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Cypress Semiconductor Product Qualification Report

QTP# 054909 version*C
June 2019

8 Meg MoBL SRAM Family Technology R95LD-3R, Skywater

CY62157EV18 MoBL®	8-Mbit (512K x 16) Static RAM
CY62157EV30 MoBL®	8-Mbit (512K x 16) Static RAM
CY62157E MoBL®	8-Mbit (512K x 16) Static RAM
CY62156ESL MoBL®	8-Mbit (512K x 16) Static RAM
CY62158EV30 MoBL®	8-Mbit (1024K x 8) Static RAM
CY62158E MoBL®	8-Mbit (1024K x 8) Static RAM
CY62155E MoBL®	8-Mbit Static RAM Die

FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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PRODUCT QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date Comp
054302	R95LD-3R, Skywater and New Device CY7C62xxx (4Meg) MoBL Product Family	Dec 05
054909	R95LD-3R, Skywater and New Device CY62xxx (8Meg) MoBL Product Family	Mar 06
130801	Qualify polyimide mask to qualified Industrial 8Meg MoBL SRAM, R95LD-3R Technology at Skywater	Oct 13

PRODUCT DESCRIPTION	
Purpose: Qualify CY62xxx 8 Meg Product Family in qualified R95LD-3R, Skywater	
Marketing Part #:	CY62155E, C762157E, CY62157EV18, CY62157EV30, CY62158E, CY62158EV30, CY62156ESL
Device Description:	1.8V, 3V, 5V 2Meg/4Meg MoBL SRAM
Cypress Division:	Cypress Semiconductor Corporation –Memory Product Division (MPD)

TECHNOLOGY/FAB PROCESS DESCRIPTION – R95LD-3R			
Number of Metal Layers:	Proprietary	Metal Composition:	Proprietary
Passivation Type and Materials:	Proprietary		
Generic Process Technology/Design Rule (μ -drawn):	Proprietary		
Gate Oxide Material/Thickness (MOS):	Proprietary		
Name/Location of Die Fab (prime) Facility:	Bloomington, MN		
Die Fab Line ID/Wafer Process ID:	Skywater / R95LD-3R		

PACKAGE AVAILABILITY

PACKAGE	ASSEMBLY SITE FACILITY
48-Ball VFBGA	CML-RA, ASEK-TAIWAN
48-Lead TSOP I	ASE-TAIWAN, OSET-TAIWAN
44-Lead TSOP II	JCET (JT)- CHINA, CML-RA

Note: Package Qualification details upon request

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION

Package Designation:	ZW44
Package Outline, Type, or Name:	44-Pin Thin Small Outline Packages (Type II)
Mold Compound Name/Manufacturer:	Hitachi CEL9200CYRU
Mold Compound Flammability Rating:	NA
Oxygen Rating Index:	NA
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	Ni-Pd-Au
Die Backside Preparation Method/Metallization:	Back grind
Die Separation Method:	100% Saw Through
Die Attach Supplier:	Dexter
Die Attach Material:	QMI 509
Die Attach Method:	Epoxy
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au, 1.0mil (25um)
Package Cross Section Yes/No:	N/A
Name/Location of Assembly (prime) facility:	Cypress Philippines (CML-R)
MSL Level	3
Reflow Profile	260C

ELECTRICAL TEST / FINISH DESCRIPTION

Test Location:	CHIPMOS-GO, CML-R, CML-RA, KYEC-TAIWAN
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Note: Please contact a Cypress Representative for other package availability.

