

Product Change Notification - KSRA-14SZTT575

Date: 05 Oct 2017
Product Category: 8-bit PIC Microcontrollers
Notification subject: CCB 2965 Final Notice: Qualification of MTAI as an additional assembly site for selected Atmel products available in 32L VQFN (5x5x0.9mm) package using CuPdAu bond wire
Notification text: **PCN Status:**
 Final notification.

Microchip Parts Affected:

Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Qualification of MTAI as an additional assembly site for selected Atmel products available in 32L VQFN (5x5x0.9mm) package using palladium coated copper wire with gold flash (CuPdAu) bond wire.

Pre Change:

Assembled at NSEB Assembly site using gold (Au) bond wire, 8600 die attach material, and G770HCD molding compound material.

Post Change:

Assembled at NSEB Assembly site using gold (Au) bond wire, 8600 die attach material, and G770HCD molding compound material or assembled at MTAI Assembly site using palladium coated copper wire with gold flash (CuPdAu) bond wire, 3280 die attach material, and G700LTD molding compound material.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	NSEB	NSEB	MTAI
Wire material	Au	Au	CuPdAu
Die attach material	8600	8600	3280
Molding compound material	G770HCD	G770HCD	G700LTD
Lead frame material	C194	C194	C194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity by qualifying MTAI assembly site using palladium coated copper wire with gold flash (CuPdAu) bond wire

Change Implementation Status:

In Progress

Estimated First Ship Date:

October 20, 2017 (date code: 1742)

SC164308-CRB 16-0751 and 16-1266 Final Notice: Qualification of MMT for Assembly and Final Test for all Military EEPROM Products available in Hermetic packages.

Affected Catalog Part Numbers (CPN)

PCN_SC164308
CATALOG_PART_NBR
AT28C010-12DM/883
AT28C010-12EM/883
AT28C010-12FM/883
AT28C010-12FM/883-341
AT28C010-15DM/883
AT28C010-15EM/883
AT28C010-15FM/883
AT28C010-20DM/883
AT28C010-20EM/883
AT28C010-20FM/883
AT28C010-25DM/883
AT28C010-25FM/883
AT28C010E-12DM/883
AT28C010E-12DM/883-341
AT28C010E-12EM/883
AT28C010E-12FM/883
AT28C010E-15DM/883
AT28C256-15DM/883
AT28C256-15DM/883-815
AT28C256-15FM/883
AT28C256-15FM/883-815
AT28C256-15LM/883
AT28C256-15LM/883-815
AT28C256-20DM/883
AT28C256-20DM/883-815
AT28C256-20FM/883
AT28C256-20FM/883-815
AT28C256-20LM/883
AT28C256-20LM/883-815
AT28C256-25DM/883
AT28C256-25DM/883-023
AT28C256-25DM/883-815
AT28C256-25FM/883
AT28C256-25FM/883-815
AT28C256-25FM/883-949
AT28C256-25LM/883
AT28C256-25LM/883-815
AT28C256-25LM/883-829
AT28C256E-15DM/883
AT28C256E-15DM/883-815
AT28C256E-15FM/883
AT28C256E-15FM/883-815
AT28C256E-15LM/883

SC164308-CRB 16-0751 and 16-1266 Final Notice: Qualification of MMT for Assembly and Final Test for all Military EEPROM Products available in Hermetic packages.

Affected Catalog Part Numbers (CPN)

PCN_SC164308
CATALOG_PART_NBR
AT28C256E-15LM/883-815
AT28C256E-20DM/883
AT28C256E-20FM/883
AT28C256E-20LM/883
AT28C256E-25DM/883
AT28C256E-25DM/883-815
AT28C256E-25FM/883
AT28C256E-25LM/883
AT28C256E-25LM/883-815
AT28C256F-15DM/883
AT28C256F-15DM/883-815
AT28C256F-15FM/883
AT28C256F-15LM/883
AT28C256F-15LM/883-815
AT28HC256-12DM/883
AT28HC256-12FM/883
AT28HC256-12LM/883
AT28HC256-90DM/883
AT28HC256-90FM/883
AT28HC256-90FM/883-023
AT28HC256-90LM/883
AT28HC256-90LM/883-696
AT28HC256E-12DM/883
AT28HC256E-12FM/883
AT28HC256E-12LM/883
AT28HC256E-90DM/883
AT28HC256E-90FM/883
AT28HC256E-90LM/883
AT28HC256F-12FM/883
AT28HC256F-12LM/883
AT28HC256F-90DM/883
AT28HC256F-90FM/883
AT28HC256F-90LM/883



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: SC164308

Date
April 6, 2017

**Qualification of MMT for Assembly and Final Test for all
Military EEPROM Products available in Hermetic packages.**



MICROCHIP **PACKAGE QUALIFICATION REPORT**

Purpose : Qualification of MMT for Assembly and Final Test for all Military EEPROM Products available in Hermetic packages.

