



PRODUCT / PROCESS CHANGE NOTIFICATION

PCN-000544

Date: Feb 19 2019

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<input type="checkbox"/>	Semtech Corporation, 200 Flynn Road, Camarillo CA 93012
<input checked="" type="checkbox"/>	Semtech Canada Corporation, 4281 Harvester Road, Burlington, Ontario L7L 5M4 Canada
<input type="checkbox"/>	Semtech Irvine, 5141 California Ave., Suite 100, Irvine CA 92617
<input type="checkbox"/>	Semtech Neuchatel Sarl, Route des Gouttes d'Or 40, CH-2000 Neuchatel Switzerland
<input type="checkbox"/>	Semtech Bristol - EMEA Limited, Block B, St James Court, Great Park Road, Bristol BS32 4QJ, UK
<input type="checkbox"/>	Semtech Corpus Christi SA de CV, Carretera Matamorros Edificio 7, Reynosa, Tamaulipas, Mexico 88780
<input type="checkbox"/>	Semtech Plano, 1101 Resource Drive, Suite 121, Plano TX 75074
<input type="checkbox"/>	

Change Details

Part Number(s) Affected: Please refer to the complete list on 2nd page.	Customer Part Number(s) Affected: <input checked="" type="checkbox"/> N/A
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Description, Purpose and Effect of Change:

Introducing additional source of 22nF, 1nF, 1uF capacitors for ROSA products.

ROSA manufacturing is faced with supply shortage of capacitors from Murata. Semtech has qualified alternate supplier Yageo Co.

Yageo's CC0402KRX7R9BB223 (22 nF)
 Yageo's CC0402KRX7R9BB102 (1 nF)
 Yageo's CC0402KRX5R6BB105 (1 uF)

Change Classification	<input type="checkbox"/> Major <input checked="" type="checkbox"/> Minor	Impact to Form, Fit, Function	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Impact to Data Sheet	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	New Revision or Date	<input type="checkbox"/> N/A

Impact to Performance, Characteristics or Reliability:

- No negative impact

Implementation Date	May 01 2019	Work Week	
Last Time Ship (LTS) Of unchanged product		Affecting Lot No. / Serial No. (SN)	
Sample Availability	Feb 19 2019	Qualification Report Availability	Feb 19 2019

Supporting Documents for Change Validation/Attachments:

- Yageo Capacitor Datasheets:
 - UPY-GPHC_X7R_6.3V-to-50V_18.pdf
 - UPY-GPHC_X5R_4V-to-50V_25.pdf
- ROHS Reports
 - 01_KA_2018_10634_X5R POWDER (SGS) .pdf
 - 01_KA_2018_10633_X7R POWDER (SGS 报告) .pdf



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- Yageo Rohs 2.0 Certificate of conformance
- Semtech reliability report

Issuing Authority

Semtech Business Unit: Signal Integrity Products

Semtech Contact Info:

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FOR FURTHER INFORMATION & WORLDWIDE SALES COVERAGE: <http://www.semtech.com/contact/index.html#support>

Affected Semtech part numbers:

GN3252-3EB8AN3E3 GN3357-3EB9AU4E3
GN3252-3EB8AT3E3 GN3357-3EB9AU7E3
GN3257-3EB9AT5E3 GN3357-3EB9AU9E3
GN3268-3EB7AT8E3 GN3357-3EB9AV5E3
GN3270-3EC7AV3E3 GN3357-3ED9AR6E3
GN3270-3EC7AV9E3 GN3358-3EF8AT6E3
GN3289-3ED7BC2E3 GN3358-3EF8AT9E3
GN3289-3ED7BC3E3 GN3358-3EF9AT9E3
GN3352-3EB8AQ4E3 GN3363-3EF9AV6E3
GN3352-3EB8AQ9E3 GN3368-3EC8AT6E3
GN3352-3EB8AS6E3 GN3368-3EC8AT8E3
GN3352-3EB8AT4E3 GN3368-3EC8AT9E3
GN3352-3EB8AW4E3 GN3368-3EC8AU6E3
GN3357-3EB9AQ9E3 GN3368-3EC8AU8E3
GN3357-3EB9AT6E3 GN3368-3EC9AT9E3
GN3357-3EB9AT9E3



SEMTECH

Reliability Qualification Report for Yageo Capacitors

Revision History

Version	ECO	Date	Modifications / Changes
0	ECO-044940	Dec 2018	New document
1	ECO-045488	Feb 2019	Adding the 1nF capacitor

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1 Purpose

To qualify a Yageo capacitors for Semtech ROSAs. Hisense current supplier of capacitors for ROSAs is Murata which will cease to supply Hisense with 22nF, 1uF, and 1nF capacitors. Yageo is a qualified Hisense supplier and will be used as a supplier for the caps used in Semtech ROSAs. This report captures the results of this qualification.

The capacitors covered by this report are:

Yageo PN	Capacitance
CC0402KRX5R6BB105	1uF
CC0402KRX7R9BB223	22nF
CC0402KRX7R9BB102	1nF

2 Qualification Test Plan

The following qualification tests will be performed to qualify the new capacitors.

- 1- Temperature Cycling
- 2- Biased Damp Heat.
- 3- Shear Test on capacitors

3 Qualification Test Results

3.1 Test Conditions

Table 1.: Qualification Stresses

Stress	Conditions	Read Points	Qualification Vehicle	Sample Size	Results
Temperature Cycling	GR-468, Method 3.3.2.2 -40C-85C, 10C/min ramp 15 min dwell time, 500 cycles	100cys, 500cys	GN3357	11	Pass
			GN3368	11	Pass
Biased Damp Heat	85C, 85% RH, VCC= Vmax	0, 500Hrs	GN3357	11	Pass
			GN3368	11	Pass
Die Shear	MIL-STD-883 Method 2019	NA	GN3357 1uF	11	Pass
			GN3357 1nF	11	Pass
			GN3368 22nF		
Die Shear	MIL-STD-883 Method 2019	NA	GN3357 1uF	11	Pass
			GN3357 1nF	11	Pass
			GN3368 22nF		

3.2 Pass Fail Criteria

Parameter	Criterion
Unstressed receiver sensitivity (URS)	Change > 1.0 dB
Responsivity	> 1 dB
PD Bias Current, Dark Current	> 50 nA
Cap shear force	<0.04kg/(0.0001 sq in)

4 Conclusion

The Yageo capacitors have been qualified on Semtech ROSAs. The Yageo capacitors are considered reliable to be used on Semtech ROSAs.