



**MICROCHIP**

## **QUALIFICATION REPORT SUMMARY**

**PCN# ALAN-30KIWY750**

**Date:**

**March 05, 2025**

**Qualification of SDI5279 as a new TIM epoxy for PM42100B1-FEI, PM41100B1-FEI, PM42084B1-FEI, PM41084B1-FEI, PM42068B1-FEI, PM41068B1-FEI, PM40100B1-FEI, PM40068B1-FEI, and PM40084B1-FEI catalog part numbers (CPN) available in 1467L BBGA (40x40x4.03mm) package.**

**Purpose:** Qualification of SDI5279 as a new TIM epoxy for PM42100B1-FEI, PM41100B1-FEI, PM42084B1-FEI, PM41084B1-FEI, PM42068B1-FEI, PM41068B1-FEI, PM40100B1-FEI, PM40068B1-FEI, and PM40084B1-FEI catalog part numbers (CPN) available in 1467L BBGA (40x40x4.03mm) package.

**CCB No.:** 7503

<u>Misc.</u>	Assembly site	Hana Micron
	BD Number	D-031860
	MP Code (MPC)	STA1596ZCB39
	Part Number (CPN)	PM40100B1-FEI
	MSL information	MSL 4, 245°C
	Assembly Shipping Media	TRAY
	Base Quantity Multiple (BQM)	21
	Reliability Site	Hana Micron
<u>Substrate</u>	Core Material	E705G
	Core Thickness	820um
	L1/L2 Thickness	L1-L5/L8-L12:15um, L7&L8:18um
	SM Material	SR7300GR
	Substrate Thickness	1348um
	Process	Build-up
	SM Thickness	21um
	Part Number	HMP-PB—1467FG-001(R160002245)
	Drill Size	150um
	Line/Space Specs	12um / 12um
<u>Bump</u>	Material	Sn1.8Ag
	Bump Site	TSMC
<u>DA Epoxy</u>	Part Number	WF6317
	Conductive	No
<u>Underfill</u>	Part Number	U8410-302LF1
<u>Others</u>	Heat Spreader	HNBSCT-01C
	Heat Spreader bonding material	<b>TIM: SDI5279</b> Adhesive: SE-4450
	Capacitor	MSRLA165SC7225MTNA01 (C4) MSRLJ103SC7104MFNA01 (C2) C0510X7S0E105M030BC (C1,C3,C5)
	Capacitor Bonding Material	WS693CPS
<u>PKG</u>	Package Type	BBGA
	Pin/Ball Count	1467
	PKG width/size	40
	Ball Pitch/Size	1/0.6mm
	Solder Ball Diameter	0.6mm
	Solder Ball Material	SAC305
	Solder Ball Flux	WF-6317

Test	Criteria	Monitoring point	Result
Bond line Thickness	100um +/- 20um	At Assembly	Passed
		Post MSL 3	Passed
Coverage	> 90%	At Assembly	Passed
		Post MSL 3 +3x reflow	Passed
		Post 1K HTS	Passed
		Post 1K T/C (B)	Passed
		Post uHAST 96hrs	Passed

Test Item	Condition	S/S (1Boat : 24ea)	Result
MSL 3	Bake 24hr, 30°C/60% RH / 192hr, IR Reflow x3	4Boat (96ea)	Passed
TC(B)	-55°C ~ 125°C , x1000cycle	2Boat (48ea)	Passed
HTS(B)	150°C 1000hr	2Boat (48ea)	Passed
u-HAST(A)	130°C, 85% RH, 2.27atm, 96hr	2Boat (48ea)	Passed