32-Bit

Microcontroller

TC290 / TC297 / TC298 / TC299

32-Bit Single-Chip Microcontroller
BC-Step

32-Bit Single-Chip Microcontroller

Data Sheet

V 1.1, 2019-03

Microcontrollers

3.35 Package Outline

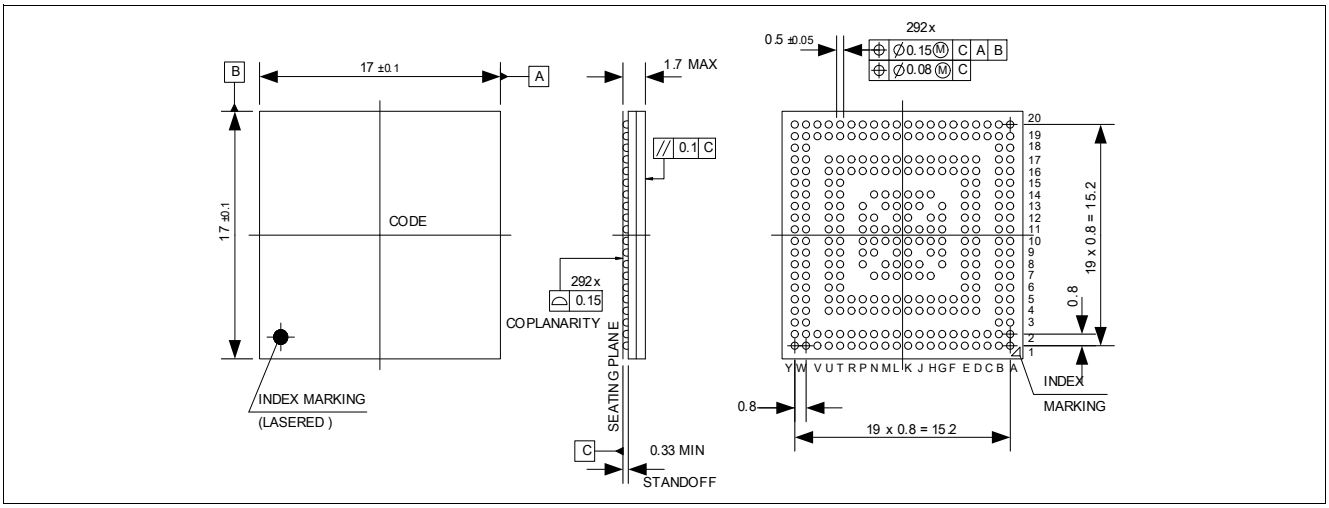

Figure 3-35 Package Outlines LF-BGA-292-6 / LF-BGA-292-10

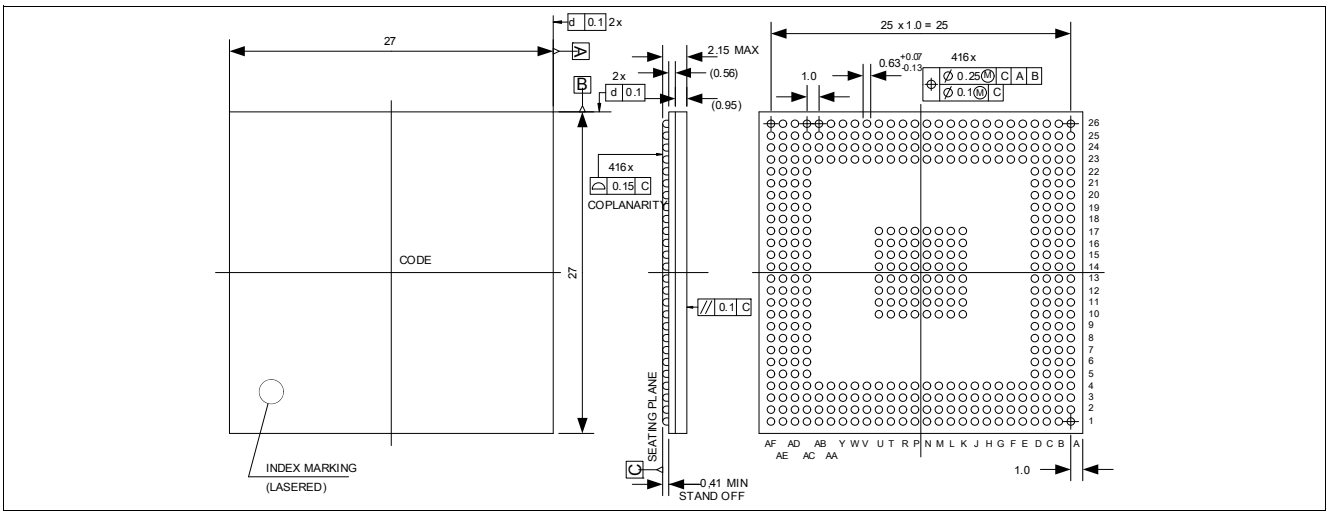

Figure 3-36 Package Outlines PG-BGA-416-26 / PG-BGA-416-29

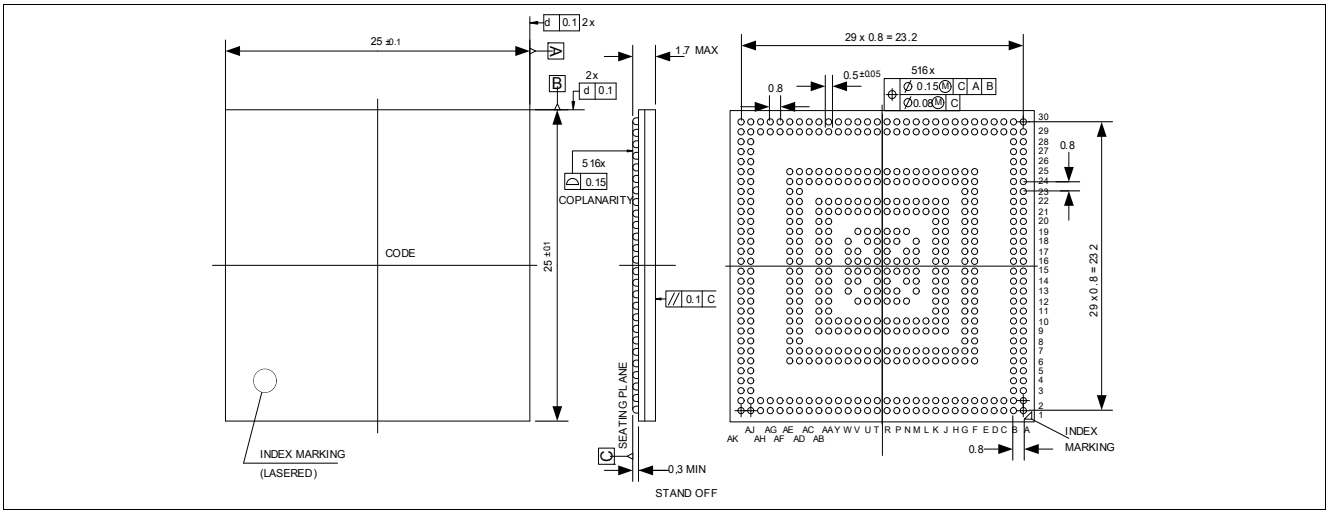

Figure 3-37 Package Outlines PG-LFBGA-516-5 / PG-LFBGA-516-10

You can find all of our packages, sorts of packing and others in our Infineon Internet Page “Products”: http://www.infineon.com/products.

3.35.1 Package Parameters

Table 3-108 Thermal Characteristics of the Package

Device	Package	RQJCT[1)]	RQJCB[1)]	RQJA	Unit	Note
TC297	LF-BGA-292-6 / LF-BGA-292-10	3,0	4,3	15,1	K/W	
TC298	PG-BGA-416-26 / PG-BGA-416-29	2,9	5,4	12,8	K/W	
TC299	PG-LFBGA-516-5 / PG-LFBGA-516-10	2,8	4,3	15,1	K/W	

1) The top and bottom thermal resistances between the case and the ambient (R_{TCAT}, R_{TCAB}) are to be combined with the thermal resistances between the junction and the case given above (R_{TJCT}, R_{TJCB}), in order to calculate the total thermal resistance between the junction and the ambient (R_{TJA}). The thermal resistances between the case and the ambient (R_{TCAT}, R_{TCAB}) depend on the external system (PCB, case) characteristics, and are under user responsibility.
The junction temperature can be calculated using the following equation: $T_J = T_A + R_{TJA} * P_D$, where the R_{TJA} is the total thermal resistance between the junction and the ambient. This total junction ambient resistance R_{TJA} can be obtained from the upper four partial thermal resistances.
Thermal resistances as measured by the ’cold plate method’ (MIL SPEC-883 Method 1012.1).

