



Cypress Semiconductor Package Qualification Report

**QTP# 054502 VERSION*B
July 2019**

**28/32-Lead SOJ, 20/24/28-Lead SOIC
28-Lead SNC Packages (300mils)
NiPdAu, MSL3, 260C Reflow
CML-R**

**FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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PACKAGE QUALIFICATION HISTORY

QUAL REPORT	DESCRIPTION OF QUALIFICATION PURPOSE	DATE COMP.
054502	28/32-Lead SOJ, 20/24/28 Lead SOIC and 28-Lead SNC packages with 300 mils body size using Kyocera KE-G3000DA (for non-SRAMs), KE-G6000DA (for SRAMs) Mold Compound, NiPdAu Leadframe, @ 260 Solder Reflow, MSL3, CML-R	Dec 05

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION

Package Designation:	V32
Package Outline, Type, or Name:	32-Lead Plastic Small Outline J-Bend Package (SOJ)
Mold Compound Name/Manufacturer:	Kyocera - KE G3000DA with PMC (for non-SRAMs) Kyocera - KE G6000DA (for SRAMs)
Mold Compound Flammability Rating:	N/A
Oxygen Rating Index: >28%	None
Leadframe Material:	Copper
Lead Finish, Composition / Thickness:	NiPdAu
Die Backside Preparation Method/Metallization:	Backgrinding
Die Separation Method:	100% Sawing
Die Attach Supplier:	Dexter
Die Attach Material:	QMI 509
Die Attach Method:	Epoxy
Bond Diagram Designation	10-02612
Wire Bond Method:	Thermosonic
Package Cross Section Yes/No:	No
Name/Location of Assembly (prime) facility:	Cypress Philippines (CML-R)
MSL Level	3
Reflow Profile	260C

ELECTRICAL TEST / FINISH DESCRIPTION

Test Location:	CML-R
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RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test (Temp/Bias)	Result P/F
High Temperature Storage	150°C±5°C, no bias	P
Pressure Cooker	121°C, 100%RH, 15 Psig Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Temperature Cycle	MIL-STD-883C, Method 1010, Condition C, -65 C to 150 C Precondition: JESD22 Moisture Sensitivity MSL3 192 Hrs 30°C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Acoustic Microscopy	J-STD-020	P
X-Ray	MIL-STD-883, Method 32012	P



Reliability Test Data

QTP #: 054502

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC							
CY7C188 (7C188BT)	2206290	610548061	CML-R	COMP	15	0	
CY7C188 (7C188BT)	2206290	610548062	CML-R	COMP	15	0	
CY7C188 (7C188BT)	2206290	610548063	CML-R	COMP	15	0	
STRESS: FLAMMABILITY							
CY7C188 (7C188BT)	2206290	610548061	CML-R	COMP	3	0	
STRESS: HIGH TEMPERATURE STORAGE, 150C, NO BIAS							
CY7C109 (7C109MC)	4520821	610528421	CML-R	500	45	0	
CY7C109 (7C109MC)	4520821	610528421	CML-R	1000	45	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH, 15 Psig) PRE COND 192 HR 30C/60%RH, MSL3							
CY7C188 (7C188BT)	2206290	610548061	CML-R	168	50	0	
STRESS: TC COND. C-65C TO 150C PRE COND 192 HR 30C/60%RH, MSL3							
CY7C188 (7C188BT)	2206290	610548061	CML-R	300	50	0	
CY7C188 (7C188BT)	2206290	610548062	CML-R	300	50	0	
CY7C188 (7C188BT)	2206290	610548063	CML-R	300	50	0	
STRESS: X-RAY							
CY7C188 (7C188BT)	2206290	610548061	CML-R	COMP	15	0	
CY7C188 (7C188BT)	2206290	610548062	CML-R	COMP	15	0	



Document History Page

Document Title: QTP# 054502: 28/32-Lead SOJ, 20/24/28-Lead SOIC 28-Lead SNC Packages (300mils) NiPdAu, MSL3, 260C Reflow CML-R
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Rev.	ECN No.	Orig. of Change	Description of Change
**	4142872	HSTO	Initial Spec Release Initiate report as per memo LGQ-654.
*A	4517626	HSTO	Align qualification report based on the new template in the front page
*B	6628259	HSTO DCON	Update Cypress logo Update Contact Person Update "MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION" table. Removed Distribution and posting information from Document History page.