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate	Dynamic Operating Condition, Vcc Max (Core) = 1.85V, 125°C JESD22-A108	P
High Temperature Operating Life Latent Failure Rate	Dynamic Operating Condition, Vcc Max (Core) = 1.85V, 150°C, 125°C JESD22-A108	P
Long Life Verification	Dynamic Operating Condition, Vcc Max (Core) = 1.85V, 150°C JESD22-A108	P
High Temperature Steady State Life	Static Operating Condition, Vcc Max = 1.75V, 125°C JESD22-A108	P
Low Temperature Operating Life	Dynamic Operating Condition, Vcc = 2.0V, -30°C JESD22-A108	P
High Accelerated Saturation Test (HAST)	JESD22-A110: 130°C, 3.63V/5.5V, 85%RH Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+ Reflow, 260°C+0, -5°C	P
Temperature Cycle	MIL-STD-883, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+ Reflow, 260°C+0, -5°C	P
Pressure Cooker	JESD22-A102: 121°C, 100%RH, 15 Psig Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+ Reflow, 260°C+0, -5°C	P
High Temperature Storage	JESD22-A103: 150°C, no bias	P
Electrostatic Discharge Human Body Model (ESD-HBM)	2,200V MIL-STD-883, Method 3015.7	P
Electrostatic Discharge Human Body Model (ESD-HBM)	2,200V JEDEC EIA/JESD22-A114	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V JESD22-C101	P
Electrostatic Discharge Machine Model (ESD-MM)	200V JESD22-A115	P
Current Density	Meets the Technology Device Level Reliability Specifications	P
Age Bond Strength	200°C, 4HRS MIL-STD-883, Method 883-2011	P
Acoustic Microscopy	J-STD-020 Precondition: JESD22 Moisture Sensitivity MSL 3 192 Hrs, 30°C/60%RH+ Reflow, 260°C+0, -5°C	P
Dynamic Latch up	JESD78	P
Static Latch up	125C, ± 200mA/± 300mA / 85C, ± 140mA JESD78	P

RELIABILITY FAILURE RATE SUMMARY

Stress/Test	Device Tested/ Device Hours	# Fails	Activation Energy	Thermal AF ³	Failure Rate
High Temperature Operating Life Early Failure Rate	3,890 Devices	1	N/A	N/A	257 PPM
High Temperature Operating Life ^{1,2} Long Term Failure Rate	549,000 DHRs	0	0.7	170	11 FIT

¹ Assuming an ambient temperature of 55°C and a junction temperature rise of 15°C.

² Chi-squared 60% estimations used to calculate the failure rate.

³ Thermal Acceleration Factor is calculated from the Arrhenius equation

$$AF = \exp \left[\frac{E_A}{k} \left[\frac{1}{T_2} - \frac{1}{T_1} \right] \right]$$

where:

E_A = The Activation Energy of the defect mechanism.

K = Boltzmann's constant = 8.62×10^{-5} eV/Kelvin.

T_1 is the junction temperature of the device under stress and T_2 is the junction temperature of the device at use conditions.

Reliability Test Data

QTP #: 054302

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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STRESS: ACOUSTIC-MSL3

CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	COMP	15	0	
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	COMP	15	0	
CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	COMP	15	0	

STRESS: AGE BOND STRENGTH

CY62147EV30LL (7C62147F)	4514985	610527600	CML-R	COMP	10	0	
CY62136EV30LL (7C62136F)	4516742	610537839	CML-R	COMP	10	0	
CY62147EV30LL (7C62147F)	4516646	610527599	CML-R	COMP	10	0	

STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE, 125C, 1.85V, Vcc Max (Core)

CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	96	679	0	
CY62147EV30LL (7C62147F)	4527847	610558767	CML-R	96	4031	0	
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	96	1711	0	
CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	96	917	1	Single Bit (Non-visual)

STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, 150C, 1.85V, Vcc Max (Core)

CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	80	400	0	
CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	500	400	1	Blocked contact at Poly
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	80	400	0	
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	500	400	0	
CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	80	400	0	
CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	500	400	0	

STRESS: LONG LIFE VERIFICATION, 150C, 1.85V, Vcc Max (Core)

CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	1000	393	0	
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STRESS: HIGH TEMPERATURE STEADY STATE LIFE, 125C, 1.75V, Vcc Max

CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	168	76	0	
CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	336	75	0	

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STRESS: LOW TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, -30C, 2.0V, Vcc

CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	500	45	0
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STRESS: HIGH TEMPERATURE STORAGE

CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	500	45	0
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CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	1000	45	0
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STRESS: ESD-CHARGE DEVICE MODEL, 500V

CY62147EV30LL (7C62147F)	4527847	610548767	CML-R	COMP	9	0
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CY62148EV30LL (7C62148F)	4527847	610548491	TAIWN-G	COMP	9	0
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CY62148EV30LL (7C62148F)	4527847	610550592	CML-RA	COMP	9	0
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CY62147EV30LL (7C62147F)	4516646	610527599	CML-R	COMP	9	0
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CY62147EV30LL (7C62147F)	4514985	610527600	CML-R	COMP	9	0
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CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	COMP	9	0
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STRESS: ESD-HUMAN BODY CIRCUIT PER JEDEC EIA/JESD22-A114, 2,200V

CY62147EV30LL (7C62147F)	4527847	610548767	CML-R	COMP	9	0
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CY62148EV30LL (7C62148F)	4527847	610548491	TAIWN-G	COMP	9	0
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CY62148EV30LL (7C62148F)	4527847	610551587	CML-R	COMP	9	0
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CY62148EV30LL (7C62148F)	4527847	610550592	CML-RA	COMP	9	0
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CY62147EV30LL (7C62147F)	4516646	610527599	CML-R	COMP	9	0
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CY62147EV30LL (7C62147F)	4514985	610527600	CML-R	COMP	9	0
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CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	COMP	9	0
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STRESS: ESD-HUMAN BODY CIRCUIT PER MIL STD 883, METHOD 3015, 2,200V

CY62147EV30LL (7C62147F)	4527847	610548767	CML-R	COMP	3	0
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CY62148EV30LL (7C62148F)	4527847	610548491	TAIWN-G	COMP	3	0
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CY62148EV30LL (7C62148F)	4527847	610551587	CML-R	COMP	3	0
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CY62148EV30LL (7C62148F)	4527847	610550592	CML-RA	COMP	3	0
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CY62147EV30LL (7C62147F)	4516646	610527599	CML-R	COMP	3	0
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CY62147EV30LL (7C62147F)	4514985	610527600	CML-R	COMP	3	0
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CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	COMP	3	0
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STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 3.63V, PRE COND 192 HR 30C/60%RH, MSL3

CY62137EV30LL (7C62137F)	4516742	610539321	CML-R	128	45	0
CY62137EV30LL (7C62137F)	4516742	610539321	CML-R	256	45	0
CY62137EV30LL (7C62137F)	4516742	610539321	CML-R	128	54	0

STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 5.5V, PRE COND 192 HR 30C/60%RH, MSL3

CY62147EV30LL (7C62147F)	4527847	610558767	CML-R	128	45	0
CY62147EV30LL (7C62147F)	4527847	610558767	CML-R	264	45	0

STRESS: DYNAMIC LATCH-UP TESTING, 9.0V

CY62147EV30LL (7C62147F)	4438656	610461414	TAIWN-G	COMP	3	0
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STRESS: STATIC LATCH-UP TESTING, 125C, 6.5V, +/-300mA

CY62147EV30LL (7C62147F)	4514985	610527600	CML-R	COMP	3	0
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STRESS: STATIC LATCH-UP TESTING, 125C, 10V, +/-300mA

CY62147EV30LL (7C62147F)	4527847	610548767	CML-R	COMP	3	0
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STRESS: STATIC LATCH-UP TESTING, 125C, 9.5V, +/-300mA

CY62147EV30LL (7C62147F)	4516646	610527599	CML-R	COMP	3	0
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	COMP	3	0

STRESS: STATIC LATCH-UP TESTING, 125C, 8.5V, +/-200mA

CY62148EV30LL (7C62148F)	4527847	610548491	TAIWN-G	COMP	3	0
CY62148EV30LL (7C62148F)	4527847	610551587	CML-R	COMP	3	0
CY62148EV30LL (7C62148F)	4527847	610550592	CML-RA	COMP	3	0