CRB No. : 16-0751 and 16-1266

SUMMARY OF QUALIFICATION REPORTS:

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MICROCHIP PACKAGE QUALIFICATION REPORT

AT28HC256-90FM/883 28 Lead Flatpak

Summary

This report presents the results of the MMT assembled AT28HC256-90FM/883, 28 Lead Flatpak stress testing. This testing serves to qualify the 28 Lead Flatpak package which is built on MMTs qualified Flatpak assembly line.

As summarized below, all qualification tests have been successfully completed. The 28 Lead Flatpak package assembled at MMT is qualified for production.

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Statu	Comment
AT28HC256-90FM/883 – Flatpak32							
B2 - Resistance to Solvents	MS883 - M2015	NA	1	3	0	Pass	
B3 - Solderability	MS883 - M2003	NA	1	3(22)	0	Pass	
B5 - Bond Strength	MS883 - M2011	NA	1	4(15)	0	Pass	
D1 - Physical Dimensions	MS883 - M2016	NA	1	15	0	Pass	
D2 - Lead Integrity	MS883 - M2004D	NA	1	3	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	3(45)	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	
D3 - Environmental							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Thermal Shock	MS883 - M1011B	15 Cycles	1	15	0	Pass	
Temperature Cycle	MS883 - M1010C	100 Cycles	1	15	0	Pass	
Moisture Resistance	MS883 - M1004	10 Days	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	



MICROCHIP PACKAGE QUALIFICATION REPORT

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Commen
AT28HC256-90FM/883 – Flatpak32							
D4 - Mechanical							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Mechanical Shock	MS883 - M2002B	NA	1	15	0	Pass	
Variable Freq. Vib.	MS883 - M2007A	NA	1	15	0	Pass	
Constant Acceleration	MS883 M2001E	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
D5 - Salt Atmosphere	MS883 - M1009A	24 Hours	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
D6 - Internal H₂O Vapor	MS883 - 1018	NA	1	3	0	Pass	
D7 - Adhesion of Lead Finish	MS883 - M2025	NA	1	3(15)	0	Pass	
D8 - Lid Torque	MS883 - M2024	NA	1	5	0	Pass	
D9 - Solder Heat	MS883 - M2036	NA	1	3	0	Pass	
End Point Electrical	TA - 25°C	NA	1	3	0	Pass	
End Point Electrical	TA - 125°C	NA	1	3	0	Pass	
End Point Electrical	TA - 55°C	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	

Conclusion:

The AT28HC256-90FM/883 in the MMT 28 Lead Flatpak complies with the guidelines set forth in the Qualification Plan. Based on these results, the Flatpak28 package is qualified for MMT production.



MICROCHIP PACKAGE QUALIFICATION REPORT

AT28HC256-90FM/883 28 Lead Flatpak

Summary

This report presents the results of the MMT assembled AT28HC256-90DM/883, 28 Lead CerDIP stress testing. This testing serves to qualify the 28 Lead CerDIP package which is built on MMTs qualified CerDIP assembly line.

As summarized below, all qualification tests have been successfully completed. The 28 lead CerDIP package assembled at MMT is qualified for production.

