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Control No. PCN-17051

February 15, 2017

PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE: Design Manufacturing Other

This notification is provided in accordance with Power Integrations policy of product/process change notification. If you have any questions or need further assistance, please contact your regional Power Integrations sales office.

DESCRIPTION OF CHANGE

The assembly process of the affected products is being modified to add copper wire bonding as an alternative process. Currently, the affected products are assembled with gold wire bonds only.

REASON FOR CHANGE

Improvement in the manufacturing capacity and flexibility. The copper wire bonding process has been widely adopted by the IC packaging industry in recent years. This change will provide Power Integrations access to additional bonding equipment at its contract manufacturing assembly facilities.

PRODUCTS AFFECTED

Products affected by the change are listed in Appendix 1.

QUALIFICATION STATUS

Refer to Appendix 2 for the qualification data.

EFFECT ON CUSTOMER

No adverse impact is expected in manufacturers' applications. The product will be guaranteed to meet the datasheet limits.

EFFECTIVE DATE

May 15, 2017. This date is subject to change.

SAMPLE AVAILABILITY

Samples will be available four weeks from the date of request.

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Appendix 1

Product Family	Part Numbers	Package
CAPZero™	CAP002DG, CAP003DG, CAP004DG, CAP005DG, CAP006DG, CAP007DG, CAP008DG, CAP009DG, CAP012DG, CAP013DG, CAP014DG, CAP015DG, CAP016DG, CAP017DG, CAP017DG0166, CAP018DG, CAP019DG, CAP200DG, SC1143DG	SO-8
ChiPhy™	CHY100D, CHY101D	SO-8
DPASwitch™	DPA424GN	SMD-8
FCC	C2471LX2, C2472PX2	SOT-23-6
LinkSwitch™	LNK500PN, LNK501PN, LNK520PN	PDIP-8B
LinkSwitch™-4	LNK4003D, LNK4013D, LNK4014D, LNK4023D, LNK4024D, C2174PX8-C	SO-8
LinkSwitch™-TN	SC1117DG	SO-8C
SENZero™	SEN012DG, SEN013DG	SO-8

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Appendix 2
Reliability Engineering
Qualification Report

Qualification Project: Various
Date of Report: 09-Feb-2017

Project Title: Copper Wire Qualification Data for Multiple Packages

Summary:

Full suites of environmental reliability stress tests were conducted on PDIP, SO-8, SO-8C, SMD-8 and SOT-23-6 package products for qualification of copper wire with passing results in all cases. These packages have been in production with copper wire for multiple years with proven records of reliability. The data assembled here is from multiple individual qualification efforts and in most cases significantly more data is available. All packages and product families were subjected to full temperature characterization and yield analysis prior to production release with copper wire.

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Typical Operating Conditions, Vd(peak) = 80% BVDSS where applicable	EIA/JESD22-A108D
HTRB (High Temp Reverse Bias Test)	Ta=150°C; off-state bias, Vd(peak) = 80% BVDSS where applicable	EIA/JESD22-A108D
THBT (Temperature Humidity Bias Test)	85°C, 85% RH; off-state bias, Vd = 30V where applicable	EIA/JESD22-A101C
TMCL (Temperature Cycle, Air to Air)	PDIP/SMD/SO-8/SOT-23-6: -65°C to +150°C,	EIA/JESD22-A104D
HTSL (High Temperature Storage Life)	Ta=175°C, unbiased	EIA/JESD22-A103D
MSL1 Preconditioning	24-hr 150°C Bake + 168-hr 85°C, 85% RH Moisture Soak + 3 Passes 260C Solder Reflow	EIA/JESD22-A113D

DOPL (Dynamic Operating Life)