3.35.2 TC290 Carrier Tape

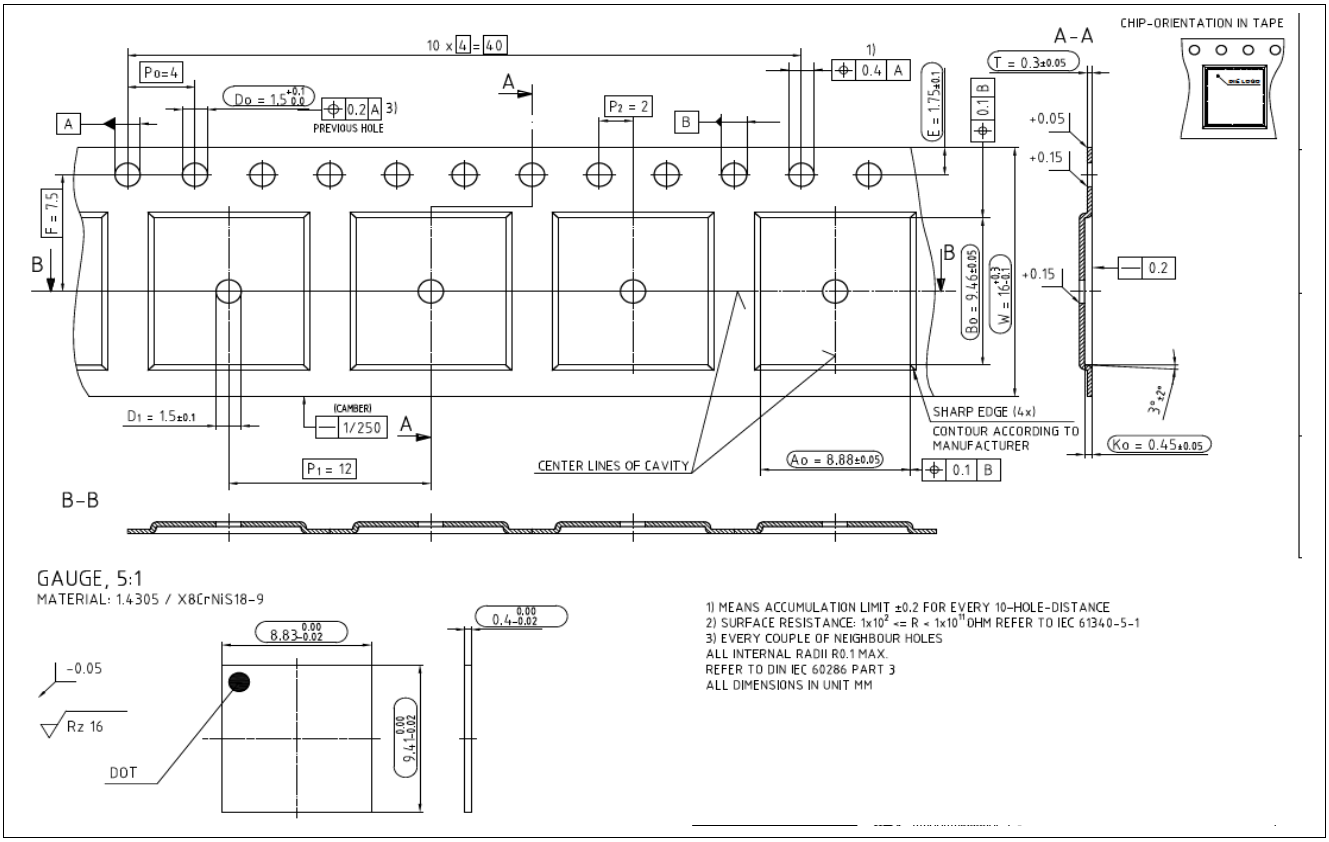

Figure 3-38 Carrier Tape Dimenions

Table 3-109 TC290 Chip Dimenions

Device	A	B	T
TC290	8,770 mm	9,357 mm	0,3 mm

w w w . i n f i n e o n . c o m

Published by Infineon Technologies AG