}$[3,4] | Cycle-to-cycle Jitter (peak) | Configuration dependent. See Table 5 | – | 100 | – | ps |
| $T_{LOCK}$[4] | PLL Lock Time | Measured from 90% of the applied power supply level | – | 1 | 3 | ms |

**Table 6. Configuration Example for C-C Jitter**

| Ref. Frequency (MHz) | CLK1 Output | | CLK2 Output | |
|---|---|---|---|---|
| | Freq. (MHz) | C-C Jitter Typ (ps) | Freq. (MHz) | C-C Jitter Typ (ps) |
| 14.3181 | 8.0 | 134 | 48 | 92 |
| 19.2 | 74.25 | 99 | 8 | 91 |
| 27 | 48 | 67 | 166 | 103 |
| 48 | 48 | 93 | 166 | 137 |

## Recommended Crystal Specification for SMD Package

| Parameter | Description | Range 1 | Range 2 | Range 3 | Unit |
|---|---|---|---|---|---|
| Fmin | Minimum frequency | 8 | 14 | 28 | MHz |
| Fmax | Maximum frequency | 14 | 28 | 48 | MHz |
| R1 | Motional resistance (ESR) | 135 | 50 | 30 | Ω |
| C0 | Shunt capacitance | 4 | 4 | 2 | pF |
| CL | Parallel load capacitance | 18 | 14 | 12 | pF |
| DL(max) | Maximum crystal drive level | 300 | 300 | 300 | µW |

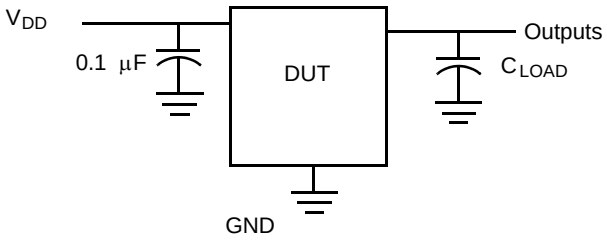
**Notes**
3. Guaranteed by design but not 100% tested
4. Configuration dependent.

## Recommended Crystal Specification for Thru-Hole Package

| Parameter | Description | Range 1 | Range 2 | Range 3 | Unit |
|---|---|---|---|---|---|
| Fmin | Minimum frequency | 8 | 14 | 24 | MHz |
| Fmax | Maximum frequency | 14 | 24 | 32 | MHz |
| R1 | Motional resistance (ESR) | 90 | 50 | 30 | Ω |
| C0 | Shunt capacitance | 7 | 7 | 7 | pF |
| CL | Parallel load capacitance | 18 | 12 | 12 | pF |
| DL(max) | Maximum crystal drive level | 1000 | 1000 | 1000 | µW |

## Test and Measurement Setup

**Figure 4. Test and Measurement Setup**




## Voltage and Timing Definitions

**Figure 5. Duty Cycle Definition**

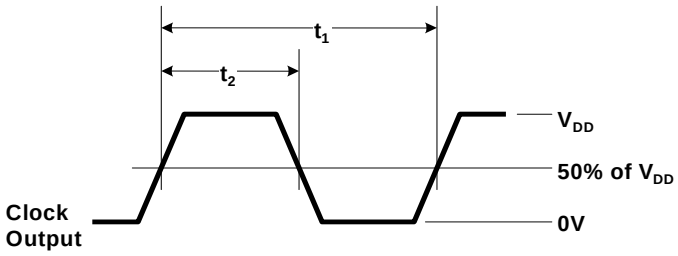
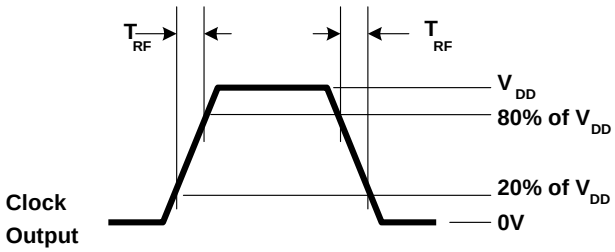



**Figure 6. Rise Time = $T_{RF}$, Fall Time = $T_{RF}$**



## Ordering Information

| Part Number | Type | Package | Supply Voltage | Production Flow |
|---|---|---|---|---|
| **Pb-free** | | | | |
| CY25402SXC | Field Programmable | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25402SXCT | Field Programmable | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25422FSXC | Field Programmable | 8-pin SOIC | 1.8 V | Commercial, 0 °C to 70 °C |
| CY25422FSXCT | Field Programmable | 8-pin SOIC -Tape and reel | 1.8 V | Commercial, 0 °C to 70 °C |
| CY25482SXC | Field Programmable | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25482SXCT | Field Programmable | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25402SXI | Field Programmable | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |
| CY25402SXIT | Field Programmable | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |
| CY25422FSXI | Field Programmable | 8-pin SOIC | 1.8 V | Industrial, -40 °C to +85 °C |
| CY25422FSXIT | Field Programmable | 8-pin SOIC -Tape and reel | 1.8 V | Industrial, -40 °C to +85 °C |
| CY25482SXI | Field Programmable | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |
| CY25482SXIT | Field Programmable | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |
| **Programmer** | | | | |
| CY3675-CLKMAKER1 | | Programming kit | | |
| CY3675-SOIC8A | | Socket Adapter Board, for programming CY25402, CY25403, CY25422, CY25423, CY25482 and CY25483 | | |