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28HC256-90DM/883 – CerDIP28							
B2 - Resistance to Solvents	MS883 - M2015	NA	1	3	0	Pass	
B3 - Solderability	MS883 - M2003	NA	1	3	0	Pass	
B5 - Bond Strength	MS883 - M2011	NA	1	4(15)	0	Pass	
D1 - Physical Dimensions	MS883 - M2016	NA	1	15	0	Pass	
D2 - Lead Integrity	MS883 - M2004D	NA	1	3	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	
D3 - Environmental							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - -55°C	NA	1	15	0	Pass	
Thermal Shock	MS883 - M1011B	15 Cycles	1	15	0	Pass	
Temperature Cycle	MS883 - M1010C	100 Cycles	1	15	0	Pass	
Moisture Resistance	MS883 - M1004	10 Days	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - -55°C	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	



MICROCHIP PACKAGE QUALIFICATION REPORT

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28HC256-90DM/883 – CerDIP28							
D4 - Mechanical							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Mechanical Shock	MS883 - M2002B	NA	1	15	0	Pass	
Variable Freq. Vib.	MS883 - M2007A	NA	1	15	0	Pass	
Constant Acceleration	MS883 M2001E	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
D5 - Salt Atmosphere	MS883 - M1009A	24 Hours	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
D6 - Internal H₂O Vapor Content	MS883 - 1018	NA	1	3	0	Pass	
D7 - Adhesion of Lead Finish	MS883 - M2025	NA	1	3(15)	0	Pass	
D8 - Lid Torque	MS883 - M2024	NA	1	5	0	Pass	
D9 - Solder Heat	MS883 - M2036	NA	1	3	0	Pass	
End Point Electrical	TA - 25°C	NA	1	3	0	Pass	
End Point Electrical	TA - 125°C	NA	1	3	0	Pass	
End Point Electrical	TA - 55°C	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	

Conclusion:

The AT28HC256-90DM/883 in the MMT 28 lead CerDIP complies with the guidelines set forth in the Qualification Plan. Based on these results, the CerDIP28 package is qualified for MMT production.



MICROCHIP PACKAGE QUALIFICATION REPORT

AT28C256-15LM/883 32 Lead LCC

Summary

This report presents the results of the MMT assembled AT28C256-15LM/883, 32 Lead LCC stress testing. This testing serves to qualify the 32 Lead LCC package which is built on MMTs qualified LCC assembly line.

As summarized below, all qualification tests have been successfully completed. The 32 Lead LCC package assembled at MMT is qualified for production.

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C256-15LM/883 – LCC32							
B2 - Resistance to Solvents	MS883 - M2015	NA	1	3	0	Pass	
B3 - Solderability	MS883 - M2003	NA	1	3	0	Pass	
B5 - Bond Strength	MS883 - M2011	NA	1	4(15)	0	Pass	
D1 - Physical Dimensions	MS883 - M2016	NA	1	15	0	Pass	
D2 - Lead Integrity	MS883 - M2004D	NA	1	5	0	Pass	
D3 - Environmental							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Thermal Shock	MS883 - M1011B	15 Cycles	1	15	0	Pass	
Temperature Cycle	MS883 - M1010C	100 Cycles	1	15	0	Pass	
Moisture Resistance	MS883 - M1004	10 Days	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	



MICROCHIP

PACKAGE QUALIFICATION REPORT

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C256-15LM/883 – LCC32							
D4 - Mechanical							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Mechanical Shock	MS883 - M2002B	NA	1	15	0	Pass	
Variable Freq. Vib.	MS883 - M2007A	NA	1	15	0	Pass	
Constant Acceleration	MS883 M2001E	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
D5 - Salt Atmosphere	MS883 - M1009A	24 Hours	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
D6 - Internal H₂O Vapor Content	MS883 - 1018	NA	1	3	0	Pass	
D7 - Adhesion of Lead Finish	MS883 - M2025	NA	1	3(15)	0	Pass	
D8 - Lid Torque	MS883 - M2024	NA	1	5	0	Pass	
D9 - Solder Heat	MS883 - M2036	NA	1	3	0	Pass	
End Point Electrical	TA - 25°C	NA	1	3	0	Pass	
End Point Electrical	TA - 125°C	NA	1	3	0	Pass	
End Point Electrical	TA - 55°C	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	

Conclusion:

The AT28C256-15LM/883 in the MMT 32 lead LCC complies with the guidelines set forth in the Qualification Plan. Based on these results, the LCC32 package is qualified for MMT production.



MICROCHIP PACKAGE QUALIFICATION REPORT

AT28C010-12DM/883 32 Lead CerDIP

Summary

This report presents the results of the MMT assembled AT28C010-12DM/883, 32 Lead CerDIP stress testing. This testing serves to qualify the 32 Lead CerDIP package which is built on MMTs qualified CerDIP assembly line.