STRESS: PRESSURE COOKER TEST, 121C, 100%RH, 15 Psig, PRE COND 192 HR 30C/60%RH, MSL3

CY62147EV30LL (7C62147F)	4516742	610537714	CML-R	168	50	0
CY62147EV30LL (7C62147F)	4516742	610537714	CML-R	288	50	0
CY62147EV30LL (7C62147F)	4516646	610537739	CML-R	168	50	0
CY62147EV30LL (7C62147F)	4516646	610537739	CML-R	288	50	0
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	168	50	0

Reliability Test Data

QTP #: 054302

<i>Device</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3							
CY62147EV30LL (7C62147F)	4438656	610461414	CML-RA	300	42	0	
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	300	49	0	
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	500	48	0	
CY62147EV30LL (7C62147F)	4519690	610533058	CML-RA	1000	46	0	
CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	300	45	0	
CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	500	44	0	
CY62147EV30LL (7C62147F)	4447261	610506302N	CML-R	1000	44	0	

Reliability Test Data

QTP #: 054909

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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STRESS: ACOUSTIC-MSL3

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	COMP	15	0	
CY62157EV30LL (7C62157F)	4540094	610605736	CML-R	COMP	15	0	
CY62157EV30LL (7C62157F)	4540094	610606790	CML-R	COMP	15	0	

STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE, 125C, 1.85V, Vcc Max (Core)

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	96	606	1	Single Bit (Non-Visual)
CY62157EV30LL (7C62157F)	4540094	610605736	CML-R	96	683	0	
CY62157EV30LL (7C62157F)	4540094	610606789	CML-R	96	419	0	
CY62157EV30LL (7C62157F)	4540094	610606790	CML-R	96	1584	0	
CY62157EV30LL (7C62157F)	4540094	610607045	CML-R	96	598	0	

STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, 150C, 1.85V, Vcc Max (Core)

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	80	499	0	
CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	500	498	0	
CY62157EV30LL (7C62157F)	4540094	610605736	CML-R	80	150	0	
CY62157EV30LL (7C62157F)	4540094	610605736	CML-R	500	150	0	
CY62157EV30LL (7C62157F)	4540094	610606790	CML-R	80	299	0	
CY62157EV30LL (7C62157F)	4540094	610606790	CML-R	500	298	0	

STRESS: ESD-CHARGE DEVICE MODEL, 500V

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	COMP	9	0	
CY62158EV30LL (7C62158F)	4548694	610613013	CML-R	COMP	9	0	
CY62157EV30LL (7C62157F)	4500094	610607844	TAIWAN-G	COMP	9	0	
CY62157EV30LL (7C62157F)	4500094	610607846	TAIWAN-G	COMP	9	0	

Reliability Test Data

QTP #: 054909

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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STRESS: ESD-HUMAN BODY CIRCUIT PER JEDEC EIA/JESD22-A114, 2,200V

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	COMP	9	0	
CY62158EV30LL (7C62158F)	4548694	610613013	CML-R	COMP	9	0	
CY62157EV30LL (7C62157F)	4500094	610607844	TAIWAN-G	COMP	9	0	
CY62157EV30LL (7C62157F)	4500094	610607846	TAIWAN-G	COMP	9	0	

STRESS: ESD-HUMAN BODY CIRCUIT PER MIL STD 883, METHOD 3015, 2,200V

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	COMP	3	0	
CY62158EV30LL (7C62158F)	4548694	610613013	CML-R	COMP	3	0	
CY62157EV30LL (7C62157F)	4500094	610607844	TAIWAN-G	COMP	3	0	
CY62157EV30LL (7C62157F)	4500094	610607846	TAIWAN-G	COMP	3	0	

STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 3.63V, PRE COND 192 HR 30C/60%RH, MSL3

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	128	45	0	
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STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 5.5V, PRE COND 192 HR 30C/60%RH, MSL3

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	128	45	0	
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STRESS: STATIC LATCH-UP TESTING, 125C, 6.5V, +/-200mA

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	COMP	3	0	
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STRESS: STATIC LATCH-UP TESTING, 125C, 8.5V, +/-200mA

