

Control No. PCN-18331

September 13, 2018

PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE: Design Manufacturing Other

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

DESCRIPTION OF CHANGE

Hefei Tongfu Microelectronics Company Limited (Hefei TFME), located in Anhui, China, will be added as a qualified site for assembly and testing of Power Integrations products in the SO-8 and SO-8C package products listed below.

There is neither change in the bill of materials nor any change to the data sheet.

REASON FOR CHANGE

Improve manufacturing flexibility and diversification of manufacturing sites.

PRODUCTS AFFECTED

Product Family	Part Number	Package
CAPZero	CAP002DG, CAP003DG, CAP004DG, CAP004DG0158, CAP005DG, CAP006DG, CAP007DG, CAP008DG, CAP009DG, CAP012DG, CAP013DG, CAP014DG, CAP014DG0158, CAP015DG, CAP016DG, CAP017DG, CAP017DGAU, CAP017DG0166, CAP018DG, CAP019DG, CAP200DG, SC1143DG	SO-8
ChiPhy	CHY100D, CHY101D, CHY103D, SC0160D, SC0163D	SO-8
LinkSwitch-II	DAP021B1, LNK603DG, LNK603DGAU, LNK603DG0004, LNK604DG, LNK605DG, LNK606DG, LNK606DGAU, LNK606DG0004, LNK606DG0166, LNK613DG, LNK614DG, LNK614DGAU, LNK615DG, LNK616DG, LNK616DGAU, LNK623DG, LNK623DGAU, LNK623DG01666, LNK624DG, LNK624DGAU, LNK625DG, LNK625DGAU, LNK625DG0055, LNK625DG0105, LNK625DG0176, LNK626DG, LNK626DGAU, LNK626DG0004, LNK626DG0139, LNK632DG, LNK632DGAU, LNK632DG0004, LNK632DG0054, LNK632DG0104, LNK632DG0166, SC1097D1, SC1097D1AU, SC1097DG, SC1097DGAU, SC1098DG, SC1099DG, SC1103DG, SC1103DGAU, SC1104DG, SC1104DGAU, SC1104D1, SC1106DG, SC1106DGAU, SC1106DG0004, SC1107D1, SC1125DG, SC1125DGAU, SC1126DG, SC1126DGAU, SC1132DG, SC1135DG, SC1137DG, SC1139DG, SC1139DGAU, SC1139DG0105, SC1139DG0166, SC1139D0	SO-8C
LinkSwitch-3	LNK625D1, LNK6404D, LNK6405D, LNK6406D, LNK6407D, LNK6407D0004, LNK6415D, LNK6416D, LNK6417D, LNK6424D, LNK6425D, LNK6426D, LNK6427D, LNK6436D, LNK64046D, SC1142D0, SC1142D00193, SC1142D00073, SC1142D1, SC1142D10077, SC1142D2, SC1142D3, SC1144D0, SC1144D1, SC1144D2, SC1144D3, SC1161D0, SC1161D1, SC1161D2, SC1161DZ, SC1170D4	SO-8C

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LinkSwitch-LP	LNK562DG, LNK562DGAU, LNK562DG0202, LNK562DN, LNK562DNAU, LNK563DG, LNK563DN, LNK564DG, LNK564DGAU, LNK564DG0190, LNK564DN, LNK564DNAU, LNK564DN0167, SC1124DG, SC1146DG	SO-8C
LinkSwitch-TN	LNK302DG, LNK302DGAU, LNK302DG0004, LNK302DG0105, LNK302DG0166, LNK302DN, LNK302DNAU, LNK302DN0005, LNK302DN0053, LNK302DN0190, LNK304DG, LNK304DGAU, LNK304DG0004, LNK304DG0105, LNK304DG0166, LNK304DN, LNK304DNAU, LNK304DN0054, LNK304DN0152, LNK304DN0166, LNK305DG, LNK305DGAU, LNK305DG0004, LNK305DG0105, LNK305DN, LNK305DNAU, LNK305DN0004, LNK305DN0166, LNK306DG, LNK306DGAU, LNK306DG0105, LNK306DN, LNK306DNAU, LNK306DN0152, SC1117DG, SC1145DG	SO-8C
LinkSwitch-TN2	LNK3202D, LNK3204D, LNK3205D, LNK3206D	SO-8C
LinkSwitch-XT	LNK362DG, LNK362DGAU, LNK362DN, LNK362DNAU, LNK362DN0004, LNK363DG, LNK363DGAU, LNK363DG0166, LNK363DN, LNK363DNAU, LNK364DG, LNK364DN, LNK364DNAU, LNK364DN0152, SC1108DG	SO-8C
LinkSwitch-XT2	LNK3604D	SO-8C
LinkSwitch-Zero	LNK574DG, LNK576DG, LNK584DG, LNK585DG, LNK586DG, LNK586DGAU, LNK586DG0166, SPS1013P	SO-8C
LYTSwitch-0	LYT0002D, LYT0002D0105, LYT0004D, LYT0004D0105, LYT0005D, LYT0005D0105, LYT0006D, LYT0006D0105, SC1195DG, SC1196DG	SO-8C
LYTSwitch-1	LYT1402D, LYT1403D, LYT1404D, LYT1602D, LYT1603D, LYT1604D, LYT1703D0204, LYT1704D0204	SO-8
LYTSwitch-7	LYT7503D, LYT7504D	SO-8
SENZero	SEN012DG, SEN013DG	SO-8
TinySwitch-LT	TNY174DG, TNY175DG, TNY176DG, TNY176DG0166	SO-8C
TinySwitch-4	DAP021AG, SC1130DG, SC1152DG, TNY177DG, TNY178DG, TNY284DG, TNY285DG, TNY285DG0152, TNY286DG, TNY286DG0152, TNY287DG, TNY287DG0105, TNY288DG, TNY288DG0152, TNY288DG0202	SO-8C

