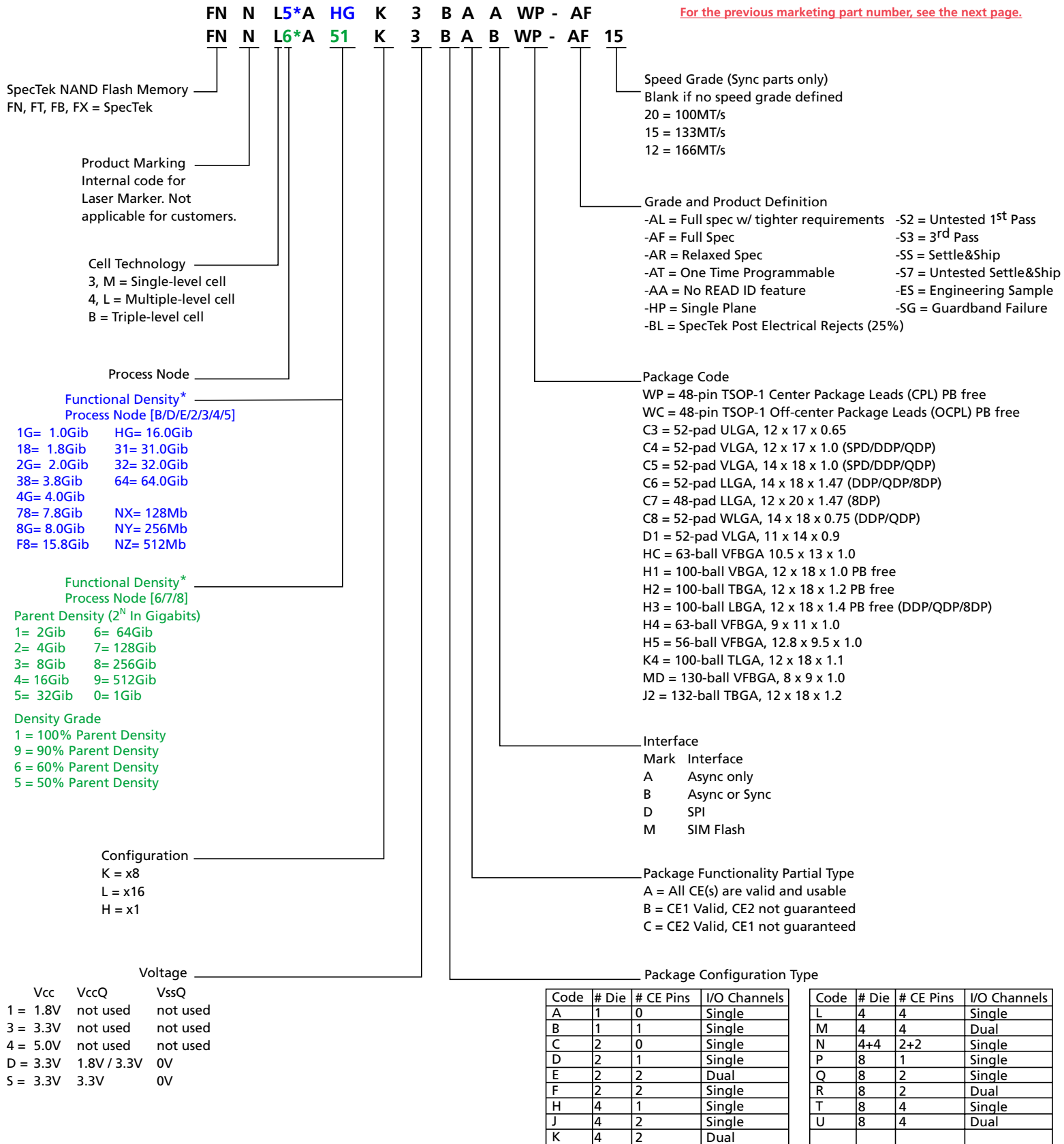


SpecTek NAND Flash Part Numbering System **SPECTEK** Brilliant Memory Solutions

Last Updated: 12/13/2011

For the previous marketing part number, see the next page.



Note: SDP (Single Die per Package), DDP (Dual Die per Package), QDP (Quad Die per Package), 8DP (Eight Die per Package)

Old SpecTek NAND Flash Part Numbering System



Last Updated: 04/01/11

FNN L52* A H G K 3 WG - AF

FNN L63* A 5 1 K 3 WG - AF

F= SpecTek

Product Family

B, N, T= SpecTek NAND Flash

Product Marking

Internal code for Laser mark. Not applicable for customers.