Product	Package	Lot	Test Duration	Failures/Sample Size
LNK616PG	PDIP-8C	96945E	1000 hours	0/47
TNY278PG	PDIP-8C	96616D	1000 hours	0/47
CHY103D	SO-8	4V947A	MSL1 + 1000 hours	0/47
CHY103D	SO-8	4V947B	MSL1 + 1000 hours	0/47
CHY103D	SO-8	4V999A	MSL1 + 1000 hours	0/47
CHY103D	SO-8	4V999B	MSL1 + 1000 hours	0/47
LYT1604D	SO-8	5C198E	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480B	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480I	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E188H	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E357B	MSL1 + 1000 hours	0/45
TNY288DG	SO-8C	5C085H	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085I	MSL1 + 1000 hours	0/47
LNK4002S	SOT-23-6	SEE356	MSL1 + 1000 hours	0/77
LNK4003S	SOT-23-6	SEE946	MSL1 + 1000 hours	0/77
LNK4022S	SOT-23-6	PEE040	MSL1 + 1000 hours	0/77

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HTRB (High Temperature Reverse Bias)

Product	Package	Assy Lot	Test Duration	Failures/Sample Size
CAP012DG	SO-8	4W538A	MSL1 + 1000 hours	0/47
CAP012DG	SO-8	4Y669F	MSL1 + 1000 hours	0/47
CAP012DG	SO-8	4Y669G	MSL1 + 1000 hours	0/47
LYT1604D	SO-8	5C198E	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U408X	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U408Y	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U885X	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U885Y	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480B	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480I	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E188H	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E357B	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085H	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085I	MSL1 + 1000 hours	0/47
TNY278PG	PDIP-8C	96616D	1000 hours	0/47
LNK616PG	PDIP-8C	96945E	1000 hours	0/47

THBT (Temperature Humidity Bias)

Product	Package	Assy Lot	Test Duration	Failures/Sample Size
TNY268PN	PDIP-8B	0L024C	1000 hours	0/47
LNK364PG	PDIP-8C	0G346B	1000 hours	0/47
LNK564PG	PDIP-8C	0E188D	1000 hours	0/47
LNK564PG	PDIP-8C	0E340J	1000 hours	0/47
TNY280PN	PDIP-8C	0N520E	1000 hours	0/47
LNK306GN	SMD-8C	3R981K	MSL4 + 1000 hours	0/47
LNK501GN	SMD-8C	3G956G	MSL4 + 1000 hours	0/47
LNK574GG	SMD-8C	89956B	MSL4 + 1000 hours	0/47
LNK576GG	SMD-8C	94011D	MSL4 + 1000 hours	0/47
LNK576GG	SMD-8C	94292D	MSL4 + 1000 hours	0/47
LNK616GG	SMD-8C	98790E	MSL4 + 1000 hours	0/47
TNY280GG	SMD-8C	0A540A	MSL4 + 1000 hours	0/47
TNY280GG	SMD-8C	0A540C	MSL4 + 1000 hours	0/47
TOP258GN	SMD-8C	3P708C	MSL4 + 1000 hours	0/47
CAP012DG	SO-8	4Y669F	MSL1 + 1000 hours	0/47
CAP012DG	SO-8	4Y669G	MSL1 + 1000 hours	0/47
LYT1604D	SO-8	5C198E	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U885X	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U885Y	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480B	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480I	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E188H	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E357B	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085H	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085I	MSL1 + 1000 hours	0/47
TNY278PG	PDIP-8C	96616D	1000 hours	0/47
LNK616PG	PDIP-8C	96945E	1000 hours	0/47

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TMCL (Temperature Cycling)

