



# Process Change Notice #1412032

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<b>PCN Date:</b> 12/3/2014		<b>Effective Date:</b> 3/9/2015	
<b>Title:</b> Si5010, Si5020 & Si5310_QFN-4x4_Punch to Saw type			
<b>Originator:</b> Paranidharan Rengarajan		<b>Phone:</b> +65 6511 7735	<b>Dept:</b> Supplier Management
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<b>PCN Type:</b>			
<input type="checkbox"/> Datasheet	<input type="checkbox"/> Foundry	<input type="checkbox"/> Packing	
<input type="checkbox"/> Product Revision	<input checked="" type="checkbox"/> Assembly	<input type="checkbox"/> Labeling	
<input type="checkbox"/> Discontinuance	<input type="checkbox"/> Test	<input type="checkbox"/> Other	
<b>Last Order Date:</b> Not Applicable			
<b>PCN Details</b>			
<b>Description of Change:</b> Silicon Labs is pleased to announce a change in package type from punch to saw type for Si5010, Si5020 and Si5310 devices. The foot print for both punch and saw package types are identical; no critical package dimensions are impacted.  The package drawings and critical dimensions are listed in the Appendix.			
<b>Reason for Change:</b> The assembly supplier is no longer able to support punch type QFN 4x4 packages.			
<b>Impact on Form, Fit, Function, Quality, Reliability:</b> No impact to fit, function, quality and reliability. The form of the package no longer has the chamfered corners from the mold cap and the molding compound extends to the edge of the package. There is no taper on the mold cap; the mold cap is now vertical. There are no changes to the recommended PCB layout of the affected device.			
<b>Product Identification:</b> Si5010-B-GM Si5010-B-GMR Si5020-B-GM Si5020-B-GMR Si5310-C-GM SI5310-C-GMR			
<b>Last Date of Unchanged Product:</b> 3/9/2015			
<b>Qualification Samples:</b> Samples are available now.			



**Appendix**

**Punch type (Existing):**

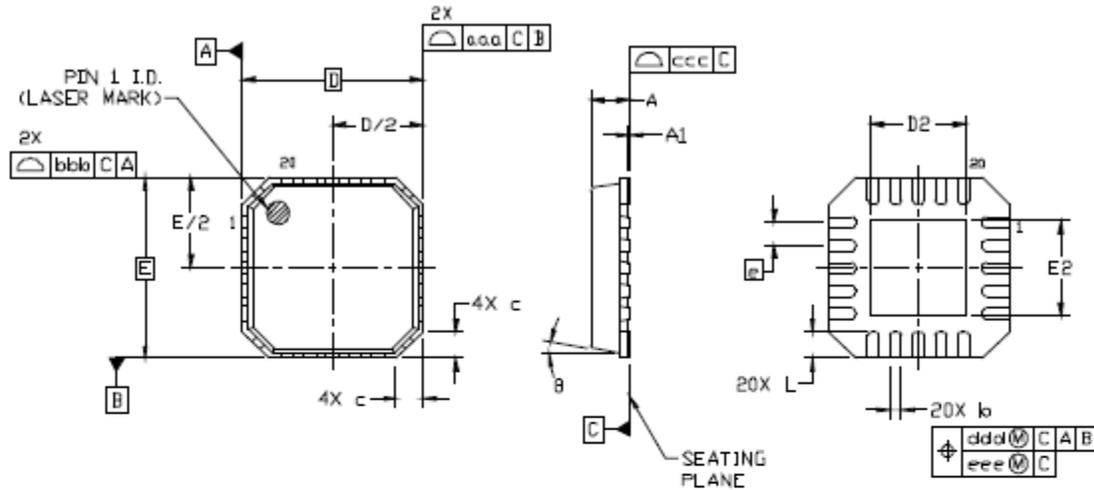


Figure 11. 20-pin Quad Flat No-Lead (QFN)