Cell Technology

M= Single-level cell
L= Multiple-level cell

Design Generation

(Consult factory)

Density

For 20, 40, 50 series: Functional Density*

1G= 1.0 Gib	8G= 8.0 Gib
18= 1.8 Gib	F8= 15.8 Gib
2G= 2.0 Gib	HG= 16.0 Gib
38= 3.8 Gib	31= 31.0 Gib
4G= 4.0 Gib	32= 32.0 Gib
78= 7.8 Gib	64= 64.0 Gib

For 60 -70 series*

Parent Density (2^N in Gigabits)

1= 2 Gib	5= 32 Gib
2= 4 Gib	6= 64 Gib
3= 8 Gib	7= 128 Gib
4= 16 Gib	8= 256 Gib

NA= Unavailable

Density Grade

1= 100% of Parent Density
9= 90% of Parent Density
6= 60% of Parent Density
5= 50% of Parent Density

Configuration

K= x8 L= x16 H= x1

Grade and Product Definition

-AL= Full Spec	-SS= Settle & Ship
-AF= Full Spec	-S3= 3 rd Pass
-AR= Relaxed Spec	-S7= Untested Settle & Ship
-AT= One Time Programmable	-ES= Engineering Sample
-AC= No Cache Feature	-HP= Single Plane
-AW= No Write Protect Feature	-SJ= 1 st Step Failure
-AA= No READ ID Feature	-SG= Guardband Failure

Package Functionality

G= Single Die Package, CE only
1= Dual Die Package, CE1 functional only
2= Dual Die Package, CE1 and CE2 functional
3= Dual Die Package, CE3 functional only
4= Quad Die Package, CE1 and CE2 functional
5= Quad Die Package, CE1 functional only
6= Quad Die Package, CE2 functional only
7= Octal Die Package, CE3 functional
8= Octal Die Package, CE2/CE3/CE4 functional
9= Octal Die Package, CE2/CE4 functional

Package Code

B= 100/170B BGA 12x18mm PB free
C= 52-pad ULGA 12x17mm PB free
D= 63/120B VFBGA 9x11mm PB free
G= 52-pad VLGA 12x17x1mm PB free
H= 63/120B VBGA 10.5x13mm PB free
J= 48/52-pad SOP/LLGA 12x20mm PB free
L= 52-pad LLGA 14x18mm PB free
P= 48ld TSOP-1 Off-center Package Leads (OCPL) PB free
T= 48ld TSOP-1 PB
V= 52-pad VLGA 14x18mm PB free
W= 48ld TSOP-1 Center Package Leads (CPL) PB free

Voltage

	Vcc	VccQ	VssQ
1=	1.8V	not used	not used
3=	3.3V	not used	not used
D=	3.3V	1.8V	0V
S=	3.3V	3.3V	0V

SpecTek NAND Flash Wafer/Die Marketing



Last Updated: 12/13/2011

WB S M 50A D B CX N L - NA F3 A

WB, WP, or WT = Die- 3.3 Volt
 WC, WQ, or WS = Unground Wafer- 3.3 Volt
 WD, WF, or WV = Die- 1.8 Volt
 WG, WH, or WW = Unground Wafer- 1.8 Volt
 WM, WN, or WR = Stacked die, no ring
 WJ, WK, or WL = Stacked die- 1.8 Volt

Parent Device/Configuration

2 = 2Mx8 H = 8Gx8
 3 = 1Mx16 J = 64Mx8
 4 = 8Mx8 L = 32Mx16
 6 = 4Mx16 M = 128Mx8
 7 = 16Mx8 Q = 64Mx16
 C = 32Mx8 S = 256Mx8
 D = 16Mx16 T = 2Mx16
 E = 1Gx8 V = 512Mx8
 F = 2Gx8 Y = 128Mx16
 G = 4Gx8 Z = 256Mx16
 U = Unavailable

Cell Technology

M = SLC
 L = MLC

Device Generation & Parent Density

x9x = 2Gb x2x = 16Gb
 x0x = 4Gb x3x = 32Gb
 x1x = 8Gb x4x = 64Gb

Film Frame Type

D = Disco
 G = Gel Pak
 K = K & S
 N = NA

Wafer Tape Type

B = D-175
 C = R-3000/R-3100
 D = LE-Z01
 F = P-2110G
 N = NA (uncut wafers)