As summarized below, all qualification tests have been successfully completed. The 32 Lead CerDIP package assembled at MMT is qualified for production.

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C010-12DM/883 – CerDIP32							
B2 - Resistance to Solvents	MS883 - M2015	NA	1	3	0	Pass	
B3 - Solderability	MS883 - M2003	NA	1	3	0	Pass	
B5 - Bond Strength	MS883 - M2011	NA	1	4(15)	0	Pass	
D1 - Physical Dimensions	MS883 - M2016	NA	1	15	0	Pass	
D2 - Lead Integrity	MS883 - M2004D	NA	1	3	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	
D3 - Environmental							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - -55°C	NA	1	15	0	Pass	
Thermal Shock	MS883 - M1011B	15 Cycles	1	15	0	Pass	
Temperature Cycle	MS883 - M1010C	100 Cycles	1	15	0	Pass	
Moisture Resistance	MS883 - M1004	10 Days	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - -55°C	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	



MICROCHIP PACKAGE QUALIFICATION REPORT

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C010-12DM/883 – CerDIP32							
D4 - Mechanical							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Mechanical Shock	MS883 - M2002B	NA	1	15	0	Pass	
Variable Freq. Vib.	MS883 - M2007A	NA	1	15	0	Pass	
Constant Acceleration	MS883 M2001E	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
D5 - Salt Atmosphere	MS883 - M1009A	24 Hours	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
D6 - Internal H₂O Vapor Content	MS883 - 1018	NA	1	3	0	Pass	
D7 - Adhesion of Lead Finish	MS883 - M2025	NA	1	3(15)	0	Pass	
D8 - Lid Torque	MS883 - M2024	NA	1	5	0	Pass	
D9 - Solder Heat	MS883 - M2036	NA	1	3	0	Pass	
End Point Electrical	TA - 25°C	NA	1	3	0	Pass	
End Point Electrical	TA - 125°C	NA	1	3	0	Pass	
End Point Electrical	TA - 55°C	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	

Conclusion:

The AT28C010-12DM/883 in the MMT 32 lead CerDIP complies with the guidelines set forth in the Qualification Plan. Based on these results, the CerDIP32 package is qualified for MMT production.



MICROCHIP PACKAGE QUALIFICATION REPORT

AT28C010-12EM/883 32 Lead LCC

Summary

This report presents the results of the MMT assembled AT28C010-12EM/883, 32 Lead LCC stress testing. This testing serves to qualify the 32 Lead LCC package which is built on MMTs qualified LCC assembly line.

As summarized below, all qualification tests have been successfully completed. The 32 Lead LCC package assembled at MMT is qualified for production.

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C010-12EM/883 – LCC32							
B2 - Resistance to Solvents	MS883 - M2015	NA	1	3	0	Pass	
B3 - Solderability	MS883 - M2003	NA	1	3	0	Pass	
B5 - Bond Strength	MS883 - M2011	NA	1	4(15)	0	Pass	
D1 - Physical Dimensions	MS883 - M2016	NA	1	15	0	Pass	
D2 - Lead Integrity	MS883 - M2004D	NA	1	5	0	Pass	
D3 - Environmental							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - -55°C	NA	1	15	0	Pass	
Thermal Shock	MS883 - M1011B	15 Cycles	1	15	0	Pass	
Temperature Cycle	MS883 - M1010C	100 Cycles	1	15	0	Pass	
Moisture Resistance	MS883 - M1004	10 Days	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - -55°C	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	



MICROCHIP PACKAGE QUALIFICATION REPORT

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C010-12EM/883 – LCC32							
D4 - Mechanical							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Mechanical Shock	MS883 - M2002B	NA	1	15	0	Pass	
Variable Freq. Vib.	MS883 - M2007A	NA	1	15	0	Pass	
Constant Acceleration	MS883 M2001E	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
D5 - Salt Atmosphere	MS883 - M1009A	24 Hours	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
D6 - Internal H₂O Vapor Content	MS883 - 1018	NA	1	3	0	Pass	
D7 - Adhesion of Lead Finish	MS883 - M2025	NA	1	3(15)	0	Pass	
D8 - Lid Torque	MS883 - M2024	NA	1	5	0	Pass	
D9 - Solder Heat	MS883 - M2036	NA	1	3	0	Pass	
End Point Electrical	TA - 25°C	NA	1	3	0	Pass	
End Point Electrical	TA - 125°C	NA	1	3	0	Pass	
End Point Electrical	TA - 55°C	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	

Conclusion:

The AT28C010-12EM/883 in the MMT 32 lead LCC complies with the guidelines set forth in the Qualification Plan. Based on these results, the LCC32 package is qualified for MMT production.



