Product/ Process Change Notification

1. PCN No.:	***QPCN12012***
2. Subject:	*TS34063 series wafer re-layout*
3. To:	*All customers involved*
4. Issued by:	*Owen Wang*
5. Issue date:	*12-Jul-2012*
6. Proposed first ship date for change:	*12-Oct-2012*

7. Affected Product Identification

TS34063 series (part no.: TS34063CD C3, TS34063CS RL)

8. **Change Description : (OLD Vs. NEW Comparison)**

Old:	New:
➢ *Die size: 1.8 mm x 1.7 mm* ➢ *Old layout*	➢ *Die size: 0.93 mm x 0.73 mm* ➢ *New layout*

9. Reason for Change:

Die optimization.

10. Anticipated Impact: (form, fit, function, quality or reliability)

1. Product outline:	*No change*
2. Inner construction changed:	*Die size changed*
3. Electrical specifications:	*Please see Appendix A – meets actual datasheet*
4. Reliability performance:	*Please see Appendix B – pass reliability test*
5. Data sheet:	*No change*
6. Packing code (order code):	*No change*

11. **Qualification plan/result:**

Refer to	
PPAP	*Available on demand*
Comparison report	*Available on demand*

12. Sample availability Date:	*Please contact your regional Taiwan Semiconductor Sales office*
13. Tentative implementation date:	*12-Jul-2012*

14. Remarks

The device circuit of new die is the same as old die. It's just re-layout for smaller die size.

15. Customer feedback required latest: **(should we receive no feedback; the change will be deemed as accepted!)**	***12-Aug-2012***
16. Approved by:	*Quayer Chen*

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Customer Approval Form_QPCN12012

(Please tick the field what is valid for you!)

☐ **We agree with this proposed change and its schedule.**	
☐ **We have objections**	
☐ **We need more information:**	
☐ **We need sample:**	
Company:	
Name:	
Address:	
Signature:	**Date:**

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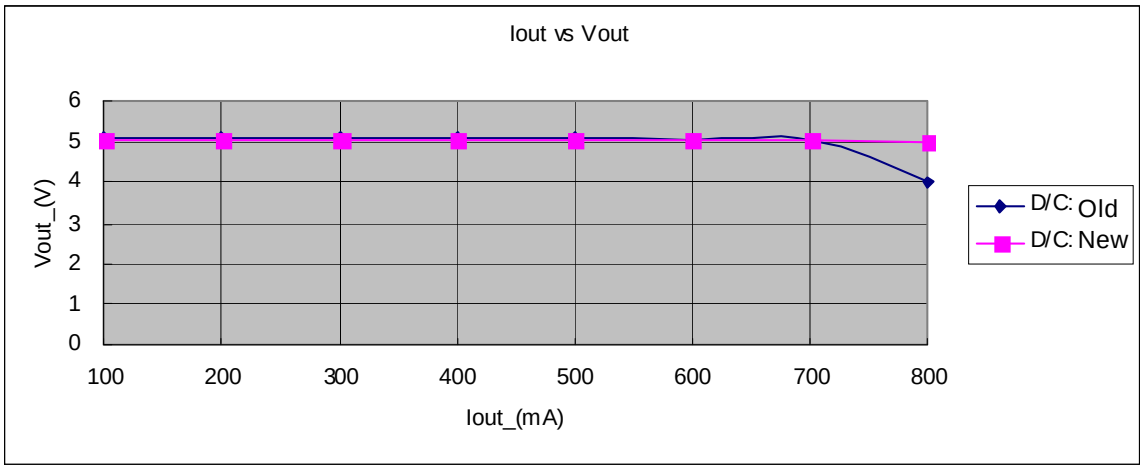
Appendix

A Performance test:



B Electrical Functions Test:

Item	Icc1	Icc2	Icc3	Vref	Ichg	Idchg	Vce-sat	Vipk	Fosc	Ic-off	Iccr
condition	Vcc=5V, Ct=1nF, pin7=Vcc, Vpin5=2V	Vcc=40V, Ct=1nF, pin7=Vcc, Vpin5=2V	Vcc=30V, Ct=1nF, pin7=Vcc, Vpin5=2V	Vcc=5V	Vcc=5V, Vpin3=0V, pin7=Vcc	Vcc=5V, Vpin3=2V, pin7=Vcc	Vcc=5V, Isw=1A, pin1, 8 connected, pin7=Vcc , Vpin3 & 5=0V	Vcc=5V, Vpin5=0V	Vcc=5V, Ct=1nF, Vpin5=0V	Vcc=5V, Vpin5=2V, Pin1 to Pin2=40V	Vcc=5V, Ct=1nF, pin7=Vcc, Vpin5=2V
Spec-min	1	1	1	1.228	25	150	-	255	24	-	-
Spec-max	4.75	4.75	4.75	1.273	41	248	1.176	345	42	0.5	4.75
unit	mA	mA	mA	V	uA	uA	V	mV	Khz	uA	mA
MIN	2.34	2.83	2.70	1.230	35.6	188.4	0.644	260	37.5	0.02	2.83
MAX	2.82	4.31	4.10	1.269	41.0	241.6	1.188	340	43.8	1.04	4.41
AVG	**2.435**	**2.952**	**2.813**	**1.256**	**-38.535**	**222.881**	**1.069**	**317.549**	**40.778**	**0.024**	**2.957**
STDEV	0.023	0.039	0.034	0.005	0.546	4.221	0.023	3.994	0.616	0.057	0.039

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Appendix

C Qualification summary:
The new one is better than old one in Vout regulation per application preference test.

Test Item*	Qualification Test Condition		Test Result						
			EVI		SAM*		F/T		conclusion
			Sample size	Rej / S.S	Sample size	Rej / S.S	Sample size	Rej / S.S	
Before Test	/		180	0/180	45	0/45	180	0/180	PASS
MSL3	TCT:-65℃~+150℃, 5cycles Baking:125℃, 24 hrs Moisture Soak: 30℃/60 %RH,192hrs IR Reflow Tp.:260 -5/+0℃,3times		180	0/180	45	0/45	180	0/180	PASS
THT	85℃/85%RH	168hrs	45	0/45	N/A		45	0/45	PASS
		500hrs	45	0/45			45	0/45	PASS
		1000 hrs	45	0/45			45	0/45	PASS
TCT	-65℃~+150℃	300cycles	45	0/45			45	0/45	PASS
		500cycles	45	0/45			45	0/45	PASS
PCT	121℃/100%RH/205Kpa, 168hrs		45	0/45			45	0/45	PASS
			45	0/45			45	0/45	PASS
HTST	150℃	168hrs	45	0/45			45	0/45	PASS
		500hrs	45	0/45			45	0/45	PASS
		1000 hrs	45	0/45			45	0/45	PASS