

PRODUCT QUALIFICATION PACKAGE

Type

LPC3130FET180

Contents

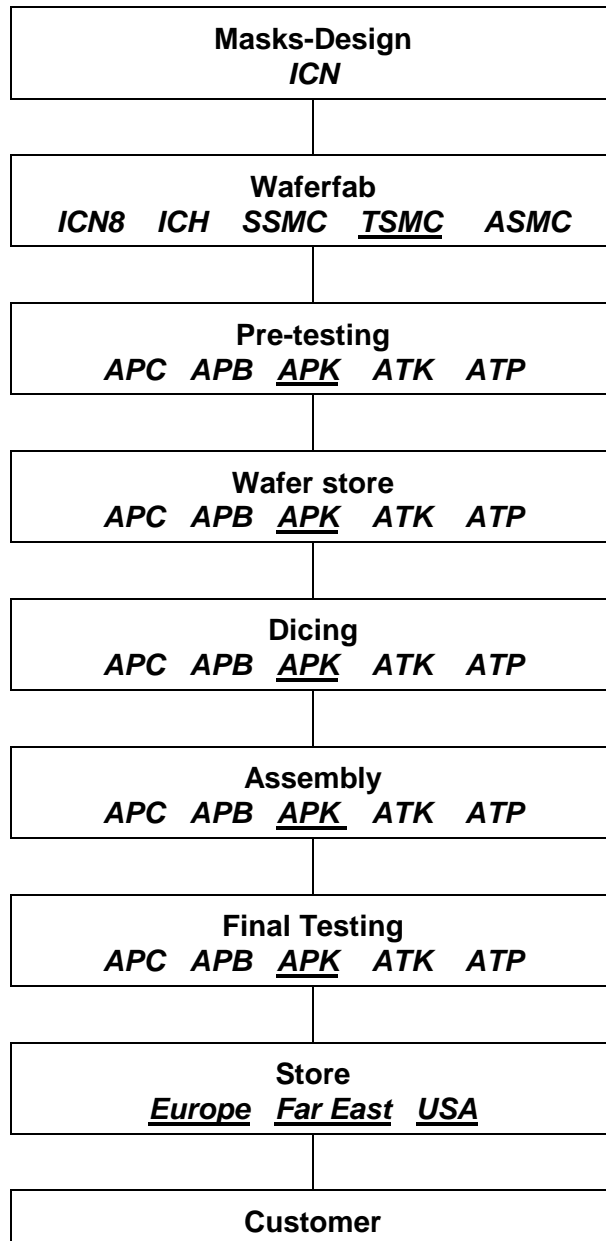
Certification of Design (including reliability data)

Customer Liaison
NXP Semiconductors Nijmegen
Product Line: Micro Controllers

1. Supplier parts number	LPC3130FET180
2. Location of die fabrication facility and process identifier a. Die fab.1 b. Die version c. Process	TSMC TAIWAN - CMOS090
3. Location of assembly facility and process identifier a. Assembly 1 b. process	NXP ASSY APK KAOHSIUNG SOT570-3
4. Location of final Q.C. facility	NXP ASSY APK KAOHSIUNG
5. Die technology description a. Wafer size b. process technology c. number of mask steps d. feature metal size	12 inch, 300mm CMOS 090 36 0.09 μm
6. Chip dimensions	3.44 x 4.112
7. Die metallization number	7
8. Die passivation	Nitride
9. Die separation methode	Sawing
10. Type of package and pin count	TFBGA180-07
11. Moisture sensitivity level 260°C	MSL 3
12. Die attach material and method	Adhesive 2000B
13. Plastic moulding compound	CEL-9750HF10F
14. Bond wire material and diameter	AuPd1 18 μm
15. Wire bond process	Thermosonic
16. Type of wire bond a. at die b. at lead frame	Ball bond Stitch bond
17. Lead frame a. Material b. Plating c. Solder ball	PCB-2L+832NXA NiAu Sn98.5Ag1.0Cu0.5 (SAC105)

<p>18. Marking of the device line A line B line C</p>	<p>NXP part number Waferbatch code + assembly sequence ID Location codes of waferfab, Location codes of Assembly fab, RoHS code, date code of assembly, mask version</p>
<p>19. E.S.D Human Body Model Charged Device Model</p>	<p>Passed: All pins 2000V Passed at 800V</p>
<p>20. Reliability summary</p>	<p>See page 5</p>

OVERALL MANUFACTURING FLOWCHART



Centre of competence: underlined/in italics are applicable

RELIABILITY SUMMARY

TEST/CONDITIONS	Duration	Sample size	Rejects
<i>High Temperature Operating Life</i>			
HTOL Temp=150°C	168 Hours	77	None
	500 Hours	77	None
	1000 Hours	77	None
<i>High Temp. Storage Life</i>			
HTSL Temp=150°C	1000Hours	77	None
<i>Themp Cycling (TMCL)</i>			
Temp = -65°C to +150°C (Air-to-Air)	500 Cycles	77	None
	1000 Cycles	77	None
<i>Highly Accelerated Stress Test (HAST)</i>			
HAST = 130°C, 85% R.H.	96 Hours	45	None
	192 Hours	45	None
Latch-up	+/- 100mA	6	None

RELIABILITY ENGINEERING