

1 GENERAL AND DEFINITIONS

This procedure defines the identification system for MAS products.

The following abbreviations are used in this document.

ESD	Electrostatic Sensitive Device
EWS	Electrical Wafer Sort
ID	Identification
MAS	Micro Analog Systems
MBB	Moisture Barrier Bag
T&R	Tape and Reel

2 PRODUCT ORDERING CODE

The product ordering code consists of the following string of identifiers (maximum 15 characters):

MASnnnnvwpppx, where

MAS is prefix for Micro Analog Systems

nnnn is a product number

v(letter) is a product version

ww(letters or numbers) is a product specific code

ppp(letters or numbers) is a package type family code as defined in the table 2.1

xx is an option (delivery form etc.) as defined in chapter 2.4

2.1 Product version (v)

A product version is a letter which denotes an update or a redesign option. The available product versions are: A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, S, U, V, W, X, Y and Z.

T is reserved for designs on Multi Project Wafer (MPW) runs.

2.2 Product specific code (ww)

A product specific code consists of two characters which are either letters (A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, S, T, U, V, W, X, Y, Z) or numbers (0-9). The code is used to separate different design options e.g. different bonding versions, output voltages or whatever other design features.

2.3 Package Type Family (ppp)

Table 2.1

(ppp)	Package Type / Body Size / Wafer Type	previous code	Description / Definition
	BGA		Ball Grid Array
C00	LF-XBGA (JEDEC MO-205)	BA	
	CSP		Chip Scale Package
CA0	Redistribution, 200 um bumps, Pb	CA	
CA1	Direct, 300 um bumps, Pb	CB	
CA2	Redistribution, 200 um bumps, Pb free, RoHS c.	CC	
CA3	Direct, 300 um bumps, Pb free, RoHS compliant	CD	
	SBDIL		Side Brazed Dual-In Line
D00	SBDIL, width 300 mill	DA	
D01	SBDIL, width 600 mill	DB	
	PDIP		Plastic Dual In-Line Package
DA0	Width 300 mill	NA	
DA1	Width 400 mill	NB	
DA2	Width 600 mill	NC	
DA3	Width 600 mill, Pb free, RoHS compliant	ND	
	LCCC		Leadless Ceramic Chip Carrier
E00		EA	
	PLCC		Plastic Leaded Chip Carrier
EA0		PA	
	MQFP		Metric Quad Flat Package
F00	10x10 mm	FA	
F01	14x14 mm	FB	
F02	14x20 mm	FC	
	LQFP & TQFP		Thin & Low Profile Quad Flat Package
FA0	(TQFP)Thickness 1.0 mm	JA	
FA1	(LQFP)Thickness 1.4 mm	JB	
	CQFP		Ceramic Quad Flat Package
FC1		RA	

	SSOP		Shrink Small Outline Package
S00	Width 150 mill	KA	
S01	Width 209 mill	KB	
S02	Width 300 mill	KC	
S03	Width 400 mill	KD	
S04	Width 209 mill, Pb free, RoHS compliant	KE	
	SO (SOIC)		Small Outline Package
SA0	Width 150 mill	SA	
SA1	Width 300 mill	SB	
SA2	Width 300 mill, fused	SC	
SA3	Width 300 mill, Pb free, RoHS compliant	SD	
SA4	Width 150 mill, Pb free, RoHS compliant	SE	
	MSOP		Mini Small Outline Package
SM0		SM	
SM1	Pb free, RoHS compliant	SN	
	TSSOP		Thin Shrink Small Outline Package
ST0	Width 4.4 mm	UA	
ST1	Width 6.1 mm	UB	
ST2	Width 4.4 mm, Pb free, RoHS compliant	UC	
ST3	Width 6.1 mm, Pb free, RoHS compliant	UD	
	TSOT		Thin Small Outline Transistor Package
T00		GA	
T01	Pb free	GB	
T02	Pb free, RoHS compliant	GC	
	SC		
SC1	SC70	VA	
SC2	SC79	VB	
	SOT		Small Outline Transistor Package
TA0		ST	
TA1	Pb free, RoHS compliant	SU	
	QFN		Quad Flat No Lead Package
Q00	6x6x0.9 mm (QFN-Q)	HA	
Q01	3x3x0.9 mm (QFN-M)	HB	
Q02	3x2x0.9 mm (QFN-M)	HC	
Q03	2x1x0.9 mm (QFN-M)	HD	
Q04	4x3x0.9 mm (QFN-D)	HE	
Q05	4x4x0.9 mm (QFN-Q)	HF	
Q06	6x6x0.9 mm (QFN-Q) Pb free, RoHS compliant	HG	
Q07	3x3x0.9 mm (QFN-M) Pb free, RoHS compliant	HH	
Q08	3x2x0.9 mm (QFN-M) Pb free, RoHS compliant	HJ	