Table 10. Package Dimensions

Symbol	Millimeters		
	Min	Nom	Max
A	0.80	0.85	0.90
A1	0.00	0.02	0.05
b	0.18	0.25	0.30
c	—	—	0.60
D	4.00 BSC		
D2	1.95	2.10	2.25
e	0.50 BSC		
E	4.00 BSC		

Symbol	Millimeters		
	Min	Nom	Max
E2	1.95	2.10	2.25
L	0.50	0.60	0.70
θ	0°	—	12°
aaa	0.10		
bbb	0.10		
ccc	0.08		
ddd	0.10		
eee	0.05		

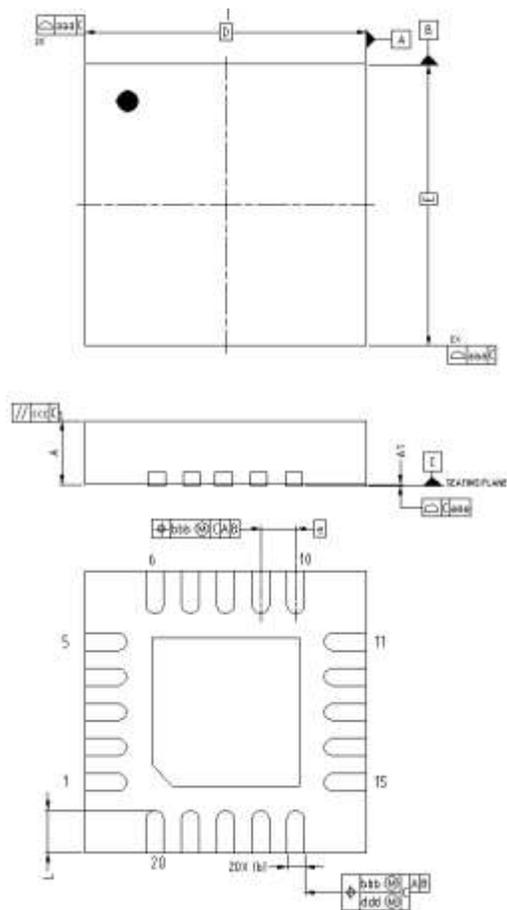
**Notes:**

1. All dimensions shown are in millimeters (mm) unless otherwise noted.
2. Dimensioning and Tolerancing per ANSI Y14.5M-1994.
3. This drawing conforms to JEDEC outline MO-220, variation VGGD-1.
4. Recommended card reflow profile is per the JEDEC/IPC J-STD-020C specification for Small Body Components.

Appendix Continued

Saw type (New):

Dimension	MIN	NOM	MAX
A	0.80	0.85	0.90
A1	0.00	0.02	0.05
b	0.18	0.25	0.30
D	4.00 BSC.		
D2	2.0	2.10	2.20
e	0.50 BSC.		
E	4.00 BSC.		
E2	2.0	2.10	2.20
L	0.50	0.60	0.70
aaa	0.15		
bbb	0.10		
ccc	0.10		
ddd	0.05		
eee	0.08		





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## Comparison of key dimensions (Punch vs Saw type):

Sl.No	Symbol	Dimension	Punch type			Saw type		
			Min	Nom	Max	Min	Nom	Max
1	A	Overall package Height	0.80	0.85	0.90	0.80	0.85	0.90
2	A1	(Refer drawing)	0.00	0.02	0.05	0.00	0.02	0.05
3	b	Lead width	0.18	0.25	0.30	0.18	0.25	0.30
4	D/E	Package size	4.00 BSC			3.90	4.00	4.10
5	D1/E1	(Refer drawing)	3.75 BSC			N/A		
6	D2/E2	ePAD size	1.95	2.10	2.25	2.00	2.10	2.20
7	e	Lead pitch	0.50 BSC			0.50 BSC		
8	L	Lead length	0.50	0.60	0.70	0.50	0.60	0.70