



MICROCHIP

QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: JAON-08DHBR103

Date
March 17, 2016

**Qualification of Microchip 8 inch Fabrication site for Micrel products
manufactured with the B2M2 Process Technology.**

PART NUMBER	PACKAGE TYPE	ASSEMBLY LOCATION	WAFER SIZE	PROCESS NAME
MIC4102YM /27801	SOIC-8L	STARS, THAILAND	8"	B2M2

DIE QUALIFICATION RESULTS

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	168 HR Rej/ss	500 HR Rej/ss	1000 HR Rej/ss	COMMENTS
HTOL High Temperature Operating Life Test	JESD22, Method 108 TA= + 125°C	1546	V416242557.100MQA	0/77	0/77	0/77	
	Vdd = + 16V HB = + 116V HS = + 100V	1547	V416242557.110MQD	0/77	0/77	0/77	
		1550	V416242557.200MQD	0/77	0/77	0/77	

HTOL Test Note:

The 4102 has a level shift circuit. When Vdd is not powered during VHBHS_ABS_MAX leakage test, gates of level shift transistors could float making their operating state unstable. Test program was changed to hold Vdd to same potential as HB when measuring HB to HS leakage. All parts pass this test condition.

ELECTROSTATIC DISCHARGE

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
ESD-HBM Human Body Model ATE Test @ Room +25C	R= 1500 Ohms C= 100 pF 1X +/- Voltage	1546	V416242557.100MQA	+/-2000V	0/3	Note: ESD ratings are device specific. All Products qualified on the 8" Micrel process technologies will have the same or better ESD and Latch-up performance as the 6" San Jose Products.
ESD-CDM Charged Device Model ATE Test @ Room +25C	JESD22-C101 1X +/- Voltage	1546	V416242557.100MQA	+/-1500V	0/3	

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
LATCH-UP	JESD-78 TA = +25°C	1546	V416242557.100MQA	I/O LU O/V LU	0/6 0/6	

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PACKAGE QUALIFICATION RESULTS					
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	Rej/ss	COMMENTS
Level 1 Pre-conditioning Flow	JESD22-A113	1546	V416242557.100MQA	0/320	
		1547	V416242557.110MQD	0/145	
		1550	V416242557.200MQD	0/145	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
PRESSURE POT With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A102	1546	V416242557.100MQA	0/45	
	Ta = +121°C/100%RH	1547	V416242557.110MQD	0/45	
	15 PSIG	1550	V416242557.200MQD	0/45	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
HAST With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A110 (BIASED)	1546	V416242557.100MQA	0/45	
	Ta= +130°C/85%RH	1547	V416242557.110MQD	0/45	
	Vdd = +16V	1550	V416242557.200MQD	0/45	
	HB/HS = +38V				
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 CY Rej/ss	COMMENTS
TEMP CYCLE With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A104	1546	V416242557.100MQA	0/45	
	Ta = -65°C / +150°C	1547	V416242557.110MQD	0/45	
		1550	V416242557.200MQD	0/45	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	1000 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life With Level 1 Pre-conditioning	JESD22-A103	1546	V416242557.100MQA	0/76	
	Ta = +150°C	1547	V416242557.110MQD		
		1550	V416242557.200MQD		
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life With Level 1 Pre-conditioning	JESD22-A103	1546	V416242557.100MQA	0/76	
	Ta = +175°C	1547	V416242557.110MQD		
		1550	V416242557.200MQD		
FLAMMABILITY	UL-94V-0 Certified	All mold compounds used by Micrel meet this standard. See the UL website on-line list of material flammability certifications. Micrel requires a Certificate of Compliance from the assembly house and we verify the certifications on the web.			

JAON-08DHBR103-B2M2000001 - CCB 1737.06 Final Notice: Release to production of listed Micrel Driver product type manufactured with the B2M2 process technology to Microchip Fab.

Affected Catalog Part Numbers (CPN)

PCN_JAON-08DHBR103-B2M2000001	
CATALOG_PART_NBR	Estimated First Ship Date (EFSD)
MIC4102YM	July 19, 2016
MIC4102YM-TR	July 19, 2016