Packaging Regulations for Cologne Chip GateMate FPGA
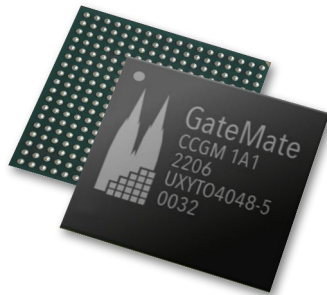
designed and
manufactured
in Germany

The following regulations are valid for these products:

CCGM1A1

The chips are packed on trays.
Each tray carries 119 chips.

Due to quality reasons it is recommended to open vacuum packs only a little while before soldering.

To avoid rebaking of chips, we recommend to order only multiples of 1190 pcs. (= entire vacuum packs).
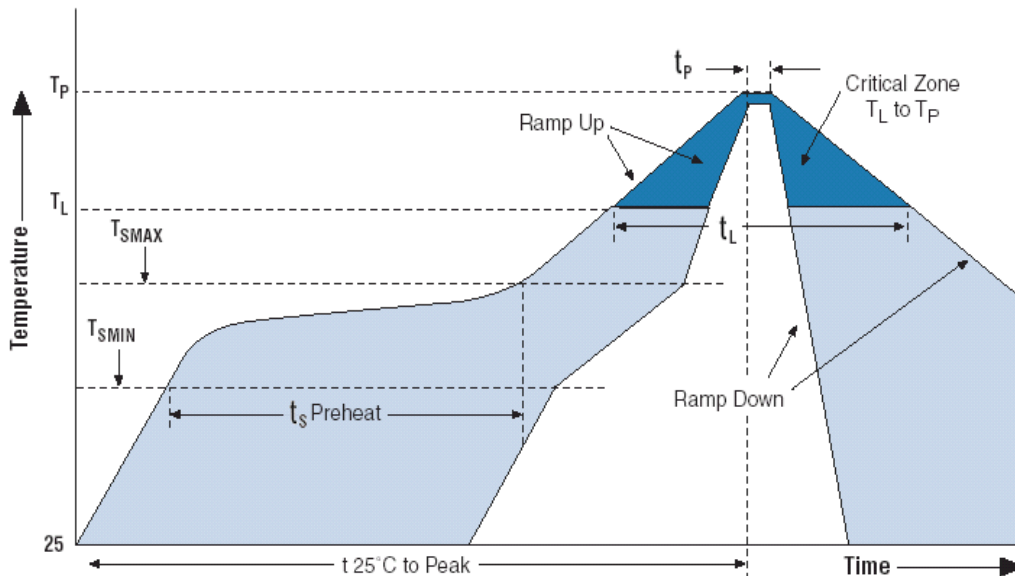
10 trays are inside a vacuum pack.

Each vacuum pack is put into a small box. This box is 1 lot (10 trays = 1190 pcs. of chips).

Weight: 2.1 kg
Dimensions: 36 cm x 15.4 cm x 9 cm

Soldering Reflow of CCGM1A1

Preheat - Temperature Min (T_{SMIN}) - Temperature Max (T_{SMAX}) - Time (min to max) (t_S)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
T_{SMAX} to T_L – Ramp-up Rate		3°C/second max
Time maintained above: - Temperature (T_L) - Time (t_L)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature (T_P)	260 +0/-5°C	260 +0/-5°C
Time within 5°C of actual Peak Temperature (t_P)	10-40 seconds	20-40 seconds
Ramp-down Rate	6°C/second max.	6°C/second max.
Time 25°C to Peak Temperature	6 minutes max.	8 minutes max.

The recommended profiles for soldering reflow of **CCGM1A1** for **Sn-Pb eutectic** as well as **Pb-free assembly** mainly correspond to the commonly applied JEDEC Standard **JSTD-020E**. But to ensure best surface mounting quality, it is encouraged to use the provisions of **Pb-free assembly**. The table and graph above illustrate the respective soldering reflow.

CAUTION: Vacuum bags contain moisture sensitive devices!

Surface mount products may have a crack when thermal stress is applied during surface mount assembly if they have absorbed atmospheric moisture. It is recommended that these products are handled under specific conditions described as follows:

Package Type (Pb-free)	Storage Condition after unpacking (as maximum)	Rebake Condition as minimum
FBGA 324 balls	Within 168 hours (30°C/60% RH) MSL 3	125°C 24 hours

Cologne Chip

GateMate FPGA

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