Q09	2x1x0.9 mm (QFN-M) Pb free, RoHS compliant	HK	
Q10	4x3x0.9 mm (QFN-D) Pb free, RoHS compliant	HL	
Q11	4x4x0.9 mm (QFN-Q) Pb free, RoHS compliant	HM	
Q12	6x6x0.75 mm (QFN-Q) Pb free, RoHS compliant	HN	
Q13	3x3x0.75 mm (QFN-M) Pb free, RoHS compliant	HP	
Q14	3x2x0.75 mm (QFN-M) Pb free, RoHS compliant	HQ	
Q15	2x1x0.75 mm (QFN-M) Pb free, RoHS compliant	HR	
Q16	4x3x0.75 mm (QFN-D) Pb free, RoHS compliant	HS	
Q17	4x4x0.75 mm (QFN-Q) Pb free, RoHS compliant	HT	
Q18	2x2x0.75 mm (QFN-Q) Pb free, RoHS compliant	HU	
Q19	4x5x0.75 mm (QFN-Q) Pb free, RoHS compliant	HV	
Q20	2x2x0.55 mm (QFN-D) Pb free, RoHS compliant	HW	
Wafer			Wafer PCM-tested
W00	Thickness 525 µm	WA	
W01	Thickness 480 µm	WB	
W02	Thickness 450 µm	WK	
W03	Thickness 400 µm	WC	
W04	Thickness 375 µm	WD	
W05	Thickness 350 µm	WJ	
W06	Thickness 300 µm	WH/ _{30um}	
W07	Thickness 270 µm	WE	
W08	Thickness 254 µm	WF	
W09	Thickness 215 µm	WG	
W0A	Thickness 145 µm	WL	
W0X	Other thickness	WX	
Wafer			Wafer EWS-tested
WA0	Thickness 525 µm	TA	
WA1	Thickness 480 µm	TB	
WA2	Thickness 450 µm	TK	
WA3	Thickness 400 µm	TC	
WA4	Thickness 375 µm	TD	
WA5	Thickness 350 µm	TJ	
WA6	Thickness 300 µm	TH/ _{30um}	
WA7	Thickness 270 µm	TE	
WA8	Thickness 254 µm	TF	
WA9	Thickness 215 µm	TG	
WAA	Thickness 145 µm	TL	
WAX	Other thickness	TX	
Wafer			Wafer EWS-tested, bumped
WB0	Thickness 525 µm	LA	
WB1	Thickness 480 µm	LB	
WB2	Thickness 450 µm	LK	
WB3	Thickness 400 µm	LC	
WB4	Thickness 375 µm	LD	
WB5	Thickness 350 µm	LJ	
WB6	Thickness 300 µm	LH/ _{30um}	
WB7	Thickness 270 µm	LE	
WB8	Thickness 254 µm	LF	

WB9	Thickness 215 μm	LG	
WBA	Thickness 145 μm	LL	
WBX	Other thickness	LX	

2.4 Options (xx)

Options (two characters) are letters or numbers. Options are product specific which means that the same option string xx may have different meaning in two different parts. However, below there is a set of predefined options having the same meaning for all the parts.

Option	Meaning
00	Tested wafer
01	Sawn wafer, Gustav Wirtz ring 6", tape NITTO SWT-20 non UV-tape, tape not expanded
02	Sawn wafer, Gustav Wirtz ring 6", tape NITTO SWT-20 non UV-tape, tape is expanded for delivery
03	Sawn wafer, metal frame 8", tape NITTO 2091J UV-tape, tape cannot be expanded
04	Sawn wafer, metal frame 8", tape NITTO UE-111AJ UV-tape, tape can be expanded
05	Dice in waffle pack
06	T&R products
07	MBB packed products, excluding T&R products
08	Delivery in tube, tray or canister (without MBB packing or T&R)
09	Reserved
23	Sawn wafer, metal frame 8", tape NITTO SWT-20 non UV-tape, tape cannot be expanded

2.5 Examples

The following examples show, how to create a part ID.

MAS1234AA1Q1806 - 1234 is the product number

- A is the product version
- A1 is a MAS1234A specific code, of which meaning has been specified in a data sheet or device specification
- Q18 stands for a QFN package according to the list
- 06 stands for the delivery form "tape&reel"

MAS6182AA1WA900 - 6182 is the product number

- A is the product version
- A1 is a MAS6182A specific code, of which meaning has been specified in a data sheet
- WA9 stands for an EWS tested wafer of which thickness is 215 μm
- 00 stands for the delivery form "tested wafer"

MAS1234T39T0206 - 1234 is the product number

- T is the test version not available in mass production
- 39 is a test version number
- T02 stands for a TSOT package
- 06 stands for the delivery form "tape&reel"

3 PRODUCT MARKING INSTRUCTION

The following general marking instructions shall be followed; detailed instructions are given by product specific assembly specifications.

Marking of packaged products consists of the following:

- MAS logo (can be excluded if there is no room for it)
- MAS product identification code (excluding MAS prefix and package coding and also other characters if there is no room for full product number), for example:

MAS1234AB3 (for the part MAS1234AB3xxxxx)
98AA2 (for the part MAS9198AA2xxxxx)

- ES to denote Engineering Samples (optional)
- Customer's product code (optional)
- Customer's product name (optional)
- ESD logo (can be excluded if there is no room for it)
- Date code of form yww or yyww, where y = the last digit of the year, yy = the last two digits of the year, ww= week number
- Lot number of form xxxxxx, xxxxx.x or xxxxx.x.x

As much of marking information as possible should appear as top marking. Due to space limitations bottom marking may also be required and can then include the following:

- Lot number xxxxxx, xxxxx.x or xxxxx.x.x
 - MAS product identification code or part of it
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