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	COMP	3	0	
CY62158EV30LL (7C62158F)	4548694	610613013	CML-R	COMP	3	0	
CY62157EV30LL (7C62157F)	4500094	610607844	TAIWAN-G	COMP	3	0	
CY62157EV30LL (7C62157F)	4500094	610607846	TAIWAN-G	COMP	3	0	

STRESS: PRESSURE COOKER TEST, 121C, 100%RH, 15 Psig, PRE COND 192 HR 30C/60%RH, MSL3

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	168	50	0	
CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	288	50	0	

Reliability Test Data

QTP #: 054909

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3

CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	300	50	0	
CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	500	50	0	
CY62157EV30LL (7C62157F)	4537188	610554884	CML-R	1000	50	0	
CY62157EV30LL (7C62157F)	4540094	610605736	CML-R	300	50	0	
CY62157EV30LL (7C62157F)	4540094	610606790	CML-R	300	50	0	

Reliability Test Data

ER#131060

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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STRESS: ESD-MACHINE MODEL, JESD22-A115-A, 200V

CY62158E* (7C62158FC)	4235161	NA	CML-RA	COMP	5	0	
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Reliability Test Data

QTP #: 130801

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, 125C, 1.85V, Vcc Max (Core)

CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	168	76	0	
CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	1000	76	0	

STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3

CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	500	77	0	
CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	1000	76	0	

STRESS: PRESSURE COOKER TEST, 121C, 100%RH, 15 Psig, PRE COND 192 HR 30C/60%RH, MSL3

CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	96	76	0	
CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	168	65	0	

STRESS: HI-ACCEL SATURATION TEST, 110C, 85%RH, 1.85V, PRE COND 192 HR 30C/60%RH, MSL3

CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	128	77	0	
CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	264	77	0	

STRESS: HIGH TEMPERATURE STORAGE

CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	1000	77	0	
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STRESS: INTERNAL VISUAL

CY62157EV30LL (7C62157F)	4229219	611238363	CML-RA	COMP	5	0	
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STRESS: SORT YIELD

7C62155FC	VARIOUS	NA	NA	COMP	EQUIVALENT		
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STRESS: E-TEST YIELD

7C62155FC	VARIOUS	NA	NA	COMP	EQUIVALENT		
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Reliability Test Data

QTP #: 130802

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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STRESS: ESD-HUMAN BODY CIRCUIT PER JEDEC EIA/JESD22-A114, 2,200V

CY62156ESL (7CC62156F)	4303684	611308216	TAIWAN-G	COMP	8	0	
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STRESS: ESD-CHARGE DEVICE MODEL, 500V

CY62156ESL (7CC62156F)	4303684	611308216	TAIWAN-G	COMP	9	0	
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STRESS: STATIC LATCH-UP TESTING, 85C, 8.25V, +/-140mA

CY62156ESL (7CC62156F)	4303684	611308216	TAIWAN-G	COMP	6	0	
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Document History Page

Document Title: QTP# 054909: 8 MEG MOBL SRAM FAMILY (CY62157E/EV/ CY62158E/EV/ CY62155E),
 TECHNOLOGY R95LD-3R, SKYWATER

Document Number: 001-88137

Rev.	ECN No.	Orig. of Change	Description of Change
**	4040678	NSR	Initial Release. Converted old qual report to spec format.
*A	4139194	ZIJ	Added ER#131060 ESD-MM data to the report. Removed 062303 and 064703 mask change QTPs from the product qualification history. They belong to a customer specific qualification report.
*B	4179322	JYF	Added qual data of 8M polyimide (QTP#130801); Added CY62156ESL (8M bond option) in the device coverage and its qual data (QTP# 130802);Template alignment.
*C	6589347	HSTO	Update Cypress logo Update Contact Person Update "TECHNOLOGY/FAB PROCESS DESCRIPTION" table Update "MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION" table Replaced "Fab4/CMI" with Skywater
		SLLO	Removed Distribution and Posting from the document history page.