Product	Package	Assy Lot	Test Duration	Failures/Sample Size
TN253PN	PDIP-8	0J013A	1000 Cycles	0/47
TN254PN	PDIP-8	0J011A	1000 Cycles	0/47
TN255PN	PDIP-8	0G322C	1000 Cycles	0/47
LNK501PN	PDIP-8B	3G956E	1000 Cycles	0/47
LNK501PN	PDIP-8B	3H961C	1000 Cycles	0/47
LNK501PN	PDIP-8B	3J627D	1000 Cycles	0/47
LNK306PG	PDIP-8C	3Q509H	1000 Cycles	0/47
LNK306PN	PDIP-8C	3R981C	1000 Cycles	0/47
LNK306PN	PDIP-8C	3R981E	1000 Cycles	0/47
LNK306PN	PDIP-8C	3R981G	1000 Cycles	0/47
LNK306PN	PDIP-8C	3S042C	1000 Cycles	0/47
LNK306PN	PDIP-8C	3S042E	1000 Cycles	0/47
LNK306PN	PDIP-8C	3S042G	1000 Cycles	0/47
LNK364PG	PDIP-8C	0G346B	1000 Cycles	0/47
LNK564PG	PDIP-8C	0E188D	1000 Cycles	0/47
LNK564PG	PDIP-8C	0E340J	1000 Cycles	0/47
LNK616PG	PDIP-8C	96945E	1000 cycles	0/47
TNY278PG	PDIP-8C	96290G	1000 cycles	0/47
TNY278PG	PDIP-8C	96616D	1000 cycles	0/47
TNY255GN	SMD-8	3Y171H	MSL4 + 1000 Cycles	0/47
TNY255GN	SMD-8	3Y171I	MSL4 + 1000 Cycles	0/47
TOP246GN	SMD-8B	3S007B	MSL4 + 1000 Cycles	0/47
LNK574GG	SMD-8C	89956B	MSL4 + 1000 Cycles	0/47
LNK576GG	SMD-8C	94011D	MSL4 + 1000 Cycles	0/47
LNK576GG	SMD-8C	94292D	MSL4 + 1000 Cycles	0/47
LNK616GG	SMD-8C	98790E	MSL4 + 1000 Cycles	0/47
TNY280GG	SMD-8C	0A540A	MSL4 + 1000 Cycles	0/47
TNY280GG	SMD-8C	0A540C	MSL4 + 1000 Cycles	0/47
CAP012DG	SO-8	4W538A	MSL1 + 1000 cycles	0/47
CAP012DG	SO-8	4Y669F	MSL1 + 1000 cycles	0/47
CAP012DG	SO-8	4Y669G	MSL1 + 1000 cycles	0/47
CHY103D	SO-8	4V947A	MSL1 + 1000 cycles	0/47
CHY103D	SO-8	4V947B	MSL1 + 1000 cycles	0/47
CHY103D	SO-8	4V999A	MSL1 + 1000 cycles	0/47
CHY103D	SO-8	4V999B	MSL1 + 1000 cycles	0/47
LYT1604D	SO-8	4Y901B	MSL1 + 500 cycles	0/47
LYT1604D	SO-8	5C198E	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U408X	MSL1 + 1000 cycles	0/47
SEN013DG	SO-8	4U408Y	MSL1 + 1000 cycles	0/47
SEN013DG	SO-8	4U885X	MSL1 + 1000 cycles	0/47
SEN013DG	SO-8	4U885Y	MSL1 + 1000 cycles	0/47
LNK306DG	SO-8C	0E480B	MSL1 + 1000 cycles	0/47
LNK306DG	SO-8C	0E480I	MSL1 + 1000 cycles	0/47
LNK306DG	SO-8C	5B362E	MSL1 + 1000 cycles	0/47
LNK306DG	SO-8C	5B362F	MSL1 + 1000 cycles	0/47

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LNK564DG	SO-8C	0E188H	MSL1 + 1000 cycles	0/47
LNK616DG	SO-8C	0E480F	MSL1 + 1000 cycles	0/47
LNK616DG	SO-8C	0E734J	MSL1 + 1000 cycles	0/47
TNY288DG	SO-8C	5C085F	MSL1 + 1000 cycles	0/47
TNY288DG	SO-8C	5C085H	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085I	MSL1 + 1000 hours	0/47
C2173PX2-B	SOT-23-6	HHH827.1C	MSL1 + 1000 cycles	0/47
C2173PX2-B	SOT-23-6	HHH827.1D	MSL1 + 1000 cycles	0/46
C2173PX2-B	SOT-23-6	HHS060.1A	MSL1 + 1000 cycles	0/47
C2173PX2-B	SOT-23-6	HHS060.1B	MSL1 + 1000 cycles	0/47
C2173PX2-B	SOT-23-6	HHS062.1A	MSL1 + 1000 cycles	0/47
C2173PX2-B	SOT-23-6	HHS062.1B	MSL1 + 1000 cycles	0/45
LNK4003S	SOT-23-6	HHH827.1C	MSL1 + 1000 cycles	0/47
LNK4003S	SOT-23-6	HHS060.1A	MSL1 + 1000 cycles	0/47
LNK4003S	SOT-23-6	HHS062.1A	MSL1 + 1000 cycles	0/47
LNK4003S	SOT-23-6	HHS062.1B	MSL1 + 1000 cycles	0/47
LNK4003S	SOT-23-6	HHH827.1D	MSL1 + 1000 cycles	0/47

