



190226482 MGM13S/BGM13S BOM and Mold Compound Update

PCN Issue Date: 2/26/2019

Effective Date: 5/30/2019

PCN Type: Assembly

Description of Change

Silicon Labs announces two assembly changes for BGM13S and MGM13S modules:

- 1 - Three 0603 supply decoupling capacitors are being replaced with 0402 equivalent devices
- 2 - A new mold compound is being introduced to maintain and guarantee product quality and reliability after decoupling capacitors are replaced.

Reason for Change

Component shortage announced by suppliers

Impact on Form, Fit, Function, Quality, Reliability

No impact on fit, function, quality or reliability. The form is changing as described in the description section.

Product Identification

Existing Part #
BGM13S22F512GA-V2
BGM13S22F512GA-V2R
BGM13S22F512GN-V2
BGM13S22F512GN-V2R
BGM13S32F512GA-V2
BGM13S32F512GA-V2R
BGM13S32F512GN-V2
BGM13S32F512GN-V2R
MGM13S02F512GA-V2
MGM13S02F512GA-V2R
MGM13S02F512GN-V2
MGM13S02F512GN-V2R
MGM13S12F512GA-V2
MGM13S12F512GA-V2R
MGM13S12F512GN-V2
MGM13S12F512GN-V2R
BGX13S22GA-V21
BGX13S22GA-V21R

Last Date of Unchanged Product: 5/30/2019

Qualification Samples

Available upon request.

Customer Response

Lack of acknowledgment of the PCN within 30 days constitutes acceptance of the change, Ref. JEDEC-J-STD-046.

To request further data or inquire about this notification, please contact your Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at <http://www.silabs.com>.

Customers may approve early PCN acceptance by emailing approval, along with PCN # to PCNEarlyAcceptance@silabs.com

User Registration

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Qualification Data

See attached Qualification Report.



BGM13S Qualification Report

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Part Rev C, TSMC Fabrication, SPIL Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A – Accelerated Environment Stress Tests							
HAST	JA110 110°C, 85%RH Vcc=1.9V, 264 hours	3 lots, N=>25	Q043729	0/25	1		
			Q043730	0/25	1	3 lots	Pass
			Q043731	0/25	1	0/75	
Temp Cycle	JA104 Cond B: -55°C to 125°C 700 cycles	3 lots, N=>25	Q043706	0/25	1		
			Q043707	0/25	1	3 lots	Pass
			Q043708	0/25	1	0/75	
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q043703	0/30	1		
			Q043704	0/30	1	3 lots	Pass
			Q043705	0/30	1	0/90	
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108 T _J ≥ 125°C, Dynamic Vcc=1.9V, 1000 hours	3 lots, N=>77	Q040471	0/80	2		
			Q041124	0/80	2	3 lots	Pass
			Q040650	0/79	2	0/239	
LTOL	JA108 T _A = -10°C, Dynamic Vcc=1.9V, 1000 hours	1 lot, N=>32	Q040451	0/80	2	1 lots	Pass
						0/80	
ELFR	JA108 T _J ≥ 125°C, Dynamic Vcc=1.9V, 48 hours	3 lots, N=>500	Q040450	0/505	2		
			Q040472	0/516	2	3 lots	Pass
			Q040651	0/515	2	0/1536	
NVM Endurance, Retention and Operating Life	JA117 25°C 500 hours	3 lots, N=>39	Q040213	0/40	2		
			Q040274	0/40	2	3 lots	Pass
			Q040278	0/40	2	0/120	
NVM Endurance, Retention and Operating Life	JA117 150°C 1000 hours	3 lots, N=>39	Q040214	0/40	2		
			Q040275	0/40	2	3 lots	Pass
			Q040279	0/40	2	0/120	
Test Group E – Electrical Verification							
ESD-HBM	JS-001	1 lot, N=>3	Q043583			2 kV	Class 2
ESD-CDM	JS-002	1 lot, N=>3	Q043582			500 V	Class III
Latch Up	JESD78 ±200mA Overvoltage = 2.85V	1 lot, N=>3	Q043580	125 °C			Pass



