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To: Distribution

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Reliability Qualification of New Device PVY117 in 4L-SOP Package (Project#2873)

Three qualification lots of PVY117 in 4L-SOP package completed Autoclave, Temp-Cycling, HTB and THB Reliability Tests without the occurrence of any reliability failure. Based on these reliability test results, the PVY117 in 4L-SOP Package is qualified and released to production. The level of qualification is industrial level.

Rel Test #1 - Autoclave Humidity Test:

Test Condition: 16 Hours of Autoclave @ +121°C, 100%RH and 15 PSIG.
 Bias Condition: None,
 Preconditioning: None, samples were not surface mounted

Results:

Qual Vehicles	Package	Lot No.	Lot Description	Hour	SS	Rej	Remarks
PVY117	4L-SOP	ED31044	Qual Lot1	16	77	0	
	4L-SOP	ED31683	Qual Lot2	16	77	0	
	4L-SOP	ED32479	Qual lot3	16	77	0	

Rel Test #2 - Temperature Cycling:

Test Condition: 1000 cycles between -40°C to 125°C ($\Delta T=165^\circ C$, Dry-Air to Dry-Air)
 Bias Condition: None,
 Preconditioning: None, but samples were surface mounted

Results:

Qual Vehicles	Package	Lot No.	Lot Description	Cycle	SS	Rej	Remarks
PVY117	4L-SOP	ED31044	Qual Lot1	1000	77	0	
	4L-SOP	ED31683	Qual Lot2	1000	77	0	
	4L-SOP	ED32479	Qual lot3	1000	77	0	

Rel Test #3 - High Temperature Reverse Bias (HTRB) Test:

Test Condition: 1008 Hours @ Tj=110°C
 Bias Condition: Vin = 0 Volts, Vout (Vds) = 32V
 Preconditioning: None, but samples were surface mounted

Results:

Qual Vehicles	Package	Lot No.	Lot Description	Hour	SS	Rej	Remarks
PVY117	4L-SOP	ED31044	Qual Lot1	1000	77	0	
	4L-SOP	ED31683	Qual Lot2	1000	77	0	
	4L-SOP	ED32479	Qual lot3	1000	77	0	

Rel Test #4 - Temperature Humidity Bias (THB) Test:

Test Condition: 1008 Hours @ +85°C and 85%RH
 Bias Condition: Vin = 0 Volts, Vout (Vds) = 10Volts,
 Preconditioning: None, but surface mounted

Results:

Qual Vehicles	Package	Lot No.	Lot Description	Hour	SS	Rej	Remarks
PVY117	4L-SOP	ED31044	Qual Lot1	1000	77	0	
	4L-SOP	ED31683	Qual Lot2	1000	77	0	
	4L-SOP	ED32479	Qual lot3	1000	77	0	