HTSL (High Temperature Storage Life)

Product	Package	Assy Lot	Test Duration	Failures/Sample Size
LNK364PG	PDIP-8B	0G346B	1000 hours	0/47
LNK564PG	PDIP-8B	0E188D	1000 hours	0/47
LNK564PG	PDIP-8B	0E340J	1000 hours	0/47
TNY268PN	PDIP-8B	0L024C	1000 hours	0/47
LNK501GN	SMD-8B	3G956G	MSL4 + 1000 hours	0/47
LNK306GN	SMD-8C	3R981K	MSL4 + 1000 hours	0/47
LNK574GG	SMD-8C	89956B	MSL4 + 1000 hours	0/47
LNK576GG	SMD-8C	94011D	MSL4 + 1000 hours	0/47
LNK576GG	SMD-8C	94292D	MSL4 + 1000 hours	0/47
LNK616GG	SMD-8C	98790E	MSL4 + 1000 hours	0/47
TNY280GG	SMD-8C	0A540A	MSL4 + 1000 hours	0/47
TNY280GG	SMD-8C	0A540C	MSL4 + 1000 hours	0/47
TNY280PN	SMD-8C	0N520E	1000 hours	0/47
TOP258GN	SMD-8C	3P708C	MSL4 + 1000 hours	0/47
CAP012DG	SO-8	4Y669F	MSL1 + 1000 hours	0/47
CAP012DG	SO-8	4Y669G	MSL1 + 1000 hours	0/47
CHY103D	SO-8	4V999A	MSL1 + 1000 hours	0/47
CHY103D	SO-8	4V999B	MSL1 + 1000 hours	0/47
LYT1604D	SO-8	5C198E	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U885X	MSL1 + 1000 hours	0/47
SEN013DG	SO-8	4U885Y	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480B	MSL1 + 1000 hours	0/47
LNK306DG	SO-8C	0E480I	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E188H	MSL1 + 1000 hours	0/47
LNK564DG	SO-8C	0E357B	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085H	MSL1 + 1000 hours	0/47
TNY288DG	SO-8C	5C085I	MSL1 + 1000 hours	0/47
LNK4002S	SOT-23-6	SEE356	MSL1 + 1000 hours	0/47

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LNK4003S	SOT-23-6	SEE946	MSL1 + 1000 hours	0/47
LNK4022S	SOT-23-6	PEE040	MSL1 + 1000 hours	0/47

Conclusion: Based on extensive reliability testing, PDIP, SO-8, SO-8C, SMD-8 and SOT-23-6 package products were qualified and released to production in years past and have a proven record of reliability

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CUSTOMER ACKNOWLEDGEMENT

Power Integrations requests you acknowledge the receipt of the above-mentioned PCN. If no acknowledgment is received within 30 days of this notification, Power Integrations will assume the change is acceptable. Lack of any additional response within 90 days of this notification further constitutes acceptance of the change.

Power Integrations reserves the right to ship either version manufactured after the effective date until the inventory of the earlier version has been depleted.

If you have any questions or need further assistance, please contact your regional Power Integrations sales office. Otherwise, please check the box below, acknowledging the receipt of the PCN.

The indicated Product/Process Change Notification was received by the undersigned authority.

Name/Title: _____

Signature: _____ Date: _____

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CUSTOMER COMMENTS

Please email this signed form to pcn@power.com specifying the PCN# in the subject.

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