BGM13S Qualification Report

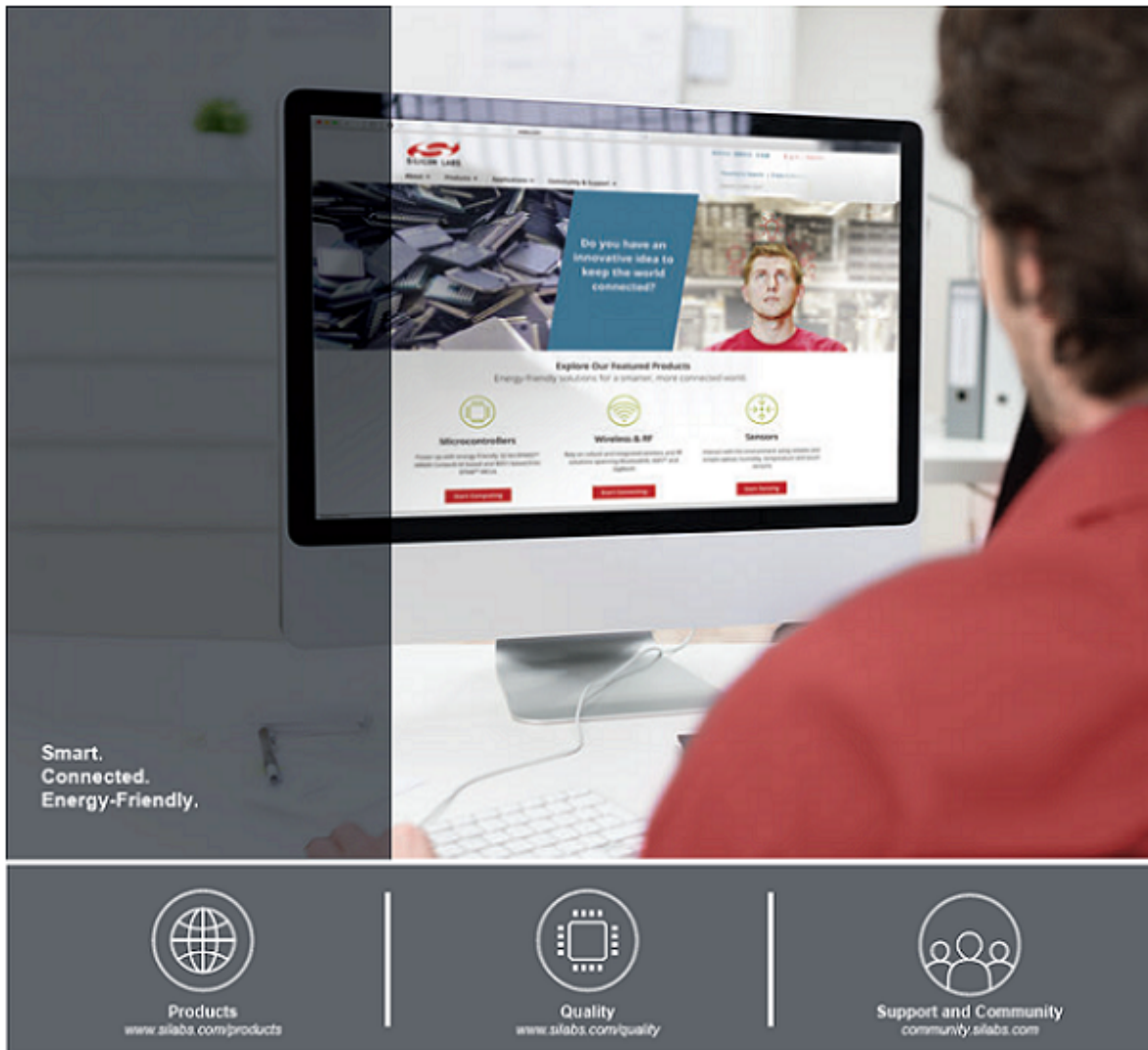
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Part Rev C, TSMC Fabrication, SPIL Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status

Notes:

1. Parts are Pre-conditioned at MSL3/260°C
2. Leveraged die family data

This report applies to the following part numbers:				
BGM13S12F512GA-V2	BGM13S12F512GA-V2R	BGM13S12F512GN-V2	BGM13S12F512GN-V2R	BGM13S22F512GA-V2
BGM13S22F512GA-V2R	BGM13S22F512GN-V2	BGM13S22F512GN-V2R	BGM13S32F512GA-V2	BGM13S32F512GA-V2R
BGM13S32F512GN-V2	BGM13S32F512GN-V2R	MGM13S02F512GA-V2	MGM13S02F512GA-V2R	MGM13S02F512GN-V2
MGM13S02F512GN-V2R	MGM13S12F512GA-V2	MGM13S12F512GA-V2R	MGM13S12F512GN-V2	MGM13S12F512GN-V2R
BGX13S22GA-V21	BGX13S22GA-V21R			



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