MICROCHIP PACKAGE QUALIFICATION REPORT

AT28C010-12FM/883 32 Lead Flatpak

Summary

This report presents the results of the MMT assembled AT28C010-12FM/883, 32 Lead Flatpak stress testing. This testing serves to qualify the 32 Lead Flatpak package which is built on MMTs qualified Flatpak assembly line.

As summarized below, all qualification tests have been successfully completed. The 32 Lead Flatpak package assembled at MMT is qualified for production.

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C010-12FM/883 – Flatpak32							
B2 - Resistance to Solvents	MS883 - M2015	NA	1	3	0	Pass	
B3 - Solderability	MS883 - M2003	NA	1	3(22)	0	Pass	
B5 - Bond Strength	MS883 - M2011	NA	1	4(15)	0	Pass	
D1 - Physical Dimensions	MS883 - M2016	NA	1	15	0	Pass	
D2 - Lead Integrity	MS883 - M2004D	NA	1	3	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	3(45)	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	
D3 - Environmental							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Thermal Shock	MS883 - M1011B	15 Cycles	1	15	0	Pass	
Temperature Cycle	MS883 - M1010C	100 Cycles	1	15	0	Pass	
Moisture Resistance	MS883 - M1004	10 Days	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	



MICROCHIP PACKAGE QUALIFICATION REPORT

Package Qualification

Test	Conditions	Duration	#Lots	SS/Lot	#Fail	Status	Comment
AT28C010-12FM/883 – Flatpak32							
D4 - Mechanical							
Baseline Electrical	TA - 25°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 125°C	NA	1	15	0	Pass	
Baseline Electrical	TA - 55°C	NA	1	15	0	Pass	
Mechanical Shock	MS883 - M2002B	NA	1	15	0	Pass	
Variable Freq. Vib.	MS883 - M2007A	NA	1	15	0	Pass	
Constant Acceleration	MS883 M2001E	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
End Point Electrical	TA - 25°C	NA	1	15	0	Pass	
End Point Electrical	TA - 125°C	NA	1	15	0	Pass	
End Point Electrical	TA - 55°C	NA	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
D5 - Salt Atmosphere	MS883 - M1009A	24 Hours	1	15	0	Pass	
Visual Examination	MS883 - M1004/10	NA	1	15	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	15	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	15	0	Pass	
D6 - Internal H₂O Vapor Content	MS883 - 1018	NA	1	3	0	Pass	
D7 - Adhesion of Lead Finish	MS883 - M2025	NA	1	3(15)	0	Pass	
D8 - Lid Torque	MS883 - M2024	NA	1	5	0	Pass	
D9 - Solder Heat	MS883 - M2036	NA	1	3	0	Pass	
End Point Electrical	TA - 25°C	NA	1	3	0	Pass	
End Point Electrical	TA - 125°C	NA	1	3	0	Pass	
End Point Electrical	TA - 55°C	NA	1	3	0	Pass	
Fine Leak	MS883 - M1014B	NA	1	3	0	Pass	
Gross Leak	MS883 - M1014C1	NA	1	3	0	Pass	

Conclusion:

The AT28C010-12FM/883 in the MMT 32 lead Flatpak complies with the guidelines set forth in the Qualification Plan. Based on these results, the Flatpak32 package is qualified for MMT production.

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	September 2017					October 2017			
Workweek	35	36	37	38	39	40	41	42	43
Initial PCN Issue Date			X						
Qual Report Availability						X			
Final PCN Issue Date						X			
								X	

Method to Identify Change:

Traceability code

Qualification Report:

Please open the attachments included with this PCN labeled as PCN_#_Qual Report.

Revision History:

September 11, 2017: Issued initial notification.

October 05, 2017: Issued final notification. Attached the Qualification Report. Provided estimated first ship date on October 20, 2017.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s):

[PCN_SC164308_Affected CPN.pdf](#)

[PCN_SC164308_Qual Report.pdf](#)

[PCN_SC164308_Affected CPN.xlsx](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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