



**MICROCHIP**

## **QUALIFICATION PLAN SUMMARY**

**PCN #: KSRA-22HOHO409**

**Date:  
May 30, 2019**

**Qualification of LMC-705VF mold compound material for  
Microsemi VSC8248YJH-02 catalog part number (CPN) of  
0.13 $\mu$ m TSMC wafer technology available in 225L FCCSP  
package at SFA1 assembly site.**

**Purpose: Qualification of LMC-705VF mold compound material for Microsemi VSC8248YJH-02 catalog part number (CPN) of 0.13µm TSMC wafer technology available in 225L FCCSP package at SFA1 assembly site.**

**CCB No.: 3837**

**MP code: XAM0292WCB01**

**Part No.: VSC8248YJH-02**

**BD No: BDM-002141A**

**Process/CUP : Yes**

**Package**

**Type/pin : FCCSP 225**

**Width or size : 16mm x 16mm**

**Package Code : 2WC**

**Die Thickness : 10 mils**

**Die size: 8.4048 x 9.5472mm**

**MSL: 4, 260**

**Package/Die Data:**

<u>Misc.</u>	Assembly site	SFA
	BD Number	BDM-002141A
	MP Code (MPC)	XAM0292WCB01
	Part Number (CPN)	VSC8248YJH-02
	MSL information	MSL 4, 260
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	84
	Reliability Site	MPHIL
<u>Substrate</u>	Core Material	CCL-HL832NS
	Core Thickness	0.100
	Part Number	07KA549A
<u>Bump</u>	Material	SnAg1.8
	Bump Diameter	110um
<u>Underfill</u>	Part Number	CV5300AM
<u>PKG</u>	PKG Type	FCCSP
	Pin/Ball Count	225
	PKG width/size	16x16
	Ball Pitch/Size	1.00mm / 0.50mm
<u>Die</u>	Die Thickness	254um
	Die Size	8.4048x9.5472mm
	Fab Process (site)/Wafer size	TSMC 0.13um, 8"
Mold Compound	Die Thickness	LMC-705VF
Solder ball	Ball Size	0.50mm
	Composition	SN96.5/AG3.0/CU0.5

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
FC Bonding Integrity	X-ray and CSAM	10	0	3	30		1	ASET	SFA/MPHIL	FCCSP	
Mold Void	CSAM/TSCAN	10	0	3	30		1	ASET	SFA/MPHIL	FCCSP	
Solder Ball Shear	JESD22B117A	5	0	3	15		5	ASET	SFA/MPHIL	FCCSP	10 balls/5 units. Parts should gone Preconditioning
Coplanarity	JESD22B108A/POD	5	0	3	15			ASET	SFA/MPHIL	FCCSP	All units
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec STD-020E for package type; Electrical test pre and post stress 109°C JESD22A113. MSL4 260	164	15	3	492	0	15	ASET	MPHIL	FCCSP	Spares should be properly identified. 231 parts from each lot to be used for HAST, UHAST & Temp Cycle test.
Unbiased HAST	JESD22A110. +130°C/85% RH for 96 hours Electrical test pre and post stress at 109°C.	77	5	3	246	0	10	ASET	MPHIL	FCCSP	Spare should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22A104. -55°C to +125°C for 1000 cycles. Electrical test pre and post stress at hot temp at 109°C	77	5	3	246	0	30	ASET	MPHIL	FCCSP	Spare should be properly identified. Use the parts which have gone through Pre-conditioning.