QUALIFICATION STATUS

Please refer to Appendix 1 for the qualification data.

EFFECT ON CUSTOMER

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

EFFECTIVE DATE

December 13, 2018

SAMPLE AVAILABILITY

Samples will be available 8 weeks from the date of request. Please send requests for samples within two weeks after receipt of this notification to the local Power Integrations sales office. For manufacturers that request samples, an accommodation will be made in order to allow time of customer's qualification in a case-specific manner.

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Appendix 1
Reliability Engineering
Qualification Report

Qualification Project: E182203

Project Title: TFME SO-8 and SO-8C Package Qualifications
Qual Summary:

Reliability testing was performed on three product types covering the range of wafer fabrication processes used in the SO-8 and SO-8C packages to qualify assembly of those packages at TFME (Hefei). All required reliability tests were completed with passing results. Yield analysis and assembly-level testing were completed with acceptable results. Based on these results, TFME is approved for SO-8 and SO-8C package assembly of all Power Integrations products using those packages.

Qualification Vehicles: LNK306DG, LYT1604DG, TNY288DG

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	T _j =125°C, V _{d(peak)} =80% Rated BVDSS	EIA/JESD22-A108
HTRB (High Temperature Reverse Bias Test)	T _a =150°C; V _d =80% Rated BVDSS	EIA/JESD22-A108
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, V _d =30V, V _{bp} = V _{shunt}	EIA/JESD22-A101
TMCL (Temperature Cycle, Air to Air)	-65°C to +150°C, air to air	EIA/JESD22-A104
HTSL (High Temperature Storage Life)	T _a =175°C, unbiased	EIA/JESD22-A103
HALT (Humidity Accelerated Life Test)	DOPL T _j =115°C, 85% RH, V _{d(peak)} = 80% Rated BVDSS	Internal Standard
MSL1 Preconditioning	24-hr 150C bake → 168-hr 85°C, 85% RH soak → 3 passes 260C solder reflow	IPC/JEDEC J-STD-020E

DOPL (Dynamic Operating Life)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LNK306DG	6W539F	SO-8C / TFME	MSL1 + 1000 hours	0/43
LYT1604D	5G929B	SO-8 / TFME	MSL1 + 1000 hours	0/47
TNY288DG	7B740G	SO-8C / TFME	MSL1 + 1000 hours	0/47

HTRB (High Temperature Reverse Bias)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LNK306DG	6W539F	SO-8C / TFME	MSL1 + 1000 hours	0/47
LYT1604D	5G929B	SO-8 / TFME	MSL1 + 1000 hours	0/47
TNY288DG	7B740G	SO-8C / TFME	MSL1 + 1000 hours	0/47

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THBT (Temperature Humidity Bias)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LNK306DG	6W539F	SO-8C / TFME	MSL1 + 1000 hours	0/47
LYT1604D	5G929B	SO-8 / TFME	MSL1 + 1000 hours	0/47
TNY288DG	7B740G	SO-8C / TFME	MSL1 + 1000 hours	0/47

TMCL (Temperature Cycling)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LNK306DG	6W539F	SO-8C / TFME	MSL1 + 1000 cycles	0/47
LYT1604D	5G929B	SO-8 / TFME	MSL1 + 1000 cycles	0/47
TNY288DG	7B740G	SO-8C / TFME	MSL1 + 1000 cycles	0/47

HTSL (High Temperature Storage Life)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LNK306DG	6W539F	SO-8C / TFME	MSL1 + 1000 hours	0/47
LYT1604D	5G929B	SO-8 / TFME	MSL1 + 1000 hours	0/47
TNY288DG	7B740G	SO-8C / TFME	MSL1 + 1000 hours	0/47

HALT (Humidity Accelerated Life Test)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LNK306DG	6W539F	SO-8C / TFME	MSL1 + 1000 hours	0/20
LYT1604D	5G929B	SO-8 / TFME	MSL1 + 500 hours	0/19
TNY288DG	7B740G	SO-8C / TFME	MSL1 + 1000 hours	0/20

Conclusion: Based on acceptable results, TFME is approved for SO-8 and SO-8C package assembly of all Power Integrations products using those packages.

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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: _____

Email Address/Phone#: _____

Company/Location: _____

CUSTOMER COMMENTS

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

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