Backside Adhesive

BX = Hitachi FH-800T 10µm WX = Nitto EM500-M3-70
 CX = Hitachi FH-800P 10µm YX = Hitachi FH-WPX2913T-60
 DX = Hitachi FH-800T 10µm ZX = Nitto EM-310J-P-8-60
 EX = Nitto EM500-M3-60 BB = Nitto FOW EM30J-P-12LW-60
 FX = Hitachi FH-800T 20µm BC = Hitachi FH9411ST 40µm
 GX = Hitachi FH-9011 20µm BD = Lintec LE4431
 HX = Hitachi FH-800P 20µm BE = Nitto EM500-M3 25µm
 JX = Hitachi FH-9011T 20µm BF = Nitto EM500-M3VJ-60
 KX = Nitto EM500-M2A-G-20µm BG = Hitachi FH-900NT-25-E
 LX = Hitachi FH-800 20µm BH = Hitachi FH-900T-40
 MX = Hitachi FH-800L 20µm BJ = Hitachi FH- 9211ST
 PX = Hitachi FH-800L 25µm BK = Nitto EM-310VJ-P-60
 QX = Nitto EM550G-P 20µm BL = Nitto EM700J=p 25µm
 RX = Nitto EM500-M2A-G-P 20µm BN = Nitto EM310VJ-P
 SX = Nitto EM550G-P-12-25 BP = Lintec LE4411
 TX = Nitto EM-550G-P-8-25 BQ = Nitto EM500-MA 2
 VX = Nitto EM-310J-P-12-60 BR = Henkel ATB - 120-12 30µm

BT = Nitto EM310G-P-8LW-50
 BV = Hitachi FH-900T-25µm
 BW = Nitto EM500-M3VJ-60
 BZ = Lintec LE4738
 CB = Hitachi FH-900-20
 CC = Hitachi FH-900-40
 CD = Henkel ATB - 130-12
 CF = Hitachi FH- 9011T-25
 CG = Henkel ATB -S120-12
 CH = Lintec LE4423H
 CJ = Cheil DF-725NT
 CK = Nitto EM-550H-P-12-20

CU Bond Pad Type

A = NI/PD
 B = NI/AU
 C = AL CAP
 D = NI/PD with Polyimide Passivation
 E = NI/AU with Polyimide Passivation
 F = AL CAP with Polyimide Passivation
 G = AL CAP

Pick Grade

F1¹ = 1st Pass
 F2¹ = 2nd Pass
 F3¹ = 3rd Pass
 F5¹ = 1st Pass/Limited Write Endurance
 F6¹ = 2nd Pass/Limited Write Endurance
 S5¹ = 3rd Pass/Limited Write Endurance
 FH¹ = Single Plane
 AP = All Pass
 W2 = Whole 200mm wafer
 W3 = Whole 300mm wafer
 W4 = Whole 200mm wafer/Limited Write Endurance
 W5 = Whole 300mm wafer/Limited Write Endurance
 W6 = Whole 200mm wafer
 W7 = Whole 300mm wafer
 WA = Whole 200mm wafer
 WB = Whole 200mm wafer
 WC = Whole 200mm wafer
 WD = 300mm wafer
 WF = 200mm wafer
 WG = Prime

Reticle Grade and Revision

MM = Not applicable
 Nx² = 300mm wafer
 Rx² = 200mm wafer
 A-S = Top Metal Reticle Revision
 Note 2: Where x equals the revision.

Die Thickness

AA = 790µm	NI = 40µm	NR = 150µm	N2 = 340µm
NA = 100µm	NJ = 750µm	NS = 510µm	N3 = 230µm
NB = 508µm	NK = 350µm	NT = 65µm	N4 = 75µm
NC = 200µm	NL = 80µm	NU = 325µm	N5 = 135µm
ND = 375µm	NM = 175µm	NV = 90µm	N6 = 275µm
NE = 305µm	NN = 250µm	NW = 120µm	N7 = 70µm
NF = 400µm	NP = 125µm	NX = 600µm	N8 = 60µm
NG = 675µm	NQ = 225µm	NY = 265µm	N9 = 50µm
NH = 500µm			

Multi Pass Pick Information

N = Not applicable
 Other = Consult factory

CL = Hitachi FH-9011P-20 DC = Nitto 310WVAJ-P-12-60
 CM = Hitachi FH-9011P-40 DD = Lintec LE-5000-12-20
 CN = Nitto EM-310J-P-12-25 DF = Hitachi FH-8011T-20
 CP = Nitto FOW EM310VJ-P-12LW-60 DG = Hitachi FH-900T-20
 CQ = Hitachi FH9111ST DH = Henkel ATB-120U51-12
 CR = Lintec LE4764 DX = Hitachi FH-800T-10
 CS = Hitachi FH-9011T-40
 CT = Nitto EM500-M2A-10
 CV = Henkel ATB -120A-12
 CY = Henkel ATB -130A-12
 CZ = Lintec LE4424H
 DB = Cheil DF-730GT