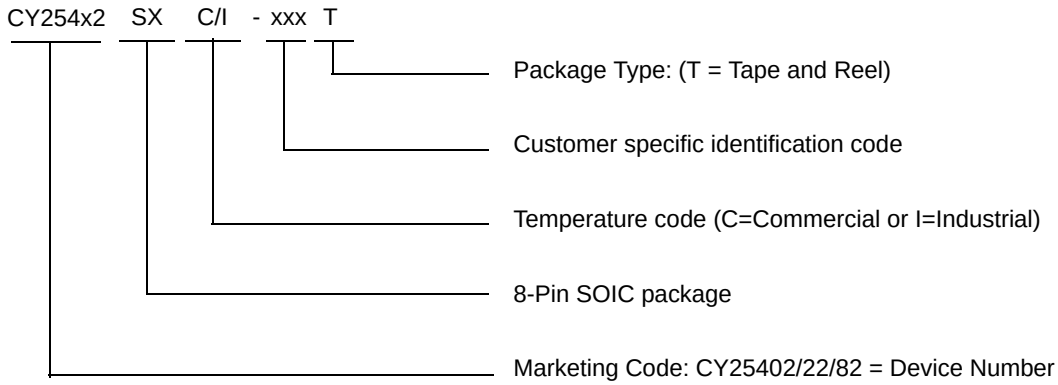
### Possible Configurations

Some product offerings are factory programmed customer specific devices with customized part numbers.The Possible Configurations table shows the available device types, but not complete part numbers. Contact your local Cypress FAE of Sales Representative for more information.

| Part Number[5] | Type | Package | Supply Voltage | Production Flow |
|---|---|---|---|---|
| **Pb-free** | | | | |
| CY25402SXC-xxx | Factory Programmed | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25402SXC-xxxT | Factory Programmed | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25422SXC-xxx | Factory Programmed | 8-pin SOIC | 1.8 V | Commercial, 0 °C to 70 °C |
| CY25422SXC-xxxT | Factory Programmed | 8-pin SOIC -Tape and reel | 1.8 V | Commercial, 0 °C to 70 °C |
| CY25482SXC-xxx | Factory Programmed | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25482SXC-xxxT | Factory Programmed | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Commercial, 0 °C to 70 °C |
| CY25402SXI-xxx | Factory Programmed | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |
| CY25402SXI-xxxT | Factory Programmed | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |
| CY25422SXI-xxx | Factory Programmed | 8-pin SOIC | 1.8 V | Industrial, -40 °C to +85 °C |
| CY25422SXI-xxxT | Factory Programmed | 8-pin SOIC -Tape and reel | 1.8 V | Industrial, -40 °C to +85 °C |
| CY25482SXI-xxx | Factory Programmed | 8-pin SOIC | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |
| CY25482SXI-xxxT | Factory Programmed | 8-pin SOIC -Tape and reel | 2.5 V, 3.0 V, or 3.3 V | Industrial, -40 °C to +85 °C |

