

# Nomenclature Guide

## TW Types

**TW** **aaaa** **bb** - **c** **d** **e** **f** **g#** - **h** **j** **k** **l**

**PREFIX** \_\_\_\_\_

**DEVICE NUMBER** \_\_\_\_\_

AT: Auto Wafer \_\_\_\_\_  
EP: Epi Wafer \_\_\_\_\_

**c - PROCESS** \_\_\_\_\_  
This character is included in the marking of legacy products only.

PROCESS	CODE
TSMC, 0.35µm, Polycide, SPQM or SPTM Logic	A
TSMC, 0.25µm	B
X-FAB, 0.25µm	C
TSMC, 0.18µm	D
X-FAB, 0.18µm	E
TSMC, 0.18µm, EPI, Ar Anneal, Hi	G
Goyatek/Vanguard, 0.25µm	H
TSMC 0.25µm EPI, Ar Anneal, Hi	J
TSMC 0.18µm Automotive Process	K
TSMC 0.13µm	M
TSMC 90nm	N
Fujitsu 90nm	P
TSMC 0.13µm 12" Wafer	Q
TSMC 65nm	R
TSMC 45nm	S

**d - ASSEMBLY VENDOR** \_\_\_\_\_  
This character is included in the marking of legacy products only.

ASSEMBLY VENDOR	CODE
ASEK	A
ASECL	B
GAPT	C
i2a/IPAC, Quick Pak	D
SPIL	E
ChipMOS	G
UTAC	J
Fujitsu	K
Amkor Korea	M

**e** - \_\_\_\_\_  
Q: 12" Wafer

**f - PACKAGE TYPE A** \_\_\_\_\_

PACKAGE TYPE	CODE
BGA package	B
LQFP package	L
PQFP package	P
TQFP package	T
QFN package	N
PQFP package with Exposed Heat Spreader	E

**I - OPTIONS**

- S = SLT
- B = Burn-in
- H = High Temp. Testing
- I = Industrial
- V = High Volt Testing
- T = Tape & Reel Packing

**k - PACKAGE VARIANT**

PACKAGE VARIANT	CODE
This is only used when one product type is offered in 2 different sizes or lead counts of the same package style. The last FG# created will include the lead count.	128 (lead count)

**j - PACKAGE TYPE C**

PACKAGE TYPE	CODE
Drop-in heat spreader	D
Exposed heat spreader	E
Regular package without heat spreader	R

**h - PACKAGE TYPE B**

PACKAGE TYPE	CODE
Green (Halogen Free) and Lead Free package	G (Note)
Normal package	N
Green (Halogen Free) and Lead Free package with Cu Bond Wires	C
Flip Chip	F

NOTE: The following FG's also use Cu wire:  
TW6815-LA1-GR  
TW6816-LA1-GR  
TW6817-LA1-GR  
TW6818-LA1-GR  
TW6932-LA1-GR

**g# - DIE REVISION**  
It starts from A1. If full layers are changed, the die revision changes like A1→B1→C1, etc.  
If some layers are changed, the die revision changes like A1→A2→A3, etc.