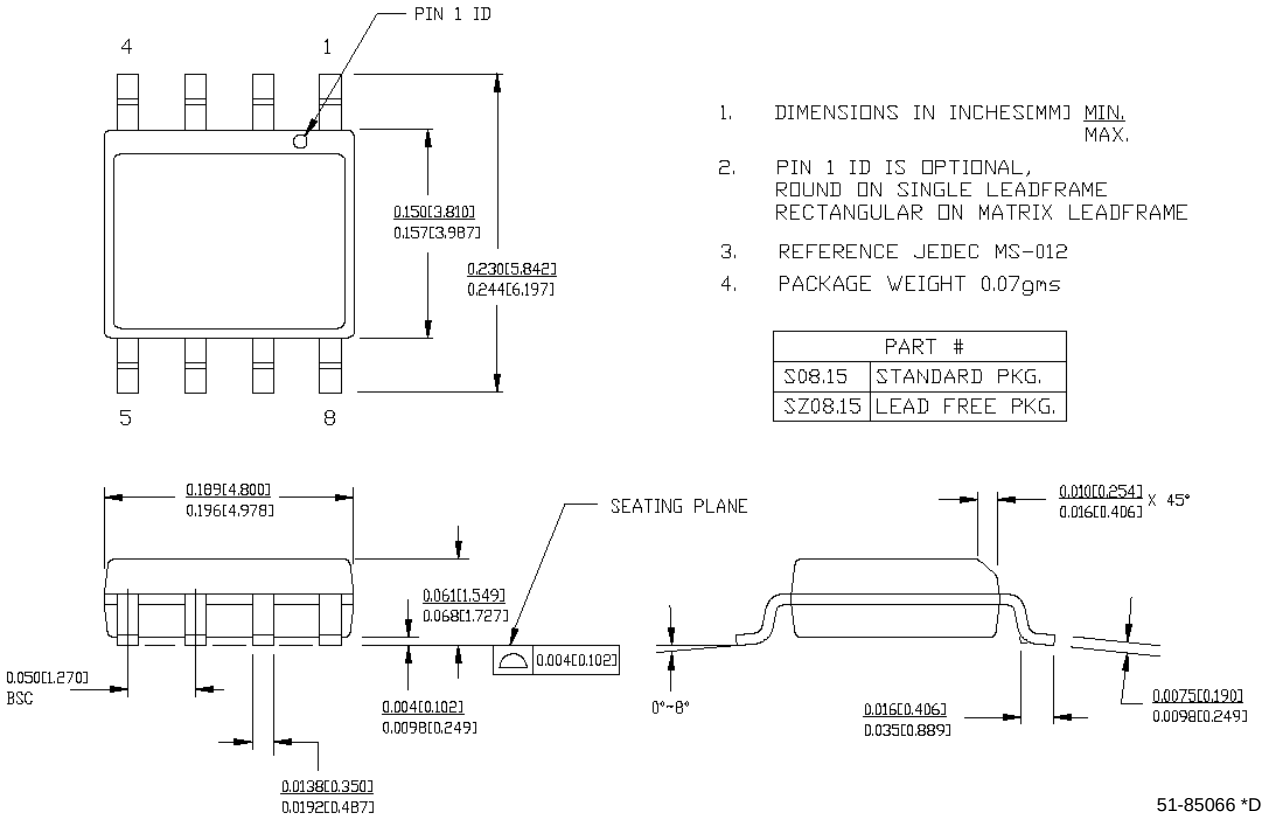
**Note**
5. xxx indicates Factory Programmable and are factory programmed configurations. For more details, contact your local Cypress FAE or Cypress Sales Representative

### Ordering Code Definitions




## Package Drawing and Dimensions

**Figure 7. 8-Pin (150-Mil) SOIC S8**



## Acronyms

| Acronym | Description |
|---|---|
| DL | drive level |
| DNU | do not use |
| DUT | device under test |
| EMI | electromagnetic interference |
| ESD | electrostatic discharge |
| FAE | field application engineer |
| FS | frequency select |
| JEDEC EIA | joint electron devices engineering council electronic industries alliance |
| LVCMOS | low voltage complemetary metal oxide semiconductor |
| OE | output enable |
| OSC | oscillator |
| PD | power down |
| PLL | phase locked loop |
| PPM | parts per million |
| SS | spread spectrum |
| SSC | spread spectrum clock |
| SSON | spread spectrum on |

## Document Conventions

### Units of Measure

| Symbol | Unit of Measure |
|---|---|
| °C | degrees Celsius |
| fF | femtofarads |
| mA | milliampere |
| MHz | megahertz |
| µs | microseconds |
| ms | millisecond |
| µW | microwatts |
| ns | nanoseconds |
| pF | picofarads |
| ppm | parts per million |
| ps | picoseconds |
| V | volts |
| Ω | ohms |
| W | watts |

## Document History Page

| Document Title: CY25402/CY25422/CY25482 Two PLL Programmable Clock Generator with Spread Spectrum<br>Document Number: 001-12565 | | | | |
|---|---|---|---|---|
| **REV.** | **ECN NO.** | **Issue Date** | **Orig. of Change** | **Description of Change** |
| ** | 690296 | See ECN | RGL | New Data Sheet |
| *A | 815788 | See ECN | RGL | Minor Change: To post on web |
| *B | 1428744 | See ECN | RGL/AESA | Changed data sheet format to match generic part, CY2544/46<br>Added new device and specification for high ref. input voltage part, CY25482<br>Removed Preliminary from Title page<br>Replaced CLK2 with REFOUT |
| *C | 2748211 | 08/10/09 | TSAI | Posting to external web. |
| *D | 2898568 | 06/02/10 | KVM | Updated the Ordering Information table and package diagram.<br>Moved ‘xxx’ parts to Possible Configurations table.<br>Updated template. |
| *E | 3110175 | 12/14/2010 | BASH | Updated as per new template<br>Added Units of Measure table |
| *F | 3235621 | 04/20/2011 | CXQ | Changed part number from CY25422SXC to CY25422FSXC, from CY25422SXCT to CY25422FSXCT, from CY25422SXI to CY25422FSXI, and from CY25422SXIT to CY